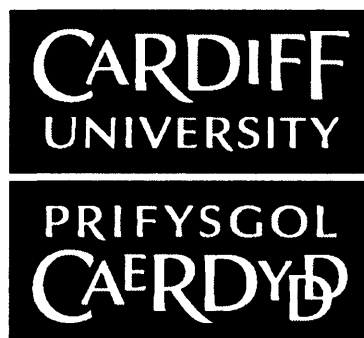


**Developing the Welsh Organic Sector:
Knowledge Generation and Learning**

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A Thesis submitted for the Degree of Doctor of Philosophy

April 2007

**School of City and Regional Planning
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Abstract

This research study is concerned with the role and influence of knowledge generation and learning processes in the development of Organic Agriculture in Wales. It builds on previous work which suggested that barriers to the generation and exchange of knowledge about organic agriculture between farmers and other actors in the sector were significant in inhibiting development.

The thesis is predicated on the view that organic farming demands a complex treatment of knowledge and processes of learning, and that organic agriculture represents a synthesis of knowledge from a wide range of actors, knowledge domains and knowledge forms. The development of knowledge about organic agriculture is considered at the institutional and at the farmer level and interaction between institutions, institutions and farmers, and between farmers are explored. The development of organic agriculture is seen as a process where all actors are engaged in continuous learning, where learning trajectories are defined by historical conditions, local context and physical influences.

The study set out to map the ways by which organic farmers in Wales acquired their knowledge about organic farming as they made the decisions to convert, during conversion and subsequently as they became more proficient organic farmers. It was designed to study the ways by which well embedded conventional family farmers went through this process, and how their knowledge-networks are reconfigured during conversion.

The farmers in the study are categorised according to a range of characteristics and these categories are considered in exploring farmer associations and social learning activities. They are also related to farmer attitudes toward organic agriculture and farmers are categorised as different types of organic farmers.

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LIST OF ABBREVIATIONS

AFP	Agri-Food Partnership
CCW	Countryside Council for Wales
COG	Cambrian Organic Group
COP	Community of Practice
EFRC	Elm Farm Research Centre
ELWa	Education and Learning Wales
ESA	Environmentally Sensitive Area
EU	European Union
FA	Farm Assured
FC	Farming Connect
FDBP	Farm Business Development Plan
FWAG	Farming and Wildlife Advisory Group
HCC	Hybu Cig Cymru/ Meat Promotions Wales
HDRA	Henry Doubleday Research Association
IFOAM	International Federation of Organic Agriculture Movements
ISO FAR	International Society of Agricultural Research
IGER	Institute of Grassland and Environmental Research
LEAF	Linking Environment and Farming
MDC	Milk Development Council
MMB	Milk Marketing Board
NAFW	National Assembly For Wales
OCB	Organic Certification Body
OCIS	Organic Conversion Information Service
OCW	Organic Centre Wales
OF&G	Organic Farmers and Growers
OFRF	Organic Farming Research Foundation
OFS	Organic Farming Scheme
OMSCo	Organic Milk Suppliers Co-operative
SA	Soil Association
SECI Model	Socialisation, Externalisation, Combination, Internalisation
SSK	Sociology of Scientific Knowledge
WAG	Welsh Assembly Government
WDA	Welsh Development Agency

Chapter 1

Developing the Welsh Organic Sector: Knowledge Generation and Learning Processes

1.1 Introduction

This research study is concerned with the role and influence of knowledge generation and learning processes in the development of Organic Agriculture in Wales. The study builds on previous work carried out at Cardiff University that explored organic food chains and the development of an innovative and quality driven approach in the agri-food sector (Banks, 1998). One of the key conclusions from those projects was that barriers to organic conversion were being too narrowly conceived by public policy makers. The conventional analysis tended to highlight the financial and underplay other barriers. One of the other barriers identified by the pilot projects was that to the generation and exchange of knowledge about organic agriculture to farmers and other actors in the sector. The present study develops the theme of knowledge creation and learning in the organic sector and examines the relevant processes at work in the Welsh organic farming sector at the turn of the century.

The remainder of the first chapter develops the rationale for the research and the key research questions that were applied in the study. It is divided into three parts. The first part addresses the general rationale and orientation of the study. The second part discusses the aims, objectives, and research questions particular to this study, and finally the structure of the thesis and a summary of the chapters are presented.

1.2 Rationale for the Study

At the time of the Cardiff Food Group's projects referred to above, the effects of relatively low levels of financial support (in comparison with other European standards) for converting farmers (Lampkin et al, 1999a) and the uncertain development of the market, leading to an unclear commercial future for the sector, had been dominant policy concerns. However, it was also claimed that the organic farmer suffered from what was termed as a 'knowledge deficit' which was

characterised by the projects in terms of the comparisons between the level of R&D resources that was being devoted to conventional agri-business from both the private and the public sectors, and the small amounts available to the organic sector. The 'knowledge deficit', conceived of in these terms, was linked to the processes by which knowledge was disseminated among actors in the sector, and to the recommendation that policy makers should be aware of the different learning regimes that applied in the organic compared to the conventional sectors. The latter sector was seen to operate with a top-down model in which the farmer is, to a large degree, a passive recipient of (universal) knowledge that has been generated by specialised expertise. In contrast, learning in organic agriculture is seen to be a more interactive process in which farmers are encouraged to blend their local with science-based knowledge, and become active partners in their own training and in the process of creating new knowledge about organic farming.

Attempts to differentiate organic farming from other farming systems are based on the belief that it offers a more sustainable way of farming in comparison to the conventional system employing industrial farming practices, dependence on agricultural input, and a focus on economic competitiveness. Its sustainability is couched in terms of economic, social and environmental goals where the economic has been balanced by other considerations, and as such is a system that depends on the contributions of a number of different domains of knowledge to define and develop the concept. Industrial-mode farming may be required to observe environmental and social regulation, but organic agriculture is by definition an integrated system that weaves the diverse elements of sustainability into its constitution¹. In this respect, the term 'farming' may be differentiated from 'agriculture' and represented as one element of the more general social and cultural activity of producing, distributing and consuming food². Industrial-mode farming by the same token is part of industrial agriculture where the tendency is to reduce interaction between actors engaged in various components of the system to simple market relations, and where knowledge demands are simplified to technical and codified terms.

¹ The contrast is useful notwithstanding the areas of overlap and blurring between the two poles, for example as 'conventional' farming adopt more environmentally benign practices, and industrial modes of ostensibly organic farming practices are developed (Guthman, 1998)

² The thesis attempts to maintain this distinction in the use of the terms 'farming' and 'agriculture' throughout.

This thesis focuses on the role of knowledge and learning processes following from the view that organic farming demands a complex treatment of these elements. It is predicated on the view that organic agriculture represents a continuing synthesis of knowledges from a wide range of actors, knowledge domains and knowledge forms. In addition the development of organic agriculture is seen as a process where all actors are in a continuous process of learning and knowledge exchange about what organic agriculture entails as it develops from insignificant levels of activity to become a credible alternative to the mainstream agricultural sector. Finally, the learning processes involved follow trajectories that are defined by historical conditions, local context and environmental influences.

Whilst all agricultural systems requires that the farmer is capable of synthesising knowledge from more than one domain, organic agriculture broadens the range of actors that may be directly involved, making the production of organic agriculture sensitive to more influences and challenges than the industrial model. There is a continuing debate about what organic agriculture is or should be. The European Union's Regulation (EC Reg. 2092/91), which establishes a legal definition of organic agriculture, acts as a reference point related to which knowledge about organic farming develops, and the codified knowledge represented by the regulation is amplified and extended in combination with domain-relevant knowledges. The farmer is but one of the actors who are engaged in the translation of organic agriculture into practice and its development as a commercial form, but may be viewed to occupy a central position in this process.

The knowledges that combine to produce versions of organic agriculture range from know-how in agricultural production to knowledge about consumer attitudes and beliefs, knowledge of market mechanisms and the knowledges that policy makers and regulators draw on to formulate their objectives and procedures. Each actor operating in each domain is a contributor, learner and transmitter of knowledge, and each may be said to be dealing with different kinds of knowledge, and engage in different processes of learning. The farmer occupies a position for which a synthesis of knowledge derived from each domain is required, but which also feeds back a demand for a particular combination of knowledges. The farmer's position may be imagined

as being at a point where the three domains overlap and which acts as a reference point for all the three domains.

Whilst knowledge and learning processes constitute the core of the study, these are connected to the attitudes of the farmers toward farming and toward the substantive effects of organic farming such as environmental impact, animal welfare and health concerns. A number of studies have explored the formation and development of farmers' attitudes toward organic farming³ (see Midmore et al, 2001, and Padel, 2001, for relatively recent surveys). What are highlighted are concerns with husbandry in terms of the condition of animals and the soil, the environmental and health impacts of farming practices, financial or commercial motivations which would include either survival or exploitation of new opportunities, and personal concerns including workload and feelings of control over work and the future.

The farmer's attitudes derive from local conditions and personal context, and so the research in this study is also concerned with those features of the farmer's lives that embed them in their locality and farming practices. The farmer is committed to relationships with their peers and other actors and the study is concerned with the ways that these relationships act in informal and formal associations. The attitudes of farmers and their embeddedness are explored as contributions to the farmers' tacit and personal knowledge, and to the relationships built up in association with other farmers, representing the social expression of these processes and leading to the interest in social learning and communal processes of knowledge generation.

1.3 Aims, Objectives and Research Questions

The aim of the study is to explore processes of knowledge generation and exchange within the Welsh organic farming sector, and to comment on policy and practice measures that may support and enhance these processes. Knowledge about organic agriculture is considered to be a synthesis of knowledges from diverse sources and so the aim of the study includes an exploration of how these knowledges interact as organic agriculture develops.

³ There is also a large literature on the attitudes and objectives of farmers in general, for example see Willock et al, 1999 for a review.

The study set out to map the ways by which organic farmers in Wales acquired their knowledge about organic farming as they made the decision to convert, during conversion and subsequently as they became more proficient organic farmers. It was designed to explore the ways by which well established conventional family farmers went through this process, and so filtered out those farmers who were either deemed to be hobby farmers (deriving their main income from other sources) or those individuals who were inexperienced in the industry and were recent entrants. The focus was on farmers who could be described as being close to a representative type of professional Welsh family farmer and who are dependent on the farm for the bulk of their income. The study is also interested in the institutional context of the organic sector in Wales, how it affects the decision of farmers to convert and their subsequent learning about organic agriculture.

Three principal research questions have been defined for the study and are provided below:

1. What are the motivations of, and influences on, Welsh family farmers in making the decision to convert to organic farming, and what are their expectations in making the conversion?

The Welsh organic sector experienced a surge in conversions of farms during the late 1990s and the early part of the 2000s. The study sets out to investigate reasons given by farmers for embarking on the conversion process at this time, and to discover the main influences that affected the farmers in their decision to convert. Among these influences are the knowledges that farmers have before considering conversion, and these represent the farmers' orientation as conventional farmers. The effect of the farmers' experience is, therefore, included in this investigation, and the embeddedness in relationships as a conventional farmer considered as important in considering the trajectory of the farmers' learning effort.

2. How do farmers learn about organic agriculture?

Organic farming can be considered a knowledge-based innovation; hence, one of the key questions is to explore how farmers go about identifying and gathering knowledge about organic farming practices, regulation and commercial knowledge

about the organic food market. The barriers to knowledge acquisition and the different knowledges that may be required at different stages in a farmer's conversion process will be some of the main areas for study.

There are a number of public and private sector organisations who are used by farmers to overcome barriers to organic conversion and post-conversion production. The study will seek to map those actors with whom farmers interact most intimately, and in a development of issues to be raised in addressing some of the other research questions, will explore the concepts of knowledge exchange in the light of the assumption that organic farmers are required to be more self-reliant and active as learning agents.

Farmer learning will be investigated in terms of two sets of interactions. Firstly it will be in terms of the interaction with other actors and institutions related to organic farming, and secondly investigation will be in terms of the social learning effort that farmers make with their farming peers. The latter type also investigates whether communities of organic farmers are created that enhances learning and form identifiable communal identities and communal understandings of what organic farming entails.

3. Are there different categories of organic farmer?

The study boundary has already been set in favour of a study of established Welsh family farmers who have decided to convert to organic farming. This limits the possible categories of farmer that may be defined since new, inexperienced farmers are ruled out, as are hobby and/or part-time smallholders. It also tends to exclude those farmers who may have a pre-existing commitment to organic farming, and concentrates on farmers who have had to go through a process of conversion and learning about new farming practices. The study is also limited to a relatively small number of farmers and the methodology emphasises an in-depth exploration of individual attitudes and motivations.

Since the range of possible types of organic farmer has been limited by the way that the study has been constructed the categorisation that is possible is likely to be limited in its scope. Therefore, what the study will be aiming to achieve in this respect will

consist in exploring how the kind of farmers included in this study may be categorised on the basis of their attitudes, motivations, knowledge, and learning behaviours, and how these categorisations may reflect on a more general understanding by the farmers of organic agriculture and what it entails.

1.4 Structure of the Thesis and Chapter Summaries

1.4.1 Thesis Structure

The thesis structure may be divided into two main parts. The first includes a discussion of the theoretical framework employed together with methodology and the methods used in the empirical work. The second part includes a review of the institutional context of organic farming in Wales along with a report and discussion of the main fieldwork that was conducted. The structure is depicted in Table 1.1 below and is followed in the next section with a brief summary of chapter contents.

The theoretical part begins with a statement of the main theoretical basis of the study and continues with an exploration of literature on forms of knowledge and in particular the definition and contrasting use of tacit and codified knowledge. Literature on the exchange of knowledge is considered in the form of theory on social learning and how knowledge generation and learning within associations of individuals and groups of people highlight the embodiment of knowledge in artefacts, practice and routines.

The thesis is grounded on the contextual and local conditions for knowledge generation and learning and the approach to the empirical work along with the empirical work itself is based on providing a rich description of how and why farmers engage in the practices and behaviours that they exhibit as learning organic farmers.

Table 1.1: Structure of the Thesis

Parts of the Thesis	Chapter	Topic
	1	Introduction and Rationale for the Research
Part One: Theory and Method	2	Theoretical Framework Part 1 Socio-economic approaches to Knowledge
	3	Theoretical Framework Part 2 The social context of Knowledge and Learning: Theories of Social Learning and of Communities.
	4	Methodology and Case Study Methods
Part Two: Context, Report and Discussion of Fieldwork	5	Institutional Context: Formal and Informal Structures
	6	Farmer Description, Embeddedness, and Categorisation
	7	Farmer Individual Learning processes: Interaction with Knowledge-Networks
	8	Farmer Communal Learning processes: Description of three Case Studies
	9	Conclusions, Reflections on Policy and Future Research

1.4.2 Chapter Summaries

Chapter 2 represents the first part of the theoretical framework of the thesis and consists of a review of literature about forms of knowledge and treatments of the role of knowledge as a crucial variable in explaining economic behaviours. Tacit knowledge is emphasised as a central aspect of a concept of embeddedness, where routines and habits are intimately related to the generation and build up of tacit knowledge, and where path dependence is based on existing and personally, or individually, held capacities.

The treatment is broadened to include considerations of knowledge with reference to a social context and, in parallel to the growth of literature in appreciation of tacit forms of knowledge; the growth in the identification and interest in non-disciplinary processes for the production of knowledge is explored. Organic Agriculture is regarded as being a synthesis of knowledges from a number of domains of knowledge, and open to influence and modification from a number of directions.

Knowledge generation and learning, therefore, are examined as social processes in the construction of Organic Agriculture and Chapter 3 continues this orientation with an exploration of knowledge generation and exchange through various forms of association.

Chapter 3 commences with a review of Social Learning from its definition as a process of knowledge acquisition by individuals through personal experience, through deliberate association with other individuals and social groups, and between social groups. The role of social learning events and processes is briefly examined, proceeding to the ways that these contribute to creating boundaries for the participating groups and how these conditions for social learning create identity and communal structures.

The identity-forming consequences of social learning processes are examined to follow the interest in ways that communal processes may interact with knowledge creation and learning. The formation of associations of organic farmers is of interest in the study as an extension of the self-reliant attitudes that organic farmers have been forced to adopt in respect of learning about organic farming. The literature on learning through associations and communal processes has concentrated on learning in business organisations and the study examines this literature for possible frameworks to be applied to associations of organic farmers. From the Community of Practice literature the idea of practice as a form of knowledge intertwined with the capacity to maintain the community of practitioners as a social learning structure is developed in particular. This is allied to the theoretical treatment of tacit knowledge and the view of communities of practice as possible fora for organic farmers to gather and synthesise knowledge from production, regulatory and market domains.

Chapter 4 relates the theoretical framework of the thesis to a justification of the methodology and methods used in the empirical work. The study is focussed on individual farmers and the ways by which they learn about organic agriculture. The empirical work, therefore, establishes the farmer in context and includes case studies of the farmer and their associations with each other and studies of the associations that individual farmers have with other actors.

The institutional setting of organic agriculture in Wales is discussed in Chapter 5 as part of the contextualisation of the experiences of the organic farmer. A description of the development of organic farming from an institutional viewpoint is presented following the approach of Michelsen et al (2001), placing the organic farmer within a framework of institutional actors that represent the production, regulatory and market domains. Developments within a broad agricultural context are discussed but the main focus is on the immediate outcomes of policy developments within Wales. The second part of this chapter looks at interaction between farmers and these institutions. The concentration here is on relationships between the farmer and various state sponsored organisations, reflecting the historical dependence of the farmer on these relationships to date.

Chapters 6-8 follow with the main description of empirical fieldwork. Chapter 6 locates the farmers in terms of their enterprises and their embeddedness in their locality and the industry. Farmer attitudes and behaviour are examined leading to a report of the reasons that the farmers give for their conversion to organic farming. Farmers are differentiated into various categories, and an overall categorisation of the farmers in terms of an organic farmer typology is presented in summary of the farmer descriptions.

Chapter 7 examines the ways that farmers go about gathering information and advice about organic farming, and reflects on the networks that are formed between farmers and advisory sources. This process is considered in terms of a re-embedding process as farmers reform and supplant their conventional networks with networks oriented to organic agriculture. Both formal and informal networks are involved in this re-embedding, which is shown to be an ambiguous process as persistent relationships survive the shift from the conventional to the organic system.

Whilst Chapter 7 concentrates on the experiences of individual farmers in conversion and in building up new relationships, Chapter 8 examines how knowledge-networks between farmers as peers are created and how farmers behave within these associations, and is composed of three case studies. Each case study is structured in a similar way, but each group is differentiated on the basis of the kind of association with which the farmers are engaged. The chapter aims to examine these groups in

terms of communal attributes and knowledge exchange processes, and whether the knowledge-networks that they represent can be considered in terms of practice-led communities of organic farmers.

Chapter 9, finally, provides some overall conclusions and relates some of the findings of the study back to the initial research questions and the motivation for the research. The chapter also includes some reflections on policy issues and on possible areas for future research.

Chapter 2

Theoretical Framework (I): Knowledge and Learning

2.1 Introduction

The thesis aims to describe and analyse aspects of the development of Organic Agriculture in Wales with a particular focus on the role and influence of knowledge generation and learning processes. These processes are embedded within social relations that are considered to be important in describing the way that Organic Agriculture has developed and the way that its form will be determined as it matures as a sector within agriculture in Wales.

The study takes a broad economic-sociology approach to the study area in the sense that Smelser and Swedberg (1994) (contrasting with mainstream economics) define where economic actors are conceptualised as intimately influenced by other actors rather than being atomised entities; rationality regarded as a variable rather than assumed to be an universal standard; economic actions are constrained by social and by meaning structures in addition to tastes and the scarcity of resources; and where the economy is seen as an integral part of society rather than being separated as potentially conflicting entities.

Following from this orientation the concept of the actor's embeddedness is utilised, where the actor's behaviour is 'closely embedded in networks of interpersonal relations' (Granovetter, 1985). In using this concept, the study attempts to place the actor within relationships that both constrains the actor's freedom of action by the path dependent nature of knowledge generation and learning processes, but also provides opportunities for change by means of those same processes. In addition, path dependent features such as habits and routines⁴ help to reduce the sensitivity of individual and collective actors to conventional or neo-classical economic signals, and

⁴ See Becker (2004) for a review of the treatment of Routines in modern models of evolutionary economics, and for a discussion of the difference between Routines and Habits

may be seen as formalised behaviours that carry embedded knowledge and contribute to the development trajectory of new knowledge.

Embeddedness implies knowledge of ways of life and of socio-economic behaviours that are supported by and develop through the networks of relationships in which the actor participates. Further, the formation of the network and the nature of the attendant knowledges are inter-dependent and co-evolutionary, and constitute what may be termed knowledge-networks that combine structural relationships with the agency of the actors' knowledges. The embedded actor is, therefore, active in the definition, continuation and development of knowledge, and interacts with other actors that are similar participants.

However, the generation and possession of knowledge is unequally distributed, and along with the processes of learning, perform as differentiators within the economic system creating opportunities and constraints for economic actors. Differential states of knowledge, and differential opportunity and capacities for learning provide some of the sources for diversity and unpredictability which provides space for innovative action and the development of new socio-economic forms. The uneven trajectory of the development of organic agriculture in Wales is, therefore, examined on the basis of the potentially conflicting but continuously interacting influences of embeddedness and learning.

In application to the organic farmer these features together broaden the conception of the farmer from being a narrowly defined economic agent and allow for broadly-based social influences, motivations and objectives to be considered in explanations of the development of organic agriculture and its treatment as a socio-economic form.

2.2 Socio-Economic views of Knowledge

Discussion of the role of knowledge in the economy has become widespread since the 1980's. Drucker⁵ claimed that knowledge is the only meaningful economic resource, being perhaps the only source of competitive advantage (Drucker, 1993). Following

⁵ Peter Drucker's book of 1969: The Age of Discontinuity, pioneered an emphasis on the centrality of knowledge in the economy

his lead many theorists believe that there is a shift in the economy towards what is termed as the 'knowledge based economy'. Greater prominence has been given to what has been isolated and signified as 'knowledge' in production systems, making explicit an attribute that was presumably always present (Amin and Cohendet, 2004; Foray and Lundvall, 1996; OECD, 1996). Agricultural production has not been immune to the greater importance attributed to 'knowledge' as the basis of the industry has shifted and state support re-directed, and farmers in relatively marginal farming areas such as Wales are encouraged to radically re-think their approach to agriculture⁶.

The belief in the increasing 'knowledge intensity' of the economy is partly a reflection of the greater awareness of forms of knowledge and the potential gains that may be derived from greater understanding of the mechanisms of knowledge production, transmission and management. The increase in interest in the commercial advantage to be gained is clear by the growth in Knowledge Management as a specific tool for business management during the mid-1990s as interest and research in the concept grew (Liebowitz, 1999; Ruggles and Holtshouse, 1999). But perhaps more fundamentally, whilst mainstream neo-classical economics is criticised for its neglectful treatment of knowledge and learning, the economic sociology approach view them as fundamental factors in the development of economies and their constituent parts. Studies of technological innovation from the evolutionary economic perspective in particular stress the need to open up the 'black box' of knowledge and to treat the production of new knowledge as an endogenous variable (Freeman and Soete, 1997; von Tunzelmann, 1995; Rosenberg, 1993). Similarly a description of the growth of Organic Agriculture may also consider processes of knowledge generation and of learning.

2.3 Theoretical Treatments of Knowledge and Learning

The range of socio-economic treatments of knowledge is indicated by the extremes represented through the objectivist view of knowledge-as-information and the social constructivist's view of knowledge as a derived property of social interaction. These two positions are translated in terms of differing treatments of two aspects of

⁶ See further discussion in Chapter 5.

knowledge, namely codified and tacit knowledge. The main disagreement between the two positions revolves around the status of tacit knowledge; whether it is to be regarded as substitutable by codified knowledge (the objectivist position) or as complementary. The objectivist/ social construction divide is also reflected in the different analytical approaches employed. The mechanisms of knowledge creation, manipulation and transmission may be examined either as manifestations of abstractions by which these processes may be described algorithmically, or as grounded in and contingent on social interaction and interpretation.

2.3.1 Definitions of Knowledge

There is a multitude of definitions of knowledge that generally reflect the context within which each is applied, and which spawn a range of knowledge categories⁷. For example Collins, working from a base in the sociology of science, has suggested that there are four kinds of knowledge⁸ that are categorised in terms of their source and accessibility (Collins, 1993). In innovation studies, Lundvall and Johnson also identify four types of knowledge that relate to the purpose and use of knowledge (Lundvall and Johnson, 1994). Liebowitz identifies three forms of knowledge categorised according to accessibility in Knowledge Management studies (Liebowitz, 1999, and see Box 2.1 for a summary of these three approaches).

Box 2.1: Typologies of Knowledge

Collins

- Symbolic type- which can be transferred in codified, explicit forms
- Embodied knowledge- which is related to the physical abilities of humans
- Embrained knowledge- by which cognitive abilities is to some degree a function of the physical structure and matter of the human brain
- Encultured knowledge- that which is created within a social group

Lundvall and Johnson

- Know what - equivalent to Collins' symbolic type
- Know why – scientific and technical knowledge
- Know how – skill and capabilities that may be learned or are innate
- Know who – an understanding of social contexts in the production of knowledge

Liebowitz

- Tacit –through knowledge elicitation and observation
- Implicit- through query and discussion
- Explicit- readily accessible through documentation and 'formal sources'

⁷ For example see Liebowitz, 1999, for a list relevant to studies in Knowledge Management.

⁸ Which he does not always distinguish from ability and skill (Collins 1993)

Each set of knowledge types acknowledges a complex of knowledge sources and manifestations of knowledge, and all refer to knowledge creation as a social activity. Nonaka and Konno go further to view Knowledge as a social resource that is contingent on space and time and that to maintain its usefulness relies on a relational dynamic between actors in possession of knowledge (Nonaka and Konno, 1998).

2.3.2 *Tacit and Codified Knowledge*

Whilst it may be possible to usefully define a number of different forms of knowledge, however, tacit knowledge and explicit, or codified, forms of knowledge are the two main forms that are consistently identified in socio-economic literatures. Liebowitz, and Nonaka and Konno make the distinctions clear in these terms, and the categories described by Collins and by Lundvall and Johnson may also be placed into these two main subdivisions. They have largely been developed as contrasting forms to account for differences in the nature and management of knowledge. Other treatments of knowledge, however, regard them as two subtypes that may be collapsed into an universal form of codified or codifiable knowledge that implies no meaningful distinction between information and knowledge (Nightingale, 2003; Cowan et al, 2000).

2.3.3 *Tacit Knowledge*

Much of the expansion in interest in tacit knowledge follows from the formulation provided by Polanyi that was based partly on psychological foundations (Polanyi, 1967). The concept of tacit knowledge has migrated to many areas. For example, in business management research, Nonaka, building on Polanyi's work describe tacit knowledge as

‘... personal, context specific, and therefore hard to formalise and communicate. We know more than we can tell. Tacit knowledge is subjective, experience-based knowledge that cannot be expressed in words, sentences, numbers and formulae. It is very context specific. Tacit knowledge includes beliefs, images, intuition, mental models, and technical skills – like the expertise of a craftsman.’

(Nonaka, 1999, p65)

Similarly, Collins in discussing the way that physicists work and the implications of the idea for scientific practice, defines tacit knowledge as

‘...knowledge or abilities that can be passed between scientists by personal contact but cannot be, or has not been, set out or passed on in formulae, diagrams, or verbal descriptions and instructions for action.’

(Collins, 2001)

Tacit knowledge is seen as personal and specific to individuals but is also related to the characteristics of a culture, deriving from shared interpretations within specific contexts, and related to the level of understanding between individuals operating within those social contexts. Because of the interplay of these personal and social features tacit knowledge is recognised as difficult to access and manage. Collins describes five features that characterise the interactions between individuals that make knowledge transfer difficult. These are deliberate concealment, a mismatch of salience, use of ostensive knowledge, use of unrecognised knowledge and unrecognisable knowledge (Collins 2001). If knowledge is deliberately concealed, the difficulty in transferring knowledge is a reflection of the lack of trust and openness between individuals. A mismatch of salience arises when each party to an interaction does not realise the capacities or existing knowledge of the other. Such misunderstanding is also present when descriptions and explanations fail to convey what direct showing may achieve (ostensive explanations). Unrecognised knowledge, however, refers to a lack of awareness that there is relevant knowledge that has to be learnt. This ignorance applies to both parties potentially involved in knowledge transfer. Finally there is a kind of knowledge that is unrecognisable in the sense that it may only be gained by unconscious emulation. Collins notes, echoed by the findings of Lundvall and Johnson, that the first three from his list can be overcome when people interact socially, and unrecognised knowledge becomes better understood as individuals learn more about the cognitive and social context within which they operate and how they may make the necessary knowledge explicit.

2.3.4 Codified Knowledge

Codified knowledge is usually taken as meaning that which has been physically recorded in some manner and is represented in codes or standards of notation or rules. Knowledge has thus been transformed into information, which can be recorded in a

'codebook', and can only perform a role as a source of knowledge when the codes can be interpreted (Cowan et al, 2000). An ability to access codified knowledge is itself a form of knowledge, and since people's knowledge differ, codified knowledge is not necessarily available to everyone. Hence, social and cultural context is important in considering the role of codified knowledge, and the ability to interpret and access codified knowledge may be considered as a tacit form of knowledge.

However, proponents of the extreme, reductionist view of knowledge-as-information argue that the usefulness of the tacit knowledge concept has been overstated. According to this argument the boundary between tacit and codified knowledge is determined by the costs and benefits of the effort required to codify knowledge and knowledge processes that have been assumed to be inaccessible and hidden by the blanket term of tacit knowledge. Cowan et al, maintaining that much if not all knowledge could be regarded as codifiable in principle, extend the concept of the codebook to include cases where the codebook exist but is not directly observable (a displaced codebook). In this scheme the displaced codebook accounts for much of the concept of tacit knowledge.

2.3.5 Conversion from Tacit to Codified and vice versa

Descriptions of the process of conversion between tacit and explicit knowledge illustrate the perceived differences between the two forms of knowledge. Paul Nightingale characterises the debate on the conversion to codified knowledge (the codification debate) as being

'..about the nature of knowledge and how knowledge use is being changed by the introduction of information technologies'
(Nightingale, 2003, p166)

Foray and Cowan, for example, argue that codification is a process of changing knowledge into information (Foray and Cowan, 1997), substituting one for the other. Nightingale criticises this approach by referring to empirical evidence that suggests that tacit knowledge and codified knowledge are complementary rather than alternative forms (Nightingale, 2003, p168).

Thinking about codification as a process of substituting codified for tacit knowledge follows from the logic and character of codification theory. Nightingale describes it as ‘an abstract *program* level theory that relies on information processing’⁹. Information processing is regarded in codification theory as the abstract causal process underlying all forms of knowledge and interaction. Hence, codification theory does not provide a causal mechanism for processes in the real world since those processes are all seen merely as physical manifestations of information processing. It is this character which also makes it difficult to refute codification theory on empirical grounds.

Nightingale accepts that thinking about the relationship between tacit and codified knowledge as that between two substitutable forms, where processes of codification may be possible in all cases (in the sense that tacit knowledge processes are forms of information processing and that codification is not just ‘writing things down’), can be a convenient way of explaining processes at an organisational level. Such a program-level approach means that knowledge transfer (as information processing in various guises) could be discussed without having to specify the actual processes that take place. However, taking this use of program-level processes too literally runs the risk of thinking that a program-level explanation relates directly to processes in the real world and that all forms of knowledge are codifiable.

On the other hand, Nightingale also cautions against expanding the use of tacit knowledge into an aggregated form of individual tacit knowledges as an explanation for processes that are due to other causes, such as the effects of social interaction between individuals. What is required in practice is to recognise the level of the causal hierarchy at which an explanation is developed, and to deploy the relevant degree of abstraction. Nelson and Winter’s use of routines is used as an example of this discrimination, where much of their theory is at the program-level. Their

⁹ As opposed to the ‘empirical *hardware* level that explores the neurological basis... (and the)... subjective *knowledge* level that relies on introspective analysis’ (emphasis in the original, Nightingale, 2003, p153, following Newell, 1982)

discussion of what routines are is couched in terms of tacit knowledge, while the ways that they are used are discussed in abstract terms¹⁰ (Nelson and Winter, 1982, pp178).

The conceptualisation of two distinct kinds of knowledge is also challenged by Brown and Duguid, who refer to Polanyi's original formulation as expressing a tacit *dimension* of knowledge. In these terms we have two interdependent dimensions, where the explicit depends on previously gained tacit dimensions of knowledge. The two must be present and in continuous interchange for knowledge creation to be possible and useful (Brown and Duguid, 2001, pp203-204). Similarly, Nonaka and Takeuchi focussing their model of knowledge creation and conversion processes within firms, regard tacit and explicit knowledge to be complementary forms of knowledge (Nonaka, 1999; Nonaka and Takeuchi, 1995). The model makes the assumption that knowledge is created and expanded through social interactions, with interaction between tacit and explicit often beginning with the individual and then amplified in quality and quantity through a spiralling social process within the organisation. The interactive process is conceptualised as being made up of four modes namely: Socialisation, Externalisation, Combination and Internalisation, (SECI). Tacit to tacit interaction occurs during the socialisation mode during which direct personal contact is required to accumulate and disseminate knowledge with colleagues. This conversion mode requires that mental models and experiences be shared through observation, imitation and practice. During the externalisation mode tacit knowledge is articulated into concepts or language through face-to-face communication with individuals who share beliefs and know-how, and who can maintain mutual trust in order to promote this dialogue. Combination is a process of explicit-to-explicit transfer conducted through formal meeting, documentary and other hardware methods of information transfer. Finally the process reverts into a conversion from the explicit into tacit as shared models are internalised and embrained, and embodied in mental models or technical know-how.

¹⁰ Nelson and Winter's theory ranges from the level of interaction between individuals, (in discussion of what routines are) to the level of technological trajectories guided by environmental selection mechanisms

2.3.6 Tacit Knowledge in the Sociology of Science and Technology

In parallel with the increasing interest in the socio-economic role of knowledge, a new sociology of science (the 'sociology of scientific knowledge' or SSK) developed toward the end of the twentieth century. SSK diverged from the older Mertonian school to emphasise the influence of social forces in shaping scientific knowledge, and set out to investigate the role of different kinds of knowledges that would affect the development of science. The Mertonian approach looked to the macro-institutional structure of scientific enterprises, and tended to accept the idea of scientific knowledge as disinterested engagement with universal facts (Merton, 1973), making scientific knowledge into a privileged, universal form in comparison to other forms of knowledge. The new sociology noted that in practice scientists employed forms of knowledge (tacit) that could not be easily transferred or interpreted according to the norms of an universal form of knowledge production. The development of a scientific concept may, therefore, be viewed more as a sociological rather than an epistemological process, and concepts could be described as largely socially constructed.

Similarly a description of technology as a social construction has been proposed to explain the development and consumption of technology. The Social Construction of Technology (SCOT) literature aims to show that artefacts are

'...culturally constructed and interpreted.....(and)...there is flexibility in how artefacts are designed'

(Pinch and Bijker, 1987)

There is not just one way of designing or using an artefact, and the creators of those artefacts cannot control the social context into which the artefacts enter. Groups of actors relate to the new artefact and technologies in differing ways and create their own knowledges and the consumer contributes to the process of technological development as much as does the artefacts' designer.

Some tacit knowledge may be embedded in artefacts, routines, and regulations, and transferred as 'turnkey' packages of knowledge (Collins, 2001). In this way unrecognised and unrecognisable knowledge can be transferred without being made explicit, and contribute to the shaping of future knowledge creation. To work as

designed the packages orientate the learner along a certain trajectory of development even if what is learnt in this process is at a different level relative to the knowledge used to create the package. The learner may be regarded as having gone through an unconscious or tacit process of learning, adapting behaviour to the new reality heuristically created by the presence and use of the turnkey package.

Conversion to organic agriculture may also be thought of as a process of adaptation to a turnkey package, where the codified structure of the organic system may provide a way for farmers to create their own conceptions of what organic farming entails. Learning about the new routines associated with production is coupled with learning about the alternative agri-food system in which organic agriculture is embedded. The couple is implicit and helps to re-orient the farmer toward the alternative system. The couple between routines and concept is also embedded in new social links the farmer makes on conversion to the organic system, and which reinforce the new mindset. The package includes new production techniques, routines, habits, networks, and conceptual knowledges, and the learning takes place in a social milieu dependent on an interaction between the tacit and the codified.

2.4 The Knowledge Society and Disciplinarity

Changes in the economic status of knowledge has been accompanied by greater study of how the production and use of the various forms of knowledge is reflected in, and contributes to, changes in society. Debate about a 'post-industrial' and a 'knowledge' society developed during the 1960s¹¹ (Lane, 1966; Drucker, 1969; Bell, 1973), although economists such as F. A. Hayek had already drawn attention to the use of various form of knowledge in the 1940's (Hayek, 1945). However, the use of the term 'Knowledge Society' had proliferated by the turn of the century (Ungar, 2003).

The concept of the knowledge society maintains an intimate connection with the development of the knowledge economy and reflects a view that the production of knowledge has become more distributed and its management more diffuse (David and Foray, 2002). This was given theoretical form by Gibbons et al (1994) in their

¹¹ The two terms 'Post-industrial' and 'Knowledge Society' used interchangeably by some authors e.g. Bell, 1973

proposition of a new mode of knowledge production. Basing their initial analysis on trends in science policy and in the organisation of scientific research, they identify a growing alternative form of knowledge production that may be distinguished from what was previously dominant.

Gibbons et al labelled the two forms of knowledge production as Mode 1 and Mode 2. Mode 1 (the traditional form) was characterised by a disciplinary structure, where problems are set and solved in an academic context, are largely the preserve of a specific community with stable and hierarchical organisation and comparatively little social accountability. In contrast a strengthening alternative paradigm is transdisciplinary, where problems tend to be set and solved in a context of application, is socially distributed, organised through heterarchical and transient structures and has a high level of social accountability and reflexivity. Transdisciplinary knowledge production encompasses the capacity to mobilise and manage knowledges from different domains as well as to develop new theories or conceptualisations and 'ways of knowing'¹². It is unlike multi- or inter-disciplinarity in that participating knowledge domains are not necessarily organised in disciplinary structures and their synthesis may not lead to the formation of new disciplines.

Whilst this re-thinking about knowledge production derived from science policy and from the organisation of scientific research, Gibbons et al have broadened the context. The Mode 2 conceptualisation has been applied to mass higher education, the role of the humanities in the production of knowledge, the influence of intensified global socio-economic links and networks and the resulting need for institutional re-configuration. Mode 2 also poses a challenge of managing the distributed, heterogeneous and reflexive nature of this type of knowledge production. The distributed nature of Mode 2 as proposed in 'The New Production of Knowledge', where knowledge production is situated in a much greater variety of sites, may be seen as offering greater legitimisation for the knowledges produced in and by hitherto marginalised knowledge domains and actors.

¹² 'Ways of Knowing' borrowed from Cook and Brown (1999)

Mode 2 has been criticised for appearing, among other things, to propose a post-modern vision of knowledge production. According to its critics the suggestion that Mode 1 forms of knowledge production are being eclipsed under-estimates the role of basic scientific research in setting the agenda for knowledge production and its ability to produce new research questions from its own cognitive resources (Gläser, 2000 and; Ziman, 1996). According to this argument Mode 1 type of knowledge production maintains relevance because it is qualitatively different to Mode 2.

‘..basic research can be terminated but cannot be redirected without losing its former content’

(Gläser, 2000, p461)

Gläser argues that while there is necessarily a close and symbiotic relationship between the institutions of science and society, which have strengthened in recent years leading to more emphasis on application-driven research, there remains a core cognitive imperative that drives what may still be referred to as basic science. A process of the ‘co-mingling’ of knowledges is acknowledged particularly in relation to the shaping of scientific agendas by social objectives, but only in so far as the cognitive constraints on the degree of such co-mingling are recognised¹³.

The transdisciplinarity of Mode 2 may also appear to be treating knowledge in the manner of program-level forms of knowledge as discussed in Nightingale’s treatment of tacit and codified knowledge (Nightingale, 2003). The disciplinary character of Mode 1 knowledge owes some of its existence to the tacit processes that contribute to its production. The claim for transdisciplinarity in Mode 2 seems to make the assumption that knowledges from different knowledge domains may be combined without losing significant attributes, and that the combination of knowledge is essentially a process of information processing.

In a development of the Mode 2 conceptualisation, and in response to such criticism, Nowotny et al argue that together the transdisciplinary and distributed character of Mode 2 have created ‘transgressive arenas’ of knowledge production. (Nowotny et al,

¹³ Finalization theory discusses the twin processes of the ‘scientification’ of society and the ‘politicization’ of science and relates them to the rise of ideas about the ‘knowledge society’ and new ways of generating and distributing knowledge. See special issue of *Social Science Information*, Vol. 36 (4) Dec. 1997

2001, p4). These arenas are termed the 'agora' and are the spaces in which the contextualisation of knowledge takes place, bringing knowledge production under a form of wider societal management and construction. Science, for example, benefits from the contextualisation that the agora offers without compromising 'scientific objectivity'. All forms of disciplinary knowledge are brought to the agora to be reviewed in the 'marketplace of ideas', but the agora may also extend its influence to shaping the questions that disciplinary knowledge production address.

The agora is seen as a selection environment for ideas in which the influence of knowledge from different knowledge domains may combine to create a '...problem-generating and problem-solving environment'. But it also offers a space where types of knowledge may meet and be mutually influential.

'It is populated not only by arrays of competing 'experts', and the organizations and institutions through which knowledge is generated and traded, but also by various jostling 'publics'...The agora is a domain of primary knowledge production through which people enter the research process, and where 'Mode 2' knowledge is embodied in people and projects.'

(Nowotny et al, 2003, pp192)

Nonaka and Konno have proposed a similar construction to the agora in the much more restricted setting of knowledge management in firms, but also with a view of describing how knowledge from different sources go through a process of contextualisation. They use the Japanese term 'Ba'¹⁴ to describe spaces for knowledge exchange, that are constructed either formally or informally within organisations, that may be physical, virtual, or mental, and are an essential component of an environment in which learning may take place. The Ba allows different forms of knowledge and knowledges from disparate areas of the firm to mingle, influence, or modify other forms as is appropriate. The individual or group that is involved in a Ba is able to:

¹⁴ 'Ba' :equivalent to "place" in English, but which is derived from an existentialist framework encompasses a number of different layers of meanings including a context 'which harbors meaning' (Nonaka and Konno, 1998)

‘...transcend...(their own)...limited perspective or boundary. This exploration is necessary in order to profit from the “magic synthesis”¹⁵ of rationality and intuition that produces creativity’

(Nonaka and Konno; 1998, p4)

The Ba has been incorporated in the SECI model (see above), that describes the interrelation of tacit and explicit knowledges and organisational learning. Whilst it is not based on a hierarchical principle, different types of Ba exist that perform their integrative functions at different levels of organisation, from the interactions between individuals to the interaction of teams. The firm itself operates in a Ba represented by the market environment as it relates with other firms and organisations.

Whilst it may be too simplistic to equate the Ba and Agora constructions to each other, each exemplify conceptualisations attempting to describe the integration of knowledges from disparate domains of knowledge¹⁶, both of the ‘traditional’ disciplinary forms and from non-disciplinary and distributed sources of knowledge, and the creation of new knowledge. Both may also be seen to capture the interaction and roles of tacit and codified knowledges in creating new knowledge, and each construction also appears to act as sites (selection environments) that co-evolve with social, economic, and technical forms contained within it.

2.5 Approaches to Knowledge, Learning and Organic Agriculture

During much of the twentieth century explicit studies of knowledge and learning in agricultural literature were aimed at understanding and influencing the diffusion of technical innovations to family farms, and in developing extension activities within the compass of agricultural production. The approach of many of these studies and activities was predicated on the linear paradigm of innovation where research knowledge from public and private scientific institutions should be communicated via extension agents to the farmer as end-user (Rogers, 1995; Buttel et al, 1990; Röling, 1988). Studies of third world agricultural development, and more recently the study

¹⁵ A reference to S. Arieti (1976, pp26): Creativity: The Magic Synthesis; Basic Books, New York

¹⁶ Other authors have discussed other ways of describing how knowledge from different fields may be integrated e.g. Collins and Evans (2002): Interactional and contributory expertise

of sustainable agriculture, including organic agriculture, have provided much of the impetus for exploring different forms of knowledge and learning (Padel, 2001; Cerf et al, 2000; Röling and Wagemakers, 1998). There has been a general shift away from regarding the linear process of knowledge diffusion as being the optimum or actual processes of knowledge creation and learning. While extension services may continue, in certain circumstances, to be based on such a linear model, the concepts of participatory and social learning, and the relevance of local and tacit knowledge have been developed in both theory and practice (Pretty, 1995). This re-orientation aligns with work on knowledge and learning¹⁷ that regard the linear model of innovation as unrealistic and obstructive (Steinmeuller, 1996).

It has also been argued that organic agriculture is a radical innovation in agriculture that demands a break from the cumulative, path dependent processes by which innovation is largely represented (Morgan and Murdoch, 2000). This view suggests that innovators undergo a process of forgetting at least some of the knowledge that was required to operate successfully in conventional agriculture. 'Forgetting' here appears to mean changing behaviour, dropping old habits and routines in favour of new ones, and becoming engaged in new associations, and/or new forms of associations. The incremental process is replaced by a sudden step change and a wholesale conversion of behaviour and relationships. Becoming a successful organic farmer, therefore, seems to require a wholesale change in attitude in order to learn new modes of working and thinking. It is not enough on this basis to learn new techniques that may be incorporated into the established farming system, and as an innovation, organic farming is predicated on a whole-farm approach and not merely in changes to particular devices or routines (Lampkin et al, 2002). Furthermore, organic farming is explicitly linked with the downstream activities of food processing, distribution and marketing. The innovation, therefore, can be said to encompass an entire agri-food system that closely links farming knowledge with knowledge in areas of activity beyond agricultural production. Each part of the agri-food system contributes to the definition and development of organic agriculture, and knowledge

¹⁷ Much of the work on knowledge and learning has been conducted in relation to manufacturing firms, industrial innovation and production, and in areas of public policy related to science and technology. In adapting treatments of knowledge and learning from these areas to examinations of the development of organic agriculture the differences in structure between the agricultural and manufacturing sectors, and of the different objectives and processes associated with each area are recognised.

and learning in each area is significant in its growth. The interaction of these knowledges is at the core of the empirical case studies that are described later.

However, what an organic farming system should look like is still the focus of debate, and raises broad ranging conceptual questions (Dabbert et al, 2004; Campbell and Liepins, 2001; Goodman, 2000). An extreme view is that organic agriculture lies in complete opposition to the conventional agri-food system, requiring farmers and other actors to learn to operate within a radically different social as well as practical agricultural framework, and to build up a new understanding of agriculture and the food system. The way that processes of knowledge generation and of learning in organic agri-food system is central to this debate, and these processes are discussed in relation to the supporting structures for knowledge generation and learning, co-ordination and governance such as Communities and Networks of Practice in the following chapter.

2.6 Conclusion: Integrating Knowledges in Organic Agriculture

The study of Organic Agriculture in this thesis is a study of a socio-economic form that undergoes continuous change within an environment that acts upon diversity and variation. Organic Agriculture is seen to develop through socio-economic processes within which knowledge generation and learning are key variables, and where social, institutional and physical context, historical development and path dependency influence the decision-making of economic actors. This chapter has concentrated on descriptions of knowledge and suggested the necessity to regard knowledge generation and learning as an activity that combines elements of the cognitive, social, and the physical.

The production of knowledge in Organic Agriculture has traditionally been seen to exhibit attributes similar to the Mode 2 type of knowledge production. Knowledge of organic production methods has been mainly developed by practitioners and disseminated through networks that overlapped with many forms of social organisations built in opposition to the twentieth century mainstream hierarchical socio-economic consensus (Conford, 1988). In sympathy with the general movement

for sustainable agriculture, Organic Agriculture has striven for an holistic approach to food production and consumption, bridging divisions between disciplinary knowledges, placing emphasis on local and traditional forms of knowledge and, hence, valuing the tacit and personal components of agricultural knowledge. It is claimed to have been essentially non-hierarchical and reliant on practical and experiential ways of building knowledge.

There have been efforts at developing an expert research base to organic production, but the main centres of practical agricultural research remain closely associated with the practitioner community. However, whilst the increase in academic interest in research as evidenced by the growth of international bodies such as ISOFAR, OFRF and IFOAM¹⁸ is a positive contribution, there may be signs that the development of organic agriculture as a regulated system is reducing practitioner influence and introducing a centralised and thereby more hierarchical structure of knowledge generation and dissemination. Whilst this is not a core issue in this study the structure of organic agricultural research and knowledge generation is of relevance to the way that Organic Agriculture may grow and is further explored in Chapter 5.

The idea of a space within which different aspects of knowledge and where knowledges from different domains may interact, as represented by Gibbon et al's (1994) concept of Mode 2 and the *agora*, is used in the study. The agora includes knowledge from the production, the market and the regulatory and policy domains, and is manifested within structures of co-ordination and regulation that are created within and about organic agriculture. The empirical work of Chapter 6-8 presents examples of such agora and describes the causal and social links operating between actors through knowledge centred interactions, involving a continuous interchange between tacit and codified forms of knowledge.

Organic Agriculture is the product of a synthesis of knowledges from different domains. The empirical work presented in later chapters attempt to show how knowledges from different knowledge domains interact to create conceptualisations of organic agriculture, and how these visions of organic agriculture influence the

¹⁸ ISOFAR: International Society of Organic Agricultural Research, OFRF: Organic Farming Research Foundation, IFOAM: International Federation of Organic Farming Movements

behaviour of farmers and other actors involved in networks of Organic Agriculture in Wales. Knowledge generation and learning within Organic Agriculture, therefore, are examined as a social process in the construction of Organic Agriculture. The following chapter explores ways by which knowledge is shared through various forms of association, and in Chapter 5, the development of Organic Agriculture is further explored in an institutional context.

Chapter 3

Theoretical Framework (II): Social Learning, Communities and Practice

3.1 Introduction

This chapter aims to discuss some of the issues involved in understanding organic agriculture as a social construction. Whilst the previous chapter explored typologies of knowledge and the interaction of knowledge domains, this chapter will look at some of the mechanisms relevant in understanding how knowledge is generated and shared between different domains, and consider some practical ways of co-ordinating knowledge generation and learning within socio-economic contexts.

The chapter begins with a discussion of learning mechanisms at the individual's level. The focus is on conceptions of social learning, and on the interaction between knowledge, practice and social structure. The core of this discussion is an examination of structures that enhance learning through creating the conditions for optimal interchange between tacit and codified dimensions of knowledge. Therefore, it starts with a general review of social learning. Some of these issues were discussed in Chapter 2 in relation to the debate on tacit and codified knowledge and the processes of knowledge transfer. The focus in that previous discussion was on the interaction between knowledge forms, and how the characteristics of different types of knowledge may affect knowledge sharing and learning processes. Hence, the discussion of routines and conventions became relevant as processes that carry embedded knowledge, along with their relationship to practice and the heuristic effect of rules and regulation. Many of these themes will be developed in the next chapter. The focus now will be on the characteristics of those social forms through which these knowledge generation and learning processes are articulated.

Much of the review that follows is linked with structural issues although the thesis, and particularly the empirical work of Chapters 6-8 is geared toward actor-centred accounts. Structural forms are explored in a review of communities and networks as means of co-ordinating learning and knowledge generation, with some reference to

their relationship to hierarchical and market forms of co-ordination. Particular attention is paid to Communities of Practice and Communities of Common Purpose as forms that may be identified as operating within each of these three means of co-ordination. The expression of knowledge in the form of practice engages ideas of community and identity and their roles as binding and knowledge sharing elements. The focus on knowledge expressed through practice also generates the need to describe how such knowledge may be communicated across the boundaries of different knowledge domains and different practices, and the extent to which ideas such as Communities of Practice may be applied in accounting for such transfer.

One of the objectives of this work is to examine how the practices of organic production interact with the practices of marketing organic food, and with the practices of the regulators and policy makers. These areas (production, marketing and policy making and regulation) have previously been mentioned as the three domains of knowledge that are seen to contribute to a synthesised conception of organic agriculture. The interaction of knowledge through practices constitutes a knowledge transfer, or perhaps more accurately a knowledge sharing, process. The process is seen as reflexive and the latter part of the chapter seeks to explore those social structures that bring different practices together and facilitate this synthesis. The discussion progresses from the co-ordination of individuals in social learning scenarios, the co-ordination of communities and networks of practice through to a discussion of macro co-ordination and governance mechanisms (in Chapter 5).

Social learning is a process that occurs between individuals, individuals and groups, and between aggregations of individuals within groups. In this view of social learning there is a continuous interchange between conceptions of knowledge as being only 'in the heads' of individuals, and the descriptions of emergent properties of 'organisational knowledge'. Similarly the literature describes how Communities of Practice, networks and other actors develop knowledge within their own boundaries and share it in direct interaction, contributing to a process of paradigm construction and reinforcement, but also contributing to the generation of those same structures and exchange routines.

3.2 Social Learning

General theories of learning emanate from a wide range of disciplines and research is oriented along many theoretical perspectives that focus primarily on behavioural, cognitive, humanistic, or social lines, leading to different definitions of the process¹⁹. While it might be said that nearly all forms of learning depends on some form of social interaction the learning meant by the term 'Social Learning' is differentiated from other forms by the quality of, and degree of social interaction in the learning process. Research within the more defined area represented as 'Social Learning' is also developed within a similar range of disciplines to the above yielding different definitions, interpretations and applications for the term²⁰. The concept includes both behavioural and cognitive processes so that social learning can be seen to be both a process of conformation to acceptable roles and practice as well as being a creative process whereby new knowledge is generated within and by the relevant social structure. It may also be differentiated by actor type, whether focussed on individuals, formal and informal groups, or whole societies, and Social Learning research is about the kind of relationship that develop between actors and about the kind of knowledge being generated or transferred.

Social learning is of interest in this thesis as a learning process that follows from interaction between individuals and a group and between a group and the wider social environment. These include 'learning to fit' processes in which roles and relationships are learnt, and this extends to the process of translating concepts and practices deriving from other actors. It also attempts to examine those processes that occur within a group and that generate new knowledge, which, hence, becomes a possession of the group as an entity. This last area includes how substantive knowledge is generated within a particular context, its form, use and legitimacy with reference to the group and to other actors.

¹⁹ The major fields of study are reviewed in Wenger, 1998; Merriam and Caffarella, 1991; Lave and Wenger, 1991.

²⁰ For a theory of social learning see Wenger, 1998; and for a general review see Parson and Clark, 1991, and Fox, 2000

3.2.1 Social Learning and the Individual

Social learning as a process of learning by adult individuals within social settings can be described at one extreme in purely behavioural terms, and at the other in terms of rational-actor models. For an extreme behavioural model the learner is assumed to have little or no knowledge about an area of operation or practice and performs through a series of stimuli/ response actions. However, in theories in which the learner is vested with more knowledge and agency, and that allow for more interaction between the learner and the social setting, learning is seen to occur through observation and may imitate behaviour that is seen to be successful in achieving desired goals. In this context learning is more likely to be successful when the learner observes a model that is regarded in a socially positive light and normally exhibits locally acceptable standards. Learning is also expected to be enhanced the more knowledge that the learner already possesses, the more the imitated model operates in similar types of conditions to the learner, and/or the more the learner perceives that the behaviour to be learned lies within their own capabilities (Social Learning Theory (SLT) see Bandura, 1977).

A contrasting psychologically based theory of social learning is Cognitive Dissonance Theory²¹ through which the focus is change in an individual's attitudes and beliefs rather than conditions for imitative behaviour (Harmon-Jones and Mills, 1999). Dissonance results from the co-existence of two elements of knowledge or cognitions that are in opposition, creating a psychologically uncomfortable condition. This condition leads the individual to action that will tend to reduce dissonance. Reduction in dissonance may be achieved by change in one of the cognitive elements, which may include cognition about attitudes, beliefs, perceptions and behaviour. Hence, a change in activity can either be induced by change of beliefs, or the obverse may apply as a change in the type of activity induces a change in beliefs. Either way the individual learns to act or to believe in ways that reduce psychological tensions.

At the other extreme of the individual learning range is rational-actor theory, which carries the implication that the learner already has substantial knowledge and may be capable of making some predictions about future events and, as a result, modify

²¹ Originated by Festinger (1957)

behaviour or beliefs. It is applied in economics to describe the decision making of economic agents faced with complex choices in conditions of limited information (Bala and Goyal, 1998). In these cases agents will observe the environment and learn from other agents, making choices partly in imitation. This form of imitation differs from the type described by the behavioural models since the rational-actor assumes that the observed model may be informed by privately held or scarce information and that it is, therefore, rational to imitate the behaviour. This kind of behaviour can result in 'herding' phenomenon as relatively large numbers of individuals adjust their behaviour in mass imitation of a leading model (Bikhchandani et al, 1998; Banarjee, 1992). The extreme rational-actor theory assumes perfect knowledge on behalf of the economic agent, a condition for which learning would be a superfluous behaviour. As suggested above, useful models for individual learning in social contexts, and in the context of this thesis, lie in between the two extremes of pure behaviourist and rational-actor, where bounded rationality²² and social interaction play important mediating roles.

3.2.2 Social Learning: Communal Learning Processes

Whilst the form of social learning discussed above is centred on the behavioural and rational characteristics of individual learners a second class of social learning theories involves communal processes. In these, learning takes place not only through observation and imitation of existing practice but also as part of processes by which new knowledge is generated. Social learning here includes behavioural learning that occurs during the process of becoming part of a group and learning about and adhering to group norms and perceptions as pre-requisites to participating in group-learning processes. It relates the identity of the learner to that of the group, and the emphasis during study of these processes is on the interactions between members of the group, and on the conditions for building trust, exchange relationships, and commitment to the group (Lave and Wenger, 1991).

²² For a multi-disciplinary discussion of research about bounded rationality see for example Gigerenzer and Selten (Eds.), 2002. For maximisation of utility see for example Elster 1977, Fischhoff 1991; Neumann and Polister 1992; and for Optimisation, which can be used in a number of different ways- to describe the outcome of a choice or process, the quality of the option selected or the way in which the choice was made, on cognitive, behavioural, cultural or evolutionary levels, and sometimes used as a synonym to maximisation see Klein, 2002 p105

It can be argued that learning, whether cognitive or behavioural, is a process that occurs only within the heads of individuals and, therefore, any exploration of learning processes should take account of underlying psychological processes. Simon follows this approach to some extent in his discussion of learning, knowledge transmission and storage processes in organisations. He emphasises the importance of the individual while accepting that what is learnt and how learning takes place is dependent on social processes. He demarcates a boundary between knowledge processes at the individual and the group level (Simon, 1991), but for a comprehensive understanding of social learning an understanding of learning processes on both levels would be required. Furthermore, when referring to learning processes within groups rather than in relation to individuals there is a change in parameters, and a shift in the meaning of basic terms such as learning, memory and knowledge. A theory of learning within a social context must deal with learning as an emergent phenomenon of communal processes, and it must be treated on its own terms and not simply as an extension or aggregate of individual learning processes. Herbert Simon warns, for example, against allowing terms like 'organisational learning' to be applied without reflecting on

'..where in the organisation particular knowledge is stored, or who has learned it'
(Simon, 1991, p126: emphasis in the original)²³

The distinction between the individual and the group learning process may be presented as a distinction between cognitive and social processes. The cognitive process is intimately tied to the individual, whereas the group learning process is emergent from processes that include the interaction of knowledge residing in individual group members. This distinction is exemplified by the difference in the positions of those individuals who are active participants in a group learning process and those that are outside this process but are aware of, and may be affected by the knowledge that is generated by the active learning group. The group takes on an identity that has an intimate relation to the knowledge that it produces, or synthesises, from individual contributions. Such an identity, based on the substantive knowledge generated by active participants, may also be recognised by non-contributors to the group-learning process. The significance and legitimacy of the knowledge produced

²³ Echoed by Nightingale/ Searle Chapter 2

by the group is judged and awarded a value, and non-contributors may award levels of expertise²⁴ to the group that reinforces its identity.

3.2.3 Social Learning and Controversies: Learning through Framing Activity, Criticism, and Debate.

Certain social processes and events make opportunities for social learning more evident than do others. For example, the value and pertinence of expertise that is drawn upon to share knowledge is brought into sharp focus in episodes of controversy. In such events, what becomes a matter that is pertinent to learn about and to debate are themselves matters for debate and disagreement at the individual and group level. Wynne notes that the learning that takes place during controversies about technologies and risks includes learning about new information relevant to decisions or commitments, the recognition of 'hitherto excluded actors', and elaboration of the agenda of issues to be addressed (Wynne, 1995, p28). Controversies illustrate how 'implicit social models' held by different groups and their differing social conditions produce particular boundaries or frames for debate. The process of framing seen as

'...a way of selecting, organizing, interpreting, and making sense of a complex reality to provide guideposts for knowing, analyzing, persuading, and acting' (Rein and Schön, 1993, p146)

...can indicate how grounds for disagreements and controversies are based on the different ways that different social actors create these frames. As decisions about technologies and risk are examined and challenged outside traditional structures the frames of reference broaden. Wynne argues that the general public's assessments of technological risks are not always based on the frameworks of technical experts, but on the trustworthiness of those supposedly in control of those risks (Wynne, 1995, 1988).

The way that knowledge about competing frames is shared between the contestants in a controversy is via a process of social learning, which may itself be considered as a framework for managing changes in perceptions and understanding. For example,

²⁴ For a discussion of Expertise and identity in Science Studies see Collins and Evans, 2002; and subsequent debate in a published symposium in *Social Studies of Science* 33 (3) June 2003, pp 389-452

Woodhill and Röling, in discussing what they see as altered ways of thinking required for sustainable development refer to social learning as a

‘...framework for thinking about knowledge processes that underlie societal adaptation and innovation... (...and that)... focuses on social actors at all levels as ‘circumstance appreciators’, who can learn to adapt on the basis of discourse and legitimation of political action. Meaningful interaction and communication between individuals is central to social learning’

(Woodhill and Röling, 1998, p64-65)²⁵

The contestants in a controversy will be identified as appreciators of different sets of circumstances, and as such will espouse the characteristics and identity of their own social group; hence social learning implies an identity forming process.

3.3 Learning as a Social and Identity Forming Process

Learning as a socialising and identity forming process in organisational settings is noted by Brown and Duguid, and described as

‘..acquiring the ability to act in the world in socially recognised ways’

(Brown and Duguid, 2001, p200)

The emphasis is on social learning within large organisations and they refer to literature²⁶ that discuss organisations as generators of culturally homogenising forces and which are seen as major identity forming influences on individuals and groups. Brown and Duguid go on to discuss the subdivision of large organisations by social and group boundaries, and that the resulting smaller units can have a more profound influence on individual and group identity than does the monolithic organisation. These groups are seen as groups of common interests and purpose, and their local coherence modify the perception of the organisation as the greatest work-based influence on the formation of identity. The sub-organisational levels are, therefore, promoted as those within which processes of social learning may be more effectively understood.

²⁵ Much of this perspective on social learning derives from Habermas’ notion of ‘communicative rationality’

²⁶ For example Brown and Duguid quote Chester Barnard, (1938), whose theme of the firm as a producer of cultural homogeneity continues in Arrow (1974) and Kogut and Zander (1996)

The grouping and identity forming processes that occur within large organisations have been linked to the differentiated work practices and routines that individuals may experience, and to which they contribute in their working lives. The common interest and purpose of sub-groups within an organisation can be delineated on the basis of work practices, and in any large organisation these can appear in a variety of forms. Individuals joining an organisation may do so on the basis of their already acquired knowledge that fit the 'particular practice' that awaits them, and to which they will contribute and learn from. Whilst the complete novice might not be in possession of high levels of relevant knowledge, nevertheless it can be expected that even the rawest recruit will have some relevant capabilities and capacity to learn and operate within the parameters expected by the organisation. Hence, diverse social and occupational communities are created which are based specifically on practice and the knowledge gained through participation in common practice within a defined group. It is work practice according to Brown and Duguid that is critical in understanding the acquisition of identity and, through that process, knowledge. Social learning in the context of places of work, therefore, rests on both a degree of common identity and of common activity. What is not strongly addressed in this conception as described so far is the generation of new knowledge and the process by which new knowledge may emerge from a communal process of learning.

3.4 Communities of Practice and Social Learning

The groups described above are what Lave and Wenger termed as Communities of Practice (Lave and Wenger, 1991; Brown and Duguid, 1991), and derive from their work on participative or situated learning²⁷. In Lave and Wenger's terminology Communities of Practice²⁸ are groups of interdependent participants who provide a context within which members of the community construct shared identities, enable learning by new entrants, and to create new knowledge. They are structures that can be identified in any area of life, both in social and work contexts, although much of the original theoretical development of the concept relates to Communities of Practice

²⁷ This work is differentiated from much learning theory that is based on formal schooling and classroom based learning (refs?)

²⁸ See also : 'Occupational Community' related to studies of organisational cultures, and 'Invisible Colleges' in discussion of learning within expert groups (De Solla Price, 1963); 'Epistemic Communities' (Knorr-Cetina, 1999; Radaelli, 1995)

within a working environment. A theory of learning within organisations²⁹ based on 'Communities of Practice' integrates learning with work practices and innovation. Individuals may belong to more than one community of practice at any given time, which may overlap in their practices, and may also change over time.

The concept of Communities of Practice derives from a social theory of learning, as opposed to the psychologically based 'Social Learning Theory' as discussed above (Bandura, 1977), and attempts to integrate learning with meaning and identity, as well as with community and practice³⁰ (Wenger, 1998). Learning through a community of practice is seen as a process of social construction rather than primarily as a process of knowledge transfer. Viewed at this level, knowledge is created within a context to which there is a range of contributing sources, and within which learners may construct their understanding by using a range of common resources, and, importantly, through active participation in practice. Since members may also belong to other and maybe more dispersed groups, a community of practice is provided with external links, allowing external influences and changes to impinge on the community.

By virtue of membership of a community of practice an individual can access and contribute to a collective identity, which becomes an important component of communal knowledge. Learning within a Community of Practice means acquiring the social capital to operate successfully within a particular community, a process described by Lave and Wenger as enculturation (Lave and Wenger, 1991). Partly due to its communal nature much of what is learnt is not explicit or explicable and is about practical rather than abstract knowledge. Thus there is a strong focus on tacit dimensions of knowledge in Communities of Practice theory.

²⁹ See also Epistemic Communities Knorr Cetina (1999, 1981)

³⁰ Schatzki (2001) provides a broad discussion of the contrast between individualist and non-individualist theoretical approaches to social order and places practice theory outside this dichotomy while able to make use of features from both sides. These include an acknowledgement of the structuring and co-ordination role of agreements, negotiations and other interactions and the significance of skills and interpretations. These are seen as being embedded in practices and hence subject to or constitutive of practice. Explanations of 'Supra-individual' phenomenon are built up from an individualistic base, but are seen to differ markedly from conventional conceptions of 'society' and 'systems'.

3.4.1 Application of Communities of Practice

As already discussed the concept of Communities of Practice has been largely developed in working environments. Lave and Wenger's work on situated learning, which initially developed the concept of Communities of Practice, was based on the study of midwives, tailors, meat cutters and quartermasters (Lave and Wenger, 1991). Wenger later used claims processing workers at an insurance firm to portray shared practice (Wenger, 1998), while Brown and Duguid (2001) draw on a number of studies conducted with diverse occupational groups, from service technicians, to senior managers and medical doctors to indicate the utility of this perspective.

Communities of Practice highlight the importance of social processes for enhancing the knowledge and learning capacities of the organisation. For example, Brown and Duguid use fieldwork conducted by Orr as the basis for analysis to refer to service technicians in a large firm whose working practices deviate substantially from the working directives provided by the firm's management (Orr, 1990). The technicians learn ways of working from participating within a relevant community. The discrepancy between the technicians' practices and the firms' stated expectations suggest that communication flows within the organisation have been disrupted. The disruption appears to be located at the boundaries between different Communities of Practice within the firm: between the community that 'writes the book' and the one that does the practical work. The disruption fatally undermines the view of an organisation as a necessarily unified structure in which information may flow unimpeded and which can accumulate an organisational store of easily accessible knowledge.

The Communities of Practice perspective might, therefore, also be seen to exchange a monolithic view of firms with the opposite extreme of a balkanised perspective where knowledge is held in dislocated sub-units and, hence, provide a tendency for a catastrophic breakdown within organisations. Research on information flow and knowledge sharing within firms also indicates that knowledge can become 'sticky' and will accumulate and grow at those areas of the firm at which it is most directly applicable (von Hippel, 1999; 1994). These areas correspond to Communities of Practice and von Hippel has described how practitioners and users of knowledge and

information build up their own knowledge through specific and applied practice, a process that can reinforce the division and boundaries already created by the firms' organisational structure. The fact that this process rarely leads to a catastrophic breakdown in most organisations follows, as Brown and Duguid (2001) emphasise, from 'common-sense' interaction across boundaries, as communities that interact must develop a shared practice of communication³¹.

Communities of Practice in firms and organisations in general, therefore, are seen as coherent entities based on practice, whose boundaries are sufficiently open to allow for the interchange of knowledge and for the flow of information. They have become important concepts to study knowledge and learning processes in firms, but for the concept to perform effectively as a tool for examining learning in working environments they must be carefully defined.

Hence, it may be summarised that Communities of Practice relate to groups of workers who are engaged in similar work or use similar practice and for whom membership may be said to be an unconscious attribute. They must also have a mechanism by which the Communities of Practice may be able to take advantage of relevant new knowledge created outside its own boundaries. Brown and Duguid (2001) note from the studies that they review that people with apparently quite similar jobs such as doctors and nurses, or sales and marketing workers may be said to belong to distinct communities because their practices, identities, and knowledge are distinct. But their distinctiveness does not mean complete separation. Their ability to operate successfully within an organisation rests on their interaction with other Communities of Practice, and this feature must be an intrinsic characteristic of the Communities of Practice. In most cases it would also be expected that the membership of a community is not static, with individuals able to move within the structure of the larger organisation, contributing to the ability of different communities to translate and disseminate the knowledge generated within individual communities. Some part of the practice of the community is oriented toward external linkages, whether in the expression of practice or the expression of knowledge gained by individual members.

³¹ See also literature on knowledge transfer studied as knowledge flows (Schultz, 2001) and treatments of 'sticky' and freely flowing knowledge

The practice of one community must be decipherable by others and the community's membership already have an ability (in most cases) to operate in more than one social milieu. These links bind the Communities of Practice to larger social configurations and can allow for co-evolution with its environment.

3.4.2 The Shapes of Communities of Practice

A coherent and well-defined Community of Practice provides a space for learning, identity, support and reinforcement and its relationships with other Communities of Practice and co-ordinating structures will help to determine its boundaries and operation. If it is not to be an inward looking and self-referential form a Community of Practice may work best when it can balance commitment to internal coherence with openness to new knowledge and practice, and is in dynamic interaction with other Communities of Practice and co-ordinating structures. Such interaction may come about through the multiple affinities and identities that individual members may hold. Diversity in this regard is as important as the degrees of homogeneity that Communities of Practice exhibit. Regarding a Community of Practice in such open sets of relationships suggests that a community of practice should be seen as an amorphous entity. The boundaries of Communities of Practice may, therefore, not be strictly defined but merge with other Communities of Practice as individual members vary their degree of involvement, and new knowledge, influences and practice migrate into the community.

3.4.3 Dispersed Communities of Practice

The concept of a community of practice is also sensitive to the degree of dispersal that the community may be able to support before the term 'community' loses its operational significance. As discussed further below, the term itself can be elusive and used in different ways for different purposes. The core of the concept in this context signifies the relationships between groups of individuals engaged in shared practice and social learning processes, where the importance of tacit knowledge and its co-ordination with codified forms of knowledge is recognised. Learning the relevant tacit knowledge is seen to require members of a community of practice to interact on personal and regular, if not frequent, terms, with consequent potential implications for the spatial dispersal of community members.

This discussion reflects the work done in the sociology of scientific knowledge³² and on learning and knowledge transfer in the literature on industrial clusters, industrial districts, dispersed industrial networks, and concepts such as territorial systems of innovation. In the latter body of literature the identification of local milieu illustrate the influence of geography on the form and quality of industrial development.

Seen as particularly important in this literature are physical proximity and sustained localised activity that help to build up trust relationships and create the conditions for the transfer of tacit knowledge (Morgan, 2004; Cooke, 2002; Cooke and Morgan, 1998). Whilst dispersed Communities of Practice may sustain these features to a degree, their depth and durability may be questioned. A comparison of a dispersed community of practice, as may be exemplified by a multi-locational firm, with the opportunities for serendipity and cross-fertilisation available in a closely linked local or regional industrial cluster, suggests that learning opportunities will be more limited in the former. The learning process within a local cluster can cross boundaries that are created by organisational structure, and by particular practice communities, in a process analogous to that between Communities of Practice within single organisations in single locations.

However, the mobility of information and knowledge can also be seen as a source of potential problems for firms. In contrast to concerns for the stickiness of knowledge within the firm the focus of study for others has been 'leaky' and mobile knowledge breaching the boundaries of the firm and eroding competitive advantage (Liebeskind, 1996; Hoopes and Postrel, 1999). Much of this type of study has been oriented towards the kind of action a firm may take to reduce this effect. Where Communities of Practice straddle the outer boundaries of firms, organisations will face the effects of leaky information. However, sharing information and knowledge is only possible where there is a reciprocal relationship and the information is of value. Hence, participation in such exchange relationships can have double-edged effects on a firm,

³² See also work on tacit knowledge in science e.g. Collins (2001) emphasising the tacit component of learning and knowledge exhibited by groups of physicists engaged in the study of laser action in Sapphire

with the costs in leaked information balanced by the potential sources of new ideas and knowledge.

The conditions for this to occur is seen to be more apparent in what Morgan (2004) (following Brown and Duguid, 2000) calls a local ecology of knowledge that arises in successful and dense local clusters, and which, as the term suggests, is replete with forms of socio- economic life. The geographical proximity of organisations in a local cluster, therefore, brings about conditions where personal and communal relations may be developed, and hence actors develop strong 'untraded interdependencies' (Storper, 1997). These are relational assets in the sense that they constitute beneficial ties between economic actors and their strength or value could be measured in terms of the degree of 'relational proximity' between actors.

The term 'relational proximity' has been used by Amin (2000)³³ to suggest that this characteristic may be applied to internal relationships as well as to external ties. Relational proximity with external actors strengthens the local clustering effect while internal relational proximity benefits intra-organisational coherence and may be denoted as 'organisational proximity' (see also Morgan, 2004). This kind of proximity suggests that the knowledge resources and practices of the groups within an organisation are closely associated and that transaction costs are low. Multi-locational organisations may be capable of providing relational proximity for their constitutive Communities of Practice through the exploitation of modern communications technology, travel, and the effects of organisational cultural homogenisation, allowing organisational proximity to become 'a partial substitute for geographical proximity' (Morgan, 2004, p13).

The emphasis by Morgan is on the 'partial' substitution of geographical with relational proximity, and on the need for examining how each type of proximity will co-evolve. In their re-appraisal of the relationship between geographical and relational proximity, Amin and Cohendet tip the balance of importance toward the relational. They propose a distanced sociology of knowledge that recognises the ability of some forms of relational proximity to thrive when individuals are, in the

³³ '...relational proximity- more specifically , ongoing organisational routines and the social practices of collectives implicated in a common venture..' (Amin, 2000)

main, spatially separated and that, therefore, frees Communities of Practice from 'the territorial moorings of knowledge' (Amin and Cohendet, 2004, p93). Geographical proximity, it is argued, is not a necessary condition for all forms of tacit coherence and comprehension and while many Communities of Practice can attribute their bonds to their localised status, others have grown without either strong organisational or geographical proximity.

However, in considering the social and institutional context of Communities of Practice, Gertler has doubts that they can always serve as 'vectors' in sharing practice. In a discussion of the processes of learning-driven convergence that are said to accompany the globalisation of economies, the growth of multi-national corporations (MNCs), and the transfer of 'best practice', he notes the role that national regulatory frameworks play in limiting the transfer of practices within global corporations. These frameworks are constructed in relation to forms of local practice and since they are the products of locally embedded institutions, with local objectives they may have a restricting influence on the mobility of practices. His assertion that ..

'...systemic institutional influences might play an important role in helping determine which practices will flow between locations most easily and which will not...'

(Gertler, 2001, p19)

...could be applied equally to the diffusion of best practice within a national system as to that between national systems and global corporations. With the relationship of practice to tacit knowledge established elsewhere, Gertler further develops a study of tacit knowledge within an institutional context (Gertler, 2003) to invoke 'institutional proximity' as an important factor in enabling individual workers or firms to produce and share tacit knowledge, where institutional proximity is defined as

'..the shared norms, conventions, values, expectations and routines arising from *commonly experienced frameworks of institutions.*'

(Gertler, 2003, p91; italics in original)

Gertler reaffirms the importance of relationships based on some form of communal experience but places an institutional structure as a disciplining framework around the idea of community.

3.4.4. The Definition of Communities

The debate on the relative importance of spatial proximity in the development of Communities of Practice largely concentrates on the extent to which the community can operate coherently and constructively. There must, therefore, be some degree of agreement on what constitutes a community, what practice means in this context, and how the two relate to each other. The use of the word 'community' evokes attributes such as inclusivity, encouragement and indulgence, and is generally used with positive connotations. However, negative, exclusive and restrictive outcomes can also be associated with communal structures, as may be experienced by those that find themselves operating outside communal life, or are involved with dysfunctional or coercive communities. A further distinction between different sorts of community may also be related to the structural context in which they may be found. Communities created within a hierarchical structure may exhibit different characteristics to those in which community members are associated through market relations, through networks or through spatial (geographical) rather than a structural relationship. Within these different types of community power relations are significant factors in shaping and defining their form and outputs³⁴.

A community, therefore, might be regarded and understood in different ways, but it may be said that a community generally consists of a collection of individuals that are oriented to each other and share or refer their activities (and practice) to the norms of the collective. In all cases the term is applied to social groupings whose memberships exhibit a relational proximity in some form or other. This may be based on spatial proximity as in a local neighbourhood community or on the proximity of other characteristics of the communities. Amin and Cohendet, following Allen (2000), suggest that communities of people with similar enthusiasms, interests and purpose, and also (ethnic) diaspora communities may be included under this latter rubric. These types of communities are said to possess internalised 'shared understandings', or have the ability to

'..translate particular performances on the basis of their own tacit and codified understandings' (Allen, 2000, p28)

³⁴ For a discussion of Power in Communities of Practice and links to ANT see Fox (2000)

These 'tacit and codified understandings' are the assumed bonds between individuals belonging to the community, and are recognised as signifiers of identity. Communal identity in turn increases commitment to the community easing the process of accumulating the tacit knowledge and the 'shared understandings' that are necessary for the success of the community.

In adapting Senge's (1990) discussion of learning organisation to the creation of learning communities, Fisk et al takes the concept of a dispersed community even further and see a community as possibly encompassing a broad group that can include...

'...individuals, organisations, and institutions that cut across cultures, age groups and geographic locations. A community may also embrace a larger vision of social change' (Fisk et al, 1998, pp219)

In analogy to Allen's 'shared understandings' such a community requires a 'common vision' that encourages trust and collaborative effort. The focus of a dispersed community may be said to be more intensely and consciously attuned to the substantive common attributes of the group; on core and defining practices rather than on serendipitous or accidental areas of common interest that may arise from a geographically defined community.

'Neighbourhood' communities may be said to exhibit shared understandings and even a common vision arising from their geographic proximity but Morgan argues that interactions within any community necessitates active construction regardless of the spatial scale on which they operate, and denies that

'..the social interactions which constitute 'local' action are somehow natural, primordial, or automatic'

(Morgan, 2004, p11)

Similarly geographical proximity is not enough to develop the basis for a community of practice. A community of practice is formed when a group of people can

'..sustain dense relations of mutual engagement organised around what they are there to do'

(Wenger, 1998; p74)

Further, Wenger also notes that the mere existence of the basis for 'mutual engagement' is not enough to sustain a community of practice, but requires constant

reinforcement and maintenance. Hence, a spatial cluster of individuals or groups engaged in the same or similar practices does not in itself guarantee the creation of a community of practice, but the demands on the durability and efficiency of links between members of spatially dispersed communities of interests or practice may be more acute.

3.4.4 The Practices of Communities

While there may be a dispute about how effective Communities of Practice may be when they are dispersed, the importance of links based on common practice is agreed upon. Barnes (2001) in his discussion of shared practice gives what may be regarded as a description of community attributes even though he does not explicitly use the term 'community'. However, he describes shared practices as 'the accomplishments of competent members of collectives' (p24). A community of practice could then be seen as a social form that is created by the bonds of shared practice. Barnes suggests that these arise from the organisations of humans oriented to each other. He uses the example of a body of cavalry that are able to maintain a formation because they act in concert. Cavalry members are

'...interdependent social agents linked by a profound mutual susceptibility who constantly modify their habituated individual responses as they interact with each other in order to sustain a shared practice'.

(Barnes, 2001, p24)

The practice of a community is thus in intimate interactive relation to the communal form and provides it with a degree of coherence. Wenger distinguishes a community of practice from a more variegated community for this reason, and ascribes three dimensions to cement the relationship. These are described as Mutual Engagement, a Joint Enterprise, and a Shared Repertoire, and are all required to distinguish a community of practice. The first defines the community as an association of individuals engaged in a practice. The second is a result of negotiation between potential community members from which mutual engagement may follow, and is such that those community members help to create the enterprise and are mutually accountable for it. Finally the third dimension encompasses those activities that form the basis of the core practices of the community and includes

‘..routines, words, tools, ways of doing things, stories, gestures, symbols, genres, actions, or concepts that the community has produced or adopted in the course of its existence and which has become part of its practice’

(Wenger, 1998, p83)

Brown and Duguid also note the importance of a specific repertoire in differentiating communities, and in creating separate identities. For them differences between the practices of people arise as the result of

‘..different assumptions, different outlooks, different interpretations of the world around them, and different ways of making sense of their encounters’

(Brown and Duguid; 2001, p207).

Hence, there is strong emphasis on the practices in which the community is engaged, how those practices are learnt, understood and expressed, and how they help form the community of practice. Features of practice pursued in a social context interact with communal structure to create the community of practice. Whilst both are important it is also important not to privilege one over the other and particularly not to allow the common-sense understanding and familiarity of the term ‘community’ to overwhelm the contribution and meaning of ‘practice’. Brown and Duguid (2001) also make the point that in the context of organisational learning too much emphasis is often placed on the element of community and not enough on the meaning of practice in examining how learning and knowledge generation occurs between groups and between individuals. Since they see differing practices as being one of the main sources of distinctions between the various communities within a firm, they maintain that successful co-ordination of the knowledge produced by these communities must take full account of underlying practices.

3.5 From Communities to Networks of Practice

Whilst the discussion above mainly focuses on the form of the community, it also acknowledges that the creation of the community of practice is based on the actual set of practices in which it is engaged. Community attributes are derived from the aggregation of the behaviours of individuals oriented to each other, but as noted above, the relationship between each part of the term ‘community of practice’ is more intimate than simply as a descriptor for an aggregation of individuals involved in the

same practice. The relationship requires a constant and detailed interaction between the formation of the social bonds and the activities that serve to create an identity. Doubts about the application of the term to dispersed groups and individuals arise for this reason. Hence, a limit on the ability of Communities of Practice to maintain operational significance across geographical distance creates ultimate boundaries for these communities.

An indication of where the boundaries of a community of practice may be drawn, and the extent to which it may be dispersed before it loses significant meaning may be gained if there is a stronger focus on the 'practice' element. Individuals that are spatially separated but engaged in the same or similar sets of practices may be capable of sustaining meaningful association, without necessarily exhibiting behaviour consistent with strong 'community' characteristics. These associations may be better described as being articulated through network structures rather than through a community form. Brown and Duguid (2001) propose the term 'networks of practice' to denote those associations that are bound by shared practice but not by tightly organised social communities.

'Practice creates the common substrate. With the term *network*, we also want to suggest that relations among network members are significantly looser than those within a community of practice'

(Brown and Duguid, 2001, p205, italic in original)

In this conception they acknowledge similarities with the 'epistemic cultures' described by Knorr Cetina (1999), and in Strauss' (1984) work on dispersed academic communities which he named 'social worlds'. It is possible for individuals to never or rarely meet but still manage to maintain relationships through which knowledge may be shared. The problem then becomes that of describing the mechanisms by which practice and knowledge is shared beyond the boundaries of communities of practice. Sharing beyond a community structure requires a different form of knowledge co-ordination and alternative structures such as networks, hierarchies, and markets (Thompson, 2003).

However, as far as the transfer a practice as expressed through communities of practice is concerned, sharing among spatially disparate locations requires that the practice is dis-embedded from one context, and has to be re-embedded into a new set

of personal, social, and institutional circumstances. To conceive of this process as a simple direct transfer, that hence creates a type of dispersed community of practice, is seen as problematic by Brown and Duguid (Brown and Duguid, 2001 quoting Giddens and structuration theory). Some practices are more embedded than are others. Those practices that may be expressed in explicit form, and have less tacit knowledge content, are more loosely bound to a local context and may be transferred more easily than those that are woven into the identity and make up of the community. The form of Practice, therefore, is seen as potentially important to its mobility, and such considerations lead to Brown and Duguid's proposal of a network of practice as an alternative to the dispersed community of practice.

3.6 Shaping Practice

The discussion involving practice to this point has not attempted to explicitly define what is meant by the term 'practice'. 'Practice' has been referred to in the discussion of communities of practice as a common-sense way to indicate the routine and normal ways by which groups of individuals perform those activities by which they are defined, and which require some degree of translation in order to communicate across group, or community, boundaries. This level of discussion has not referred to the breadth and depth of Practice Theory as it has developed over the final couple of decades of the twentieth century.

Practice Theory has emanated from a wide range of disciplines from philosophy, cultural theory, and history, sociology, anthropology and science and technology studies, and because of this breadth of interest has not so far coalesced into a single grand theory of practice. Table 3.1 provides an indication of the range of understanding deriving from some of the different disciplines and some of their intellectual sources.

Whilst there may not be an unified 'Practice theory', practices are commonly seen as arrays of activity, although conceptions of 'activity' may also vary over the disciplines, in some cases to include those of non-humans. Not all writers go this far, although understanding specific practices requires an understanding of the role and influence of material, non-human entities. To this extent, therefore, practices have been seen to be embodied and are in intimate interaction with artefacts, and natural

objects and, hence, such embodied activity involves the employment of tacit knowledge (Schatzki, 2001).

Table 3.1: Practice Theory: Disciplines and Approaches

Discipline	Indicative Writers	General Approach
Philosophy	<ul style="list-style-type: none"> • Wittgenstein, L. (1958) • Dreyfus, H. (1991) • Taylor, C. (1985) The last two informed by Heidegger, M. (1978)	Practices at once underlie subjects and objects, highlight non-propositional knowledge and illuminate the conditions of intelligibility
Social Theory and Ethnomethodology	<ul style="list-style-type: none"> • Bourdieu, P. (1977, 1980): • Giddens, A. (1979, 1984): For review of the work of these two see Ortner, S. (1984) And <ul style="list-style-type: none"> • Lynch, M. (1993) 	For these two practices concern desires to e.g.: <ul style="list-style-type: none"> - free activity from the determining grasp of objectified social structures and systems - question individual actions and their status as building blocks of social phenomenon - transcend rigid action-structure oppositions
Cultural Theory	Foucault, M. (1976, 1980) Lyotard, J-F (1984, 1988)	To speak of Practices is to depict language as discursive activity in opposition to structuralist, semiotic, and post-structuralist conceptions of it as structure, system, or abstract discourse.
Science and Technology Studies	Rouse, J. (1996); Pickering, A. (1995)	The development of concepts of science as activity as opposed to representation and the reconsideration of humanist dichotomies between human and non-human entities

Adapted from Schatzki, T.R. (2001, p1)

The Community of Practice literature has developed its approach with a theory based explicitly on activity. Wenger relates ‘practice’ to doing,

‘..but not just doing in and of itself. It is doing in a historical and social context that gives structure and meaning to what we do’

(Wenger, 1998, p47)

Practice is moulded and embedded by, and into, both material and institutional artefacts and procedures, and by both the explicit knowledge represented by these forms and the tacit knowledge of the individuals involved in creating the practice.

Wenger includes

‘...the language, tools, documents, images, symbols, well-defined roles, specified criteria, codified procedures, regulations, and contracts...’

among the carriers of explicit knowledge, and

‘..implicit relations, tacit conventions, subtle cues, untold rules of thumb, recognizable intuitions, specific perceptions, well-tuned sensitivities, embodied understandings, underlying assumptions, and shared world views.’

(Wenger, 1998, p47)

to convey the wealth of forms by which tacit knowledge is communicated through practices.

Further, ‘practice’, as used by Wenger, includes any activity that is performed through acting and/or knowing, manual and/or mental activity, the practical and/or the theoretical. Each of these forms is manifested in various practices, an usage that is in danger of expanding the term ‘practice’ into a catch-all for all activity, and to lose some of its explanatory power in relation to Communities of Practice. The restriction that it must be activity in ‘a historical and social context’ (see above) helps in maintaining a focus on the activity of individuals that is oriented toward and with others. This stipulation helps to marry practice to community, and it is through such a relationship that social learning processes may be perceived in communities of practice.

Barnes maintains a similar attitude to practice as being embedded in a social context. He refers to the understanding of ‘Practice’ as being

‘..socially recognised forms of activity done on the basis of which members (of a group) learn from others, and (is) capable of being done well or badly, correctly or incorrectly’

(Barnes, 2001; p19)

Recognition of performed practice is recognition of a competence³⁵ and the power to achieve particular goals. However, Barnes widens the scope of his treatment of practice from individual capabilities, extending it to describe a ‘shared possession of a collective’ (p25) that implies the combination of individuals’ practices to form a social achievement. In this formulation individual practice is modified in response to dynamic interaction between individual practices to form a social and shared practice³⁶. The group may thus be identified as creating and possessing a characteristic knowledge and shared practice, which may be viewed as the product of

³⁵ Note links with expertise (Collins and Evans, 2002)

³⁶ See Stephen Turner (1994) for a criticism of the concept of a ‘shared practice’.

a process of social learning. All members of the group contribute to, and create, a knowledge that is identified as being emergent from the group as a whole, and such a group can be considered to be a community constituted through shared practice.

3.6.1 Sharing Practice

Sharing practice, as intimated above, however, is not confined to the kind of practices or the kind of sharing that may be expressed through communities of practice. Knorr-Cetina's epistemic cultures, Strauss's social worlds and Brown and Duguid's networks of practice indicate the variety of approaches to studying the co-ordination of knowledge production and learning that are related to practice. Each represents ways of sharing practice through arrangements that involve looser relationships than are those between practice and community in Communities of Practice. They may be regarded as positions on a continuum of practice and knowledge co-ordination, with Community of Practice appearing toward the extreme point of 'co-constitution' of activity and structure.

The relationship between structure and practice in Communities of Practice set limits to a number of features of this form of co-ordination. The form of a practice³⁷, the amount of tacit knowledge associated with a practice, and the social and institutional context of the production of practice that constitutes a community are each significant specifying factors. As has been argued above Communities of Practice have been described in ways that limit the degree to which they may be dispersed due to the form of a practice. They are associated most strongly with a highly localised form of co-ordination. A Community of Practice is also constituted by a specific set of practices (of any particular form) and not just a generalised activity that may generate the same or similar outcomes as exemplified by the differences between health professional communities of practice (Wenger, 1998). Specifying and limiting the set of practices is intrinsic to the formation of the community of practice. And as a complementary limitation to those on practice, a general community structure, with all the knowledge and identity demands that such a structure entails, is not enough. A Community of Practice requires that the practice community is oriented toward specific objectives whether consciously and/or willingly or not.

³⁷ 'Forms of practice' meaning the variety included by Wenger (see above p22)

Further, Collins (2001a,b) demonstrates the part that tacit knowledge plays in mastering practices in examples ranging from the skills required for bike riding (following Polanyi, 1958) to the designing, building and operation of lasers. Some of these skills, particularly obvious with regard to bike riding, may be seen as individual and, hence, apparently irrelevant in terms of the study of shared practices. But they are practices that are learned and frequently performed in a social context and in order to achieve specific objectives. Therefore, they have to be appreciated as socially embedded.

In the case of bike riding, and in particular bike riding in traffic, where the cyclist and other road users access and contribute to shared understandings of the practice of 'bike-riding in traffic' (Collins and Kusch, 1998), the social embeddedness, however, does not entail a community of practice. The practices of different road users may be consciously and socially learnt to achieve a common objective (safe transport), and these may be set in a social and historical context, but it would be stretching the concept past usefulness to regard bike-riding-in-traffic as an example of communities of practice. The practices of each road user are too differentiated to be regarded as common, and are not shared in the sense that they belong to a Community of Practice. Certain elements of each road users' knowledge can be regarded as common, such as knowledge about the importance of visibility, or an assumed knowledge of the basic rules of the Highway Code, but these form only a part of the knowledges used to create the practice of a particular type of road user. The knowledges exhibited in the performance of these practices are derived from different sources and mediated by different physical relationships in the expression of each practice. A theoretical understanding (as might be gained by just reading the Highway Code book) would be insufficient and the road-user requires a physical experience of the conditions and objectives of multiple-road use. When brought together in context the different knowledges and embodied practices create a shared understanding and a micro social milieu through which the conditions for safe transport are attempted. In this case a common objective derives mainly from shared knowledge and values rather than through shared practice, although knowledge of some of the practices of each road user is understood and required by others. The social milieu of road users, therefore,

requires that a certain amount of knowledge be shared about practice if not a sharing of practice itself.

3.7 Social Learning by Monitoring

The social milieu referred to above arises from a process of social learning where individuals and other social actors, identifiable as groups (bike riders, car drivers, pedestrians, etc) are aware and learn about the practices and knowledges of other road using groups. These groups could be viewed as exhibiting a capacity for monitoring the practice knowledge of other groups, through the learning process of individuals in continuous contact with other group members and in observation, or monitoring, of the adjacent groups. Charles Sabel has proposed this kind of learning by monitoring in economic relationships (Sabel, 1994). Where monitoring is a part of a continuous interchange of knowledge between interest groups it can accommodate potential shocks to relationships that may result from innovative action of one or other of the interacting groups.

Whilst Sabel concentrates on conflict between learning and knowledge generation by economic actors and the degree of trust and stability in relations that can be maintained between them, the concept of a reflexive learning by monitoring can be applied as a mechanism of social learning in a wider sense. Actors from different domains of activity interact and engage in a process of continuous learning about how their activities and interaction produce and reproduce the environment (or milieu) in which they are situated. Changes in the knowledge of actors in one domain, brought about through new knowledge production within that domain, causes a disequilibrium in relations with actors in interacting domains that will lead to a process of learning by those actors. Sabel suggests that the learning/monitoring problem between economic partners is resolved by making the two indistinguishable and by creating institutions through which

‘...discrete transactions among independent actors become continual, joint, formulations of common ends in which the participants’ identities are reciprocally defining’

or that

‘...these institutions transform transactions into discussion, for discussion is precisely the process by which parties come to reinterpret themselves and their relation to each other by elaborating a common understanding of the world’

(Sabel, 1994, pp138)

Independent actors from different domains of activity, therefore, create discursive institutions through which social learning takes place, and through which knowledge from each domain is made accessible and influential beyond its generative source.

3.8 Networks as Discursive Institutions, Knowledge-Networks and Conclusion

Various mechanisms and structures by which social learning occurs have been considered including specific constructions such as Mode 2 and the Ba in Chapter 2, and Communities of Practice and the process of learning by monitoring in this³⁸. Each employs a form of discursive institution as a device for combining the socially constructed knowledges generated within each domain. The concentration in this chapter has been on Communities of Practice as structures for knowledge generation and sharing for relatively well-defined groups of people. The limitations of the COP were discussed in terms of its spatial extent and in terms of the breadth of knowledge and practice that may be encompassed by a community of practice structure. It is a form of co-ordination that addresses a narrow range of practices by definition, and there is debate about what kind of limitation there may be on its spatial extension. However, the COP framework is useful as a way of considering the construction and possible forms of what might be termed practice-led communities, where both structure and activity are important elements of social learning.

Networks of practice have been briefly considered as a response to doubts about the spatial limitations of COPs, and may be considered as a means of extending the discursive institution on organic agriculture beyond localised groups of organic farmers. They may first be applied to knowledge sharing and learning within specific

³⁸ Discourse between different knowledge domains also takes place within the heads of individuals and expressed as the outcome of a synthesis of personal knowledge. The Ba conceptualisation promotes the idea of a spiral of discourse between individual and community, mediated by recognition of tacit knowledge and translations into and by codified forms of knowledge, and part of this spiral resides within the individual.

domains of knowledge, but such networks may also be useful in combining knowledge across domains, creating more general forms of discursive institution and encouraging a deeper synthesis of different knowledges.

An initial structuralist visualisation of these networks may be described as intra-domain links that are bundled together, but with nodes from which 'filière' extend to link to nodes in similar bundles in the other domains. Each domain, therefore, sustains its own knowledge and information sharing networks, but also contributes toward the flow of knowledge and information within an inter-domain network structure. The different levels of networks are mutually supportive and oriented around an evolving conception of organic agriculture and food. But each domain is also anchored in some way to their core sources of knowledge, practice and identity, (viz. agriculture, markets and policy/regulatory domains) from which a general orientation is obtained. These core sources can be considered as containing resources that may have positive and/or obstructive consequences for the success, or survival of organic agriculture and food.

An alternative view of networks sees them as outcomes of the knowledge, learning and practice routines of the actors involved rather than bolted-on constructions. In this conception, individuals interact with both human and non-human entities learning and expressing new knowledge through their activities. The initial knowledge and learning capacities of the individual precedes network structures, which are formed through social practice and as inherent expressions of learning activity, which are reconstituted with each interaction, providing support for further social learning and learning feedback (see also Structuration Theory : Giddens, 1984). The generation of knowledge and the processes of social learning create the links through which actors will interact further. These links, formed as extensions of the knowledges of actors, act, in biological analogy, as limbs that strengthen or weaken with their degree of use. They may, therefore, since they constitute both structure and agency (in terms of knowledges and practices), be considered as combined knowledge-networks.

Similar themes are developed in terms of different forms of capital by Bourdieu (1985) where different forms of capital are described as fungible and need to be traded to develop (see also Portes, 2000). Social capital of any significance can only

be acquired by the investment of some material resources and the possession of cultural knowledge. Much of the same language that is used in discussion of Social Capital is shared with theory on COP (see for an application of Social Capital to rural and agricultural communities Falk and Kilpatrick, 2000; Kilpatrick, Bell and Falk, 1999), but with more emphasis on the individual and somewhat less on social and work practices and their interaction with community.

The extreme constructivist view neglects the persistence of structures that appear not to depend on the presence of a particular individual or other entity to reproduce the network structure and its associated activities. A criticism of Giddens' structuration approach includes the suggestion that a major flaw is a 'neglect of physicality' that leads to an over-socialised view of structure (Craib, 1992). A combination of the structuralist and social constructivist approaches produce a description of discursive institutions that emanate from the knowledge and practice of individuals but that can also persist as social structures. A conception of structure external to human actors, which could persist to some extent independently of humans and of social construction, may also require a theoretical approach that recognises the influence of material or physical non-human entities as well as of social interaction (Murdoch, 1997). Whilst the influence of the non-human is acknowledged and implicitly included in the exploration of farmers' knowledges, this study is limited to the interaction of human actors and institutions.

The thesis addresses the ways that knowledge, drawn mainly from three domains identified as the production, market, and regulatory and policymaking, is created about organic farming, and how this process is intimately related to institutional and social structures. Chapter 5 surveys the institutional environment for Organic Agriculture in Wales and suggests how these domains are represented in terms of institutional structures. Institutional-level discourse form and develop conceptions of organic agriculture, and these conceptions contribute to structural or institutional growth.

Actors, who may combine practice and other forms of knowledge, from more than one domain, interact and engage in social learning processes. The processes of social learning as discussed above provide mechanisms by which particular views and

understanding of what organic agriculture means are developed. The learning processes are continuously reflexive and adaptive as learning discourses contribute to shaping knowledges about organic agriculture. The summation of this social learning is seen as the creation of generalised or paradigmatic views of what organic agriculture and food represents, how it is produced and how it might develop. The survey of institutions in Chapter 5 and the empirical work of the study are also related to the experience of the farmer. The institutional analysis attempts to integrate the individual and the local with more general views of the development of Organic Agriculture.

The conceptions of various forms of social learning among farmers are applied to an empirical basis in Chapters 6-8 where individual learning, tacit knowledge and embeddedness equip the farmer to participate in associations through which they learn about organic farming and contribute to its further development. Different types of farmer association are discussed that illustrate different fora for discourse involving the three knowledge domains. The empirical work highlights the social context of the farmer's practices, interaction between farmers and other sources of knowledge, and explores the practice-led communities of organic farmers.

Chapter 4

Research Design, Methods and Fieldwork

4.1 Introduction

The conceptual framework of the thesis, outlined in Chapters 2 and 3, establishes the role of the organic farmer within a network of actors. Following this the empirical work is focussed on the relationships between various actors who contribute to determining the form and future of Organic Agriculture in Wales, and on the ways by which knowledge about organic agriculture is developed and shared between them. To study these actors, their relationships and their knowledges the empirical field is divided into three parts that is comprised of regulatory, policy and market actors, individual organic farmers and farmers as they associate into groups.

A description of institutions and groups provides a structural view of the relationships between the relevant actors and is complemented, in order to study the farmers' knowledge-networks, by an exploration of the interaction that takes place between the relevant actors. Farmers exchange knowledge with their network partners about different aspects of organic agriculture, either in direct interaction or through various fora and forms of discursive institutions, and these processes are described in the study. The institutional context, described in the following chapter (Chapter 5), delineates the formal institutional structure and its development in Wales. The relationship and interaction of various formal institutions with farmers is also described. The chapter discusses the way that institutional understanding of organic agriculture has developed and how this understanding influences the relationships that are developed with organic farmers.

The second part of the empirical field is the role, attitude and behaviour of individual organic farmers, as described from their own viewpoint. This is discussed in Chapters 6 and 7 in terms of the way that the farmers are embedded, and how they gather information and learn about organic agriculture. In Chapter 7 the focus is explicitly on learning processes and farmers' relationships with various sources of advice and information. Chapter 7 explores the range of knowledge-networks in

which farmers engage and in Chapter 8, one element of these knowledge-networks is considered in the form of associations of organic farmers. Chapter 8 constitutes the third part of the empirical field, of social learning within groups of peers, and explores the development of a communally shared understanding of what organic farming entails. The present chapter continues with a description of the research design and methods employed in the empirical work, and in analysis of the data collected.

4.2 The Empirical Field

The field is divided into three parts, namely the institutional context, the individual farmer and the farmer in association with peers in farmer-led groups. A description of these parts is given in the following sections together with the main methods used to gather evidence for the study.

4.2.1 The Institutional Context

The organic farmer is placed within a network of institutional influences, interacting with different areas of disciplinary or codified knowledge and associated actors. The institutional context is first examined in terms of its structure and development, followed by the interaction that take place between institutional actors and the organic farmers.

As part of the empirical work qualitative interviews were held with actors in each of the three primary areas or domains of knowledge that are seen to be directly influential in forming the context and, hence, influencing the development of organic farming. These actors include those associated with the market, with regulation and farmer support services, as well as with the domain of production knowledge and extension activities. These domains can not be maintained as wholly separate areas of knowledge, however, since individuals interviewed primarily as representative actors from particular domains of knowledge frequently cross domain boundaries. Interviews with these actors were semi-structured and their content and analysis are presented in Chapter 5.

4.2.2 The Individual Farmer

The life-context of the farmers is seen as an integral element in the formation of the farmers' actions. The farmers are, therefore, located with reference to the physical

locality within which they live, and with reference to their experience and attitudes to farming. This 'location' of the farmers emphasises their degree of embeddedness within the physical, social, and economic relationships of their lives and provides a basis for a description of their attitudes and behaviours. Hence, the research includes a description of the kind of conditions that individual farmers experience and the kind of attitudes that they display. It does not, however, attempt to explain attitudes solely by reference to the conditions, but farmer attitudes and the conditions within which they live and work provide elements of the farmers' knowledge-network, and it is the formation, and reformation of these knowledge-networks that is the main concern of the study.

The knowledge-networks that are explored include formal and codified sources of information, with the farmers relating to actors such as those that are described within the institutional context. Informal knowledge-networks, defined in terms of knowledge sharing interaction with farming peers, are also explored and are found in association with formal knowledge-networks, organised farmer-led interactions, and the peer relations that follow from the embedded nature of the farmers.

The study of individual farmers attempts to establish a view (albeit partial) of individuals on their own account but also to describe them as the constituent membership of three groups of farmers that are described below. The in-depth semi-structured interviews and the field notes taken during visits to their farms are intended to provide a means of identifying the kind of person with whom the research is dealing, to build up a picture of their knowledge-networks and to identify their characteristics in relation to their membership of the three groups.

The farmers are alike in so far as they are organic farmers who have all converted their own farms within the previous ten years. They differ by the size, location and type of farm that they work, and in their personal background, attitudes and beliefs. In this respect the farmers in the study display the kind of heterogeneity on which van der Ploeg (1993) based his Farming Style approach and defined as follows.

- 'Farming styles refer to a cultural repertoire, a composite of normative and strategic ideas about how farming should be done. A style involves a specific way of organizing the farm enterprise: farmer practice and development are

shaped by cultural repertoire, which in turn are tested, affirmed and, if necessary, adjusted through practice. Therefore, a style of farming is a concrete form of praxis, a particular unity of thinking and doing, of theory and practice.'

(van der Ploeg, 1993, pp241)

While this study has not explicitly followed van der Ploeg's approach the concept of farming style is useful in thinking about the way that individual farmers are differentiated, and placed within their socio-economic and physical context. This context and the farmer's style are seen to inform the farmer's motivation for conversion. Hence, the analysis of farmer characteristics produces various categorisations of the sample's farmers, and these are used to indicate an overall typology of the organic farmers included in this study.

Initially a broad range of farmers' knowledge-networks is considered. The initial breadth is intended to establish a view of the ways by which farmers build up general knowledge about agriculture and about farming practice applied to their own farms. The farmer is seen as embedded in a multiplicity of personal associations with farm, locality and industry, and these associations build up the farmers' tacit knowledge and establish their identity in a community of farmers and other relevant actors. This view is progressively narrowed to concentrate on the formal and informal links through which the farmers learn about organic farming.

4.2.3 The Farmer in Association: Three Examples

The third area of empirical work is the association between farmers and their peers in farmer-led groups. The focus on the individual farmers' networks narrows to follow the farmers through association with their peers and in particular with those associations by which the farmer learns about organic farming.

The sample of farmers is divided into three groups which represent different forms of farmer-led associations, and each represents a particular example of the farmer-led knowledge-networks that are described for individual farmers. The association of farmers may be examined both from the viewpoint of farmer-group interaction, and from that of groups as entities which build group or communal identity. The aim is to

examine the groups from both of these viewpoints and to explore the production of a communal knowledge about what organic agriculture entails.

Three examples have been constructed around three groups of commercial farmers who had converted to organic farming over the ten years or so prior to the fieldwork. They are studied both in terms of their constituent membership (borrowing from the study of individual farmers) and in terms of their association as farmers. The common element in the study of the individual farmer and of each of the groups is interest in the processes of learning that take place about organic farming. The farmers and their groups are also placed, as observed above, within a context of market and policy oriented actors who impinge on the kind of knowledge and the kind of learning processes with which the farmers engage. Interaction between the groups and these institutional actors, and group discussion of the interactions in which individual farmers are engaged, help draw the group's boundary and contributes to a group-identity forming process.

The groups are denoted as Groups A, B, and C and are explored in Chapter 8. They may be differentiated on the basis of their primary areas of activity. Group A represents farmers who are members of a farmer-led producer and marketing group while Group B is based on a Discussion Group organised by the government agency, Farming Connect³⁹ (FC). Hence, Group A may be said to interact directly with the organic food market, whilst Group B has been established as a part of a government-sponsored extension network to support sustainable agriculture.

Both A and B are recognisably organised groups, but Group C is not constituted as an organised farmer group since it is created for the purpose of this study and made up of organic farmers whose relationship is their close geographical proximity. Group C, therefore, offers the opportunity to explore the possibilities of learning processes and practice-led community that arise within a group constituted principally on the basis of association through social ties and personal relationships, and draws more directly from the general study of individual farmers.

³⁹ See a discussion on the formation and role of Farming Connect in Chapter 5

Group C is of interest in examining the potential of such a group to act in a co-operative manner, on the basis that they are all engaged in similar practices and on the assumption that their commercial context will make such co-operation attractive. Rigby et al (2001, p607) have noted that in some circumstances organic producers who find that they are not in an area that has a 'critical mass of organic producers' find it difficult to operate on a commercial basis. The existence of a cluster as dense as that represented by Group C suggested that the local organic farmers may be able to derive some additional benefits from their proximity either in terms of enhanced economic viability by commercial co-operation and/or through greater opportunity to exchange information and knowledge about any aspect of organic farming.

The groups may also be differentiated on the basis of their structures. They represent different networking structures and different ways of maintaining networking activity that illustrate the ways in which different types of structures may work as conduits of knowledge, advice and mutual support. In this respect the analysis of the groups makes use of the concept of the groups as centres of discursive interaction and as putative practice-led communities of organic farmers.

Whilst the groups may represent only some of the structures in which the interviewed farmers are engaged, they are useful in providing three contrasting forms of association. Each group represents an opportunity for farmers to form and utilise network links to learn from each other and to exploit the potential of co-operative association. However, whilst each individual farmer may have a different level of commitment to the relevant group and may be connected to other network structures, each group (particularly Groups A and B) act as significant actors in their own right, influencing farmers' view of organic farming and contributing to the creation of the concept of organic agriculture.

4.2.4 *Actors and Processes*

The actors that the study focuses on are, as described above, the institutions, individual farmers and the associations of farmers. For a fully comprehensive study⁴⁰ these should be joined by the physical and natural elements of the knowledge-

⁴⁰ In the style of a full Actor-network theory analysis (e.g. Latour, 1988; Callon, 1986)

networks that the study examines. These are included in a general sense in terms of, for example, the conditions on particular farms, the characteristics of livestock and the limitations of organic farming, but the emphasis is on the interaction between the three actor-groups described above.

Similarly the treatment of processes is limited to discussion of knowledge generation and exchange and the identification and use of knowledge resources by farmers. The effect of conversion to the organic system on the farming practices of farmers are examined in terms of the reports of changes in practice that are available from farmers. These are elicited both through one-to-one interview sessions, and through observation of the discussion and matters of concern included in the events organised by the farmer-led groups described in the study. These narratives are subject to the distorting influences of memory, the rationalisation that re-presentation of events encourages, and the effects of cultural conventions and dominant forms of expression (Coffey and Atkinson, 1996). The discussion between farmers at group events can be a partial correction for these distortions, and can also serve to highlight differences based on differing farming conditions or attitudes related to different farmers. However, a detailed examination of particular learning outcomes affecting identifiable farming practices is not attempted beyond the general discussion of changes that the conversion to organic farming has entailed. A more detailed examination would require a study more closely focussed on particular farms aiming to understand the changes in practice at a more intimate and more local level than is the aim in this study.

Neither is the long term effect of taking on new practices examined in this study. Farmers indicate the potential for a more profound change in farming practice that may develop as they become more experienced as organic farmers. The majority of farmers in the study were relatively new converters and, hence, this study cannot provide such a longitudinal study of the learning processes in which these farmers take part. Examples of changes in practices which highlight the influence of knowledge-networks and illustrating the change in knowledge-networks that conversion has brought about are included both in the reports of individual farmers and from the discussion events and farm walks that are described.

4.3 Methodology

The study has been conducted as a case study of knowledge generation and learning processes, an approach that encompasses a broad view of the empirical field and includes a wide range of research methods. The following section demonstrates how the qualities of the case study approach have been applied in this case and leads on to a discussion of the fieldwork and the analytical strategy in the following sections.

4.3.1 Case Study

A case study approach uses multiple sources of information, including observation, interviews and documentary analysis (Creswell, 1998). The researcher is free to choose the facts that are pertinent to the study from a rich mass of material that may be gathered by an open and in-depth exploration of a subject area. Yin, a much quoted exponent of case study theory, describes case studies as suited to

‘...empirical inquiries that investigate contemporary phenomena within real-life contexts, especially when the boundaries between the phenomena and context are not clearly evident’

(Yin, 1994, p1)

And continues that ...

‘..the distinctive need for case studies arises out of a desire to understand complex social phenomena...the case study allows an investigation to retain the holistic and meaningful characteristics of real-life events.’

(Yin, 1994, p3)

The development of organic agriculture, and the study of the knowledge generation and learning processes that contribute to its development, represent such a phenomenon, where the empirical field has been set to encompass a broad range of actors and activities and where it is evident that the phenomenon is seen to be intrinsically dependent on its context. The use of the case study as a context-dependent approach fits particularly well with a study of the ways by which farmers relate with their peers and gather knowledge about organic farming, and the processes in which they engage together and by which they are influenced in developing their knowledge.

Given the intimate relation between the phenomenon and its context, the boundary of the case has to be identified in order to apply research questions sensibly (Stake, 1998 p87; Miles and Huberman, 1984; Ragin, 1994, p101). The case studied in this thesis may be considered to be bounded in that knowledge generation and learning processes are studied in relation to the development of organic agriculture in Wales, during a particular period of time, and with a defined group of actors. However, the study is also consciously exploratory in nature, and the boundary of the study has been determined in an iterative process between the conceptual framework, the research process and the empirical conditions. The approach to the study has been to follow the farmers in the methods and the relationships that they employ to gather knowledge, and to describe their embedded condition. The research is conducted to discover how these processes are conducted, and endeavours to link the activities of the farmers to their context, both locally as individual farmers and as actors in the wider context of agricultural institutions and policy.

In practice, the exploration must follow particular routes through the empirical field based on the main focus of the study; for example the exploration with individual farmers of their experience of organic conversion and the ways by which they built up their understanding of organic agriculture provides a learning trajectory that is continued in their association with other farmers in processes of social learning. Similarly, since the organic farmer is perceived as being placed in a central position within the empirical field (see further discussion in Chapter 5) the focus of the knowledge-networks tends to be on production-related practices and the wider knowledge-networks that might include consumer, environmental and trade knowledges are limited.

Hence, the study is composed of subsections. These focus on the institutional context; the interaction of farmers with institutions of various kinds; farmers grouped in functional and social associations; on the organisational structure of the three groups; on occasions or events, namely the farm walks and discussion meetings, that are related to the farmers' work and to common practices; and on the complex interaction of these subsections or domains of study.

A case study is necessarily a complex entity even if the focus may be primarily on a particular sub-section, but it is studied as a phenomenon placed within a number of interlocking and crosscutting contexts (Stake, 1998, p91). This thesis aims to examine these linkages and produce a study of the development of organic agriculture as the product of the diverse understandings of a range of different actors.

4.3.2 *Generalisability, Validation and Sampling*

Generalising from the Study

As discussed above a case study is valued for its dependence on context and the grounded basis that it may provide for theory building, but these are also grounds on which it has been criticised: for providing too little scope to create generalisable knowledge (Stake, 1998 p91). Other criticisms have been made which Flyvbjerg has depicted as five ‘misunderstandings’ or over-simplifications of the nature and scope of the case study (Flyvbjerg, 2001, pp66-87). These include a belief that general or theoretical (context-independent) knowledge is more valuable than concrete, practical and context-dependent knowledge, that case study is limited in usefulness to generating hypothesis rather than to theory building, and that it contains a bias towards verification of preconceived notions. Coffey and Atkinson (1996) note that qualitative research can be thought of as capturing a ‘version’ of ‘multiple realities’ but that qualitative research may provide generalised value through delineating the particular with reference to general forms and processes.

‘..qualitative data, analyzed with close attention to detail, understood in terms of their internal patterns and forms, should be used to develop theoretical ideas about social processes and cultural forms that have relevance beyond those data themselves.’ (Coffey and Atkinson, 1996, pp163)

This study was designed as an open exploration of the empirical field, which was itself conceived in broad terms. The core concern of the study is to explore knowledge generation and learning processes, bounded by its context of the development of organic farming in Wales at the turn of the twenty first century. The context of the study plays a major part in the way that the research can be conducted, and, therefore, affects the way the research findings may be generalised.

Farmers are placed in a central position, but a substantial concern in the study is the way that other actors are significant in the creation of farmer's knowledge about organic agriculture, and how the knowledge-networks that influence, and the knowledge-networks that include, farmers are composed and organised. Whilst farmers are central actors in the study they cannot be isolated and taken out of context, and the positions and activities of their knowledge-network partners are equally significant. The knowledge-network, by definition, depends on the interaction of network partners and, for a fully comprehensive study, the physical and the natural elements of the knowledge-networks in which farmers participate should also be included. This study has concentrated on the interactions between farmers, their farming industry partners such as advisors, veterinarians, consultants, seed merchants and food processors, institutional actors including bureaucratic and market actors, and the products of all these actors. But the physical conditions on farms, the characteristics of livestock, and the qualities of food products from these farms are all actors in the process of creating meaning, and relevant to the processes in which the farmers' and other actors' knowledge about organic agriculture is shaped. Hence, the study depends on its generalisability not only the representative nature of the sampled farmers, but on the degree of actor inclusivity, and the representative nature of the forms of interaction that take place.

Validation

Case study is unrestricted by the choice of data collection techniques it may employ and, hence, its flexibility allows validation through the triangulation of information sources that is built into the design (Hakim, 1987). The three parts of the empirical field, as described above (including the institutional context, individual farmer, and the association of peers), provides the breadth and diverse viewpoints from which to explore the case. The approach to this study includes a range of different sources of data, and different methods by which the data was collected. Integrating methods in a case study approach enables a triangulation of the data by employing multiple points of view and expression (Hammersley and Atkinson, 1995; Hakim, 1987), in this case on the process of meaning creation and learning in organic agriculture.

Fieldwork methods have included participant observation (including visits to a series of Farm Walks and Open Days), in-depth semi-structured interviews with farmers and

with other actors, and documentary analysis. Contextual interviews were also conducted with commentators on farmer behaviour, the relationship between the state support bureaucracy and farmers, and with market-related actors in both the organic and the conventional agri-food sectors. The events organised by the Groups took place in advance of most of the in-depth interviews with farmers and have, therefore, acted as focus groups in performing a piloting function to provide a contextual basis for the interviews (Bloor et al, 2001; and further discussion in Section 4.5.4 below). But they also act to complement and support in-depth interviewing while providing different perspectives on the research area.

The analysis of data from the various sources used is described below in Section 4.5. The choice of data to contribute to the thesis narrative is explained in terms of an evaluation of context, farmer self-presentation and the over-arching structure of theoretical themes. The interpretation of farmer response is made through a process of summarising respondent views, including contradictory and implied material, and placing the responses in both their presentation and their substantive context. Hence, the analysis is dependent on the way that the research was constructed, the combination of semi-structured interviews, field notes from group events and participant observation, and the analysis of policy documents and institutional structure.

Choosing the Farmer Sample

The sample was chosen as Welsh family farmers, who had converted to organic farming within a decade or so of each other, who had been professional conventional farmers and were not hobby, part-time or new farmers. They were also chosen on the basis of their association with what were designated as groups for the purposes of this study. Membership of groups allowed the possibility of exploring the third area of the empirical field as defined earlier, which was to follow the farmers as they interacted on a structured, farmer-led basis with their peers, and synthesised knowledge about organic agriculture from a wide range of sources.

This approach to creating the sample meets the criteria for what Silverman (2001) describes as 'theoretical sampling'. In his discussion of theoretical sampling

Silverman quotes Bryman in suggesting that qualitative research 'follows a theoretical, rather than a statistical logic' (2001, pp251) and that the sample should, therefore, be linked to theory. Hence, the choice of farmers in this study follows from a desire to identify farmers who may be described as relevant to the project of developing organic farming in Wales, but who may also be shown to be active in some form of social learning activity.

The farmers in the sample were distributed over a geographically diverse area in Wales, and were differentiated also in terms of their enterprises, the position of their farms with some being hill farms and some lowland; and in terms of the main enterprises that the farmers ran. The differences in the enterprises roughly matched the three groups that were identified, with most of Group A farms being sheep with some beef, Group B farms being mainly dairy with some sheep and beef, and Group C being mainly dairy, but with some beef and some horticulture. The way that the farmers were 'found' and contact made with the farmers and groups is discussed in Section 4.4.1 below.

Another level of sampling choice is at the group level. In designing the research and choosing groups it may be assumed that the farmers are involved with more than one group. The particular associations chosen for this study were, therefore, chosen on the basis of two criteria, namely on the group's apparent stability and likelihood of long-term continuation, and on the group's primary function. Groups A and B met both of these criteria, in that Group A is based on an expanding organic producer and marketing group, and Group B is a group established as part of the state supported Farming Connect network of discussion groups. Group C had less well-defined characteristics but its potential for producing an informal association of farmers was useful to illustrate a contrast with the two formally organised groups. It was also included to explore the notion that organic farmers become members of a community of organic farmers by virtue of conversion, a community that differentiates them from their conventional neighbours, and which is a necessary consequence of the less well-developed understanding of organic farming practices.

Two more groups had been investigated as potential contributing sites for research during the study. One was a Grazing Group in which two Group C farmers were

members (see Chapter 7). The Grazing Group offered the two farmers some way of associating with other farmers in an organised, farmer-led association of farming peers. The Grazing Group was attractive as a comparator to the organic groups since it was a group composed of both organic and conventional farmers. This association of farmers reflected on the embeddedness of the two farmers from Group C, on the relationship between organic and conventional farming, and on the understanding of organic farming vis-a-vis conventional farming that had been developed by the two farmers. These relationships and the knowledge-networks that were illustrated in this example offered an interesting and added dimension to the empirical field as had been originally conceived. However, it was decided to omit the study, partly in order to concentrate on relationships between organic farming peers, and partly because the introduction of the Grazing Group made the study unwieldy and over-extended.

The second group that was considered was rejected for similar reasons, being a group of organic dairy farmers who were associated by virtue of being members of a dairy processor's farmer mentoring group. An additional reason for not including this group was that the time and financial costs of including it would have been difficult to meet.

4.4 Fieldwork

The fieldwork was conducted over a period of two years between 2001 and 2003. This period followed soon after the end of the Foot and Mouth epidemic in 2001, and this event had an effect on farmer attitudes and behaviours that is reflected in some of the farmers' responses during interview. It contributed to an increase in interest in organic farming, but also affected the ability of farmers to engage in the social and commercial activities with which they had been involved prior to the outbreak. The activities of many of the farming institutions were also impaired, and the development of services such as the Farming Connect scheme and the OCIS were hampered. The epidemic also curtailed farmers' experience of association and some of the groups that are discussed in the empirical chapters had not restarted their activities long before the start of this research. However, fieldwork was organised over an extended period and

the following sections describe the methods used in obtaining the material for the study.

4.4.1 *Finding the Farmers*

The sample of farmers was found through their association with the three groups. Access was provided to the membership of Groups A and B via their respective central organisation, and attendance at meetings of both groups and formal introductions to the group members were provided. Group members were spoken to informally during these meetings and it was possible to address one of Group B's meetings to outline the purpose of the research. This initial contact was useful in establishing research credentials, and no difficulty was found in recruiting respondents for interviews through follow up letters sent directly to the individual farmers. The local co-ordinators of the two groups provided the names of all the current group members and there was no restriction or bias made on the choice of individuals. Of the thirty eight farmers of Group A (26 of whom lived in Wales), eight were interviewed, and of ten for Group B nine were interviewed.

In the case of Group C, the group was 'discovered' through a meeting with a member of one of the organic farm families during a Farming Connect Open Day at a conventional farm. This contact provided the initial introduction to a cluster of farms in the locality. The existence of a number of farmers in the area was already known, but this introduction served to build up the numbers of farmers for the group by a snowballing process of personal recommendations from each of the farmers that were contacted: a process that reinforced the potential for finding network links between individuals. This process yielded nineteen names, of which nine (which lived most closely together) were interviewed. Each of the farmers that were contacted was happy to participate in an interview session and to suggest the names of other organic farmers in the locality. The ease by which the group was established suggested that there may well be a cluster that co-operated in building up a local communal knowledge about organic farming. This impression did not, as described in Chapter 8, survive the fieldwork in such simple terms although there was evidence of a degree of association on the basis of existing social networks and common interest and purpose.

The differences in numbers interviewed from each group were due to difficulty in organising interview timetables that would keep time and financial costs within control. Interviews with farmers from each group were done in batches of three to four per day over a period of about two weeks for each group and took place during the spring and summer of 2003.

4.4.2 Identification and Anonymity

The fieldwork with the farmers in the study has all been conducted on family farms in Wales, and the farmers are all commercial organic farmers. The farmers are identified by code numbers in order to maintain a degree of anonymity and to simplify the process of differentiation during the discussion and analysis of the empirical work. Deciding to forgo the use of surrogate names for individuals, their farm names, and the farmer groups incurs the loss of a valuable tool that would help to humanise the respondents, help to embed them in their culture and locality and to form a richer view of their world. Most of the farmers are, as is discussed in the empirical reports (Chapters 6-8), deeply embedded in their farms and their locality, and the names of farmer and farm convey that association much more fully than the dry use of code letters and numbers. However, the study does not claim to be a full ethnographic study of the farmers and their locality, and there has been neither time nor space to develop the theme of locality and cultural embeddedness any further.

The three groups are, therefore, denoted as Group A, Group B and Group C, and the individual farmers by the codes A1, A2, B1, B2, C3, and so on. No differentiation is made where a husband and wife both take an active part in the interviews as long as there is no disagreement or difference of opinion expressed in the responses from either partner. Where a difference does occur the relevant speaker is denoted as e.g. A1 (husband) or A1 (wife).

Interviews with actors that provide the contextual material for the study have been denoted in terms of the relevant knowledge domain and differentiated by labels that explain their relevance.

4.4.3 Data Gathering: Interviews and Observation

Interviews: Types and Context

Research interviews may be categorised in terms of the structure of the interview process, the relationship between the interviewer and the interviewee, or in terms of the informant type or interview context. The categorisation, according to Gubrium and Holstein (Gubrium and Holstein, 2001), may be said to correspond to three types of interviews namely the Survey interview, the Semi-structured interview and the Focus Group interview. These types have been modified in this study but essential elements have been retained to accommodate the case study subjects. Hence, interviews with contextual actors have included formal and structured elements in recognition of the narrower field of interest represented by these respondents, but include open-ended questions of the semi-structured approach to allow respondents the opportunity to cross knowledge domain boundaries. Interviews with individual farmers have been conducted as semi-structured interviews, whilst the observational field work employed during group meetings and farm walks perform much the same role as the focus group interview.

These three methods of data elicitation are linked and used as a focussing process (Wengraf, 2001) onto the core issues of interest to the project, particularly to the case study element of the project. The initial approach through the contextual interviews has been exploratory and scene setting, gathering information related to issues on which subsequent interview sessions may be focussed. For the case studies, the contextual interviews help to establish the main elements of researches, which may be further developed through semi-structured one-to-one interviews with the farmers, and which help to prepare a framework for observational work at farmer meetings. The contextual actors also provide data related to their own role as influential actors contributing to the development of organic agriculture.

Semi-Structured Interviews

Semi-structured interviews were chosen for use with the farmers in order to allow the respondents to express themselves as freely as possible without excessive guidance from the interviewer. Interview structure may be manifest simply through the number

of prepared questions that the researcher intends to ask, or by the breadth and depth of topic that will be explored. Catherine Hakim describes depth interviews as unstructured interviews for which there is an interview guide but no questionnaire (Hakim, 2000 p35). The interviewer keeps control of the main focus of discussion, but the interviewee is also able to direct the conversation to a certain extent.

Wengraf (2001) advocates that the depth interview be semi-structured, allowing the researcher greater control, but not so much as to inhibit the ability of the interviewee to develop particular areas of interest. The researcher must have a number of prepared questions, which are designed to allow for subsequent questions to be unplanned and to be responsive to the direction in which the interviewee may wish to take the discussion at any particular time (Kvale, 1996). The researcher must also be well prepared to improvise questions that should be available from the researcher's theoretical preparation for the interview, with a concern to identify and amplify themes that appear to be common between respondents (Warren, p 85, 2001).

The structure of the interview sessions is common to all the farmer interviews (see Appendix 4.1) with the main subject areas reflecting the concerns of the research questions as follows:

- Biographical: embeddedness, knowledge and learning
- Attitudinal: to farming, conversion to organic farming, to agri-environmental schemes, and to the environmental credentials of organic farming
- Processes of change and systemic differences: motivation for change, influences and support, changes in routine, practice, and understanding new production knowledge
- Knowledge-Networks: social and commercial networks, identity, community, co-operative and collaborative action
- Learning and Advice: formal and informal sources of information, peer to peer, and expert-peer interaction, social learning

The interview structure is aimed at eliciting the farmers' experiences of their knowledge-networks providing a narrative that is embedded in its local and personal contexts, but also attempting to place the attitudes and understanding displayed by the farmers within a more general debate about what organic agriculture entails.

Conducting the Interviews

Interviews are not neutral events in the process of data collection. The relationship between interviewer and respondent is often one of asymmetric power (not necessarily always in the interviewer's favour), and that may inhibit the flow of information, and modify the interpretation of the information elicited. With regard to research into knowledge and learning, whilst the respondent might not perceive the subject area as personally challenging, it may impinge on his or her area of competence and responsibility and, hence, engender a reluctance to divulge some aspects of knowledge, belief or attitude (Wengraf, 2001, p18). The intention in the interview sessions, therefore, was to create a reciprocal relationship, where the session may be seen to be of benefit to both parties. The main technique used in this case was flexibility with regard to the pace and focus of the interview, reducing its formal nature and attempting to present it as a conversation on topics of mutual interest. This type of interview relationship and process may reduce inhibitions, but may also allow the interviewee to reflect more deeply on issues relevant to the research area, and hence lead to modifications in their contributions (Sayer, 1984, p213).

In this study interviews with individual farmers were used in part to build up a picture of the degree of embeddedness of the farmer in the locality, with the farm and with the industry, as well as to elicit the farmers' beliefs, motivations and aims. Data gathered from interviews and the observation of group activities, therefore, displays some ethnographic features in the kind of life-history material that is included from the interview sessions. The presentation of the interview material reflects this to some extent, as is further discussed in Section 4.51 below.

Voice recording equipment was used during all the interviews, both with farmers and with 'contextual' actors. There were no objections made by the respondents, and whilst one or two nervous comments were made when the request to make the recording was first made, the presence of the machine was quickly forgotten. However, since most of the farmer interviews were conducted in farmhouse kitchens, domestic noise often obliterated the recording of some sections of the interview. On such occasions, for example when a baby decided to join in, responses were recorded in writing or the question repeated when the disturbance was over.

Interviews with individual farmers were made during the working day and interruptions of various kinds could occur. These ranged from the shrieking baby, to a delivery of fuel oil, the arrival of a milk tanker, discussions with farm hands, and to various members of the family drifting in and out of the room some to add their own comments to the discussion. These interruptions sometimes changed the direction of the discussion, triggered comments or added illustrations to the main topic of the interview conversation. Interview sessions were also often well catered for with cups of tea and other sustenance, and even invitations to stay to continue the discussion over lunch or dinner. Brief tours around one or two of the farms were also provided as additional illustration of the points that the farmer wished to make, and what was planned to be interviews of an hour to an hour and a half could continue for much longer, particularly if my interview timetable allowed. Interview sessions were, therefore, social occasions and the farmers were happy to take the opportunity to explain their views in detail often on subjects that were not directly relevant to the research project.

Observation

The majority of the Group events occurred prior to the times that interviews with individual farmers were conducted. As such it was not possible to be sensitised to the actions of particular individuals and to relate them to relevant interview data. The observation of events and discussion during the group meetings was guided by some foreshadowed expectations, and informed by issues that arose from contextual interviews of what may be important themes that should be later developed during interview sessions with farmers and during the analysis of the field notes. The empirical aim during observation, therefore, was to try to make as comprehensive a record as possible of the activities and interactions that took place. Hence, data gathering during Open Days, Farm Walks, and discussion meetings was done through contemporaneous note taking, an activity that was possible in most cases although sometimes inhibited by environmental factors such as weather conditions, cold and insufficient light (particularly during part of a Group A meeting that ended in an open barn of a hill farm in the gathering gloom of a March evening). The field notes were

supplemented as soon as possible with recollected thoughts and documentary material that was referred to during the meetings.

The use of voice recording equipment was considered, but for the presence of such equipment was considered to be a possible distraction or inhibitor to contributors during the meetings. In certain situations a voice recorder would not have been useful in any case because of the difficulty in obtaining clear recordings in the open air on a farm walk, or to adequately record the contributions of different individuals standing around in a field or barn.

As noted above, introductions had been made to the membership of the groups at group events, a process which may have eased access to individual farmers for the purposes of arranging individual interviews. The only exception to this sequence was with Group C where interviews had been arranged with farmers without having previously been introduced by recognisable gatekeepers. The introduction had been through the snowball sequence of personal references, which had seemed to work well enough to gain access. It was also after interviewing individual farmers in this group that an introduction was made to a farmer-organised discussion group, namely the so-called Grazing Group, which had not been among the initial set of farmer groups.

During group meetings, following a formal introduction, the researcher maintained the role of a passive observer. Observation during group meetings, the Open Days and Farm Walks for Groups A and B, as well as for the Grazing Group meeting of Group C, has strong parallels to Focus Group events and conditions similar to those during focus group session are found during the group events attended in this study. For example, the interaction in some forms of focus groups can be viewed as approximating to naturally occurring data and thus comparable to that derived from participant observation (Morgan and Krueger; 1993).

For both a successful focus-group event and for this study's group events the individual participant's level of interest in the topic of discussion and their characteristics relative to other group members is important to enable discussion that will be useful for research purposes. These variables are outside the control of the

researcher when observing already constituted groups, and the researcher is obliged to take a reduced role compared to an interviewer or surveyor's role both during the focus group meeting and the farmer group meetings. The researcher can only follow the development of events and discussion as directed by the dynamics of the group. The facilitation role, usually assumed by the researcher in a focus group, is taken by the convenor of the farmers' group, and a restricted set of topics are discussed where all of the participants are encouraged to contribute. The suggested similarity between observation and focus groups is relevant for analysis of the data gathered, and is further discussed in Section 4.5.2 below.

4.5 Data Presentation and Analysis

4.5.1 Interviews and Field Notes

As noted in Section 4.4.3 the nature of the interview sessions contributed to a relaxed and open discussion and included additional and useful contextual information. The interview transcripts include material that serve to provide a richer context to the interview content, and to add to the identification of the farmers as authentic voices. The writing style of the empirical chapters (Chapters 6-8) attempts to suggest some of this richness, and the inclusion of extensive interview data in appendices further preserves the contextual richness and provides some further validation for the interpretations made of the farmers' self-presentations through their interview responses. This material constituted the data that was used in the empirical chapters and in analysis of the farmers' evidence.

Field notes were produced as discussed in Section 4.4.3 above, and have been used to inform the interpretation and analysis of group events, interview material and contextual discussion. Where they are presented in Chapters 6-8 as identifiable sources of data they are represented as such, particularly in the form of the notes contained in Appendix 7.3.

The convention used for interview transcripts is as follows:

- Verbatim sections are shown in indented text and with quotation marks.

- When comments that are linked thematically are separated by other responses, the removed section is denoted by a series of dots:
- When a response is unclear or a connecting word or phrase is omitted in the speech the section is denoted as follows: ..<unclear speech>.. or..(We)...
- When a response makes reference to other parts of the interview a note to explain the reference is added in square brackets.
- When an identifying name or other reference that compromises anonymity is made, a non-speech communication is made, or a disruptive event occurs, the section is replaced with e.g. *[name of wife]*, *[arrival of milk tanker]* etc.

4.5.2 *Analytical Strategy*

Analysis for the study is concerned with data from the contextual interviews, interviews with individual farmers, the field notes made during observation of farmer groups, and documentary material. Data from the documentary material has been analysed for its content and no further analysis in terms of discourse or textual analysis has been attempted. Material from the contextual interviews was treated in a similar fashion since it may be seen to be of a more formal and restricted nature than that from the farmer interviews the treatment for which is described below. Notes on analysis of data from observation also follow.

The analytical strategy followed identifies themes that draw on economic sociology and social learning theory discussed in Chapters 2 and 3. Hence, knowledge and learning processes, the embeddedness of actors and in particular of farmers, the path dependence of their learning processes and decision making, and the attitudes and motivation of farmers emerge as the major themes for which the empirical material is examined. These analytical themes are those that the research problem, research design, and data collection methods imply. They are identified in terms of a narrative of self-representation by the farmers, and supported by the contextual information derived from other actors included in the study.

Interview Analysis

Whilst all data is identified and conditioned by the main research questions, analysis of interview data is seen by qualitative researchers to be intimately related to the

research process. In particular, the form of the questions proposed during the interview shapes the data that is elicited (Robson, p373, 1993), whilst the wording, structure, and sequencing of the questions are seen to influence the data and the subsequent analytical framework (Foddy, 1993). However, given the informal nature, as described above, of many of the interview sessions conducted with farmers, and the open-ended nature of the questions, the responses made were less constrained by the structure of the interview questions than they might have been under more formal conditions. The presentation of the empirical material reflects this freedom and is conveyed in a presentation style that attempts to let the voice of the respondent be heard as directly as possible.

The responses from the interviews were analysed on the basis of three analytical perspectives viz. the content, the structure, and the form of the response, which may be translated into 'what is being said', 'how' and 'why' (Silverman, 1997). In the initial stages of the analysis process the emphasis was on the content layer (the 'what' and 'how') where coding⁴¹ may be done in terms of common features across interview sources (the different respondents) which are grouped as themes that are presented in the empirical chapters (Chapters 6-8). Analysis of relationships within sources is more concerned with attempting to highlight the attitudinal and motivational themes ('why') of individual farmers (Robson, 1993; Tesch, 1990).

The choice of semi-structured interviews is discussed above and is made on the basis of a desire to elicit the respondents' own interpretations of their knowledge beliefs and motivations and to avoid the possibility of the researchers' own preconceptions of what may be important issues impinging too strongly on the reporting of the farmers' experience. The interviews offer the main opportunities to 'view' individual organic farmers. The structure of the interviews and the theoretical basis of the study as described above provide a set of themes that arise from the theoretical discussion which is presented in Chapters 2 and 3, namely:

⁴¹ Initial coding of the interview transcripts was done using a CAQDAS package. In this case the software package MaxQDA was used to separate themes out of individual transcripts and later grouped for use in the empirical chapters.

Embeddedness
Path Dependence
Farmer Attitude
Farmer Motivation
Forms of Knowledge
Learning and Learning Processes

These themes adapted to the empirical field and the data and described in more detail in Table 4.1 below. Analysis of the interview transcript is built on these themes and done through a cumulative and iterative process represented by:

1. Assembling all the relevant direct, indirect and implied examples of each of the above themes for each of the individual farmers that have been interviewed
2. Summarising and comparing the responses from each farmer thereby cross-checking for consistency for each farmer
3. Interpreting the input from each farmer in relation to the farmer's individual context

A thematic matrix, therefore, may be constructed for each farmer and used to guide the analysis (see format in Appendix 4.2). Material from the semi-structured interviews is also useful in analysing the association of the farmers with their peers, and in analysing group events, and these themes may be described as:

Group/ communal features:

- Cohesiveness of motivation and attitude to organic agriculture activity
- Commitment to group activity and goals
- Social interaction/socialisation between group members
- Trust relationships between group members
- Tacit understanding of other group members
- Practice based interaction/ relationship
- Spatial boundedness and extent of the group
- Physical and business characteristics of participating farms

Social Learning

- Observation of peer practice
- Imitation of peer practice
- Interaction and exchange (including individual input/ questions/demands)
- Group Norms

This process aims to ensure that all forms of farmer response is incorporated into the analysis and that researcher bias in data interpretation is minimised. Accounting for negative instances provides evidence to trust the results of fieldwork, helping to guard against research bias and to increase the commitment to falsifiability (Seale, 1999, p74). Negative cases can also provide additional support to the norm by acting as identifiable aberrations and thereby strengthening the general case. Negative cases can also, of course, lead to modification of ideas and conceptual schemes (Ragin and Becker, 1992). A particular example of how this process has been applied in the analysis of farmers' interview material is in the categorisations that were developed in Chapter 6, where farmers' responses were evaluated by comparing direct, indirect and implied responses from the farmers to differentiate the farmers into separate categories. These categories are used further to indicate the way that farmers build their understanding of organic farming, their compatibility with their peers and, hence, the form of association that they may make.

Interpretation of the thematic analysis consist of a discussion of the themes within their context, and with reference to the direct, indirect or implied nature of the thematic instance in the farmers' responses. Relevant sources of empirical data include all the fieldwork that was undertaken for the study in recognition of the contribution to context that is provided by these sources. Hence, data from semi-structured interviews with individual farmers, responses from 'key-respondents' and institutional actors that provide contextual material, documentary context and field-notes taken during interview sessions, and during group events and other open-farm events all add to the interpretative process.

Table 4.1: Description of themes and interpretation process during Interview Analysis

Theme	Description	Relationship with Organic System/ Conversion	Data / Exemplifiers
Embeddedness	-in social, practice, physical (farm type and characteristics) knowledge network terms	<ul style="list-style-type: none"> • History and depth of commitment to farm/ industry • Range of network and other contacts • Confidence/ trust in advisory relationships- interaction c.f. top-down 	<p>Exemplifiers found as: quotes chosen in light of individual context; that abstract what the respondent says and without the contextual material</p> <p>Individual respondents and group event have a profile that includes examples of themes and interpretation in the light of 'contextualised data'</p>
Path dependence	Related to social, practice, physical (farm type and characteristics) knowledge network terms	<ul style="list-style-type: none"> • Physical conditions/ limits of the farm • Continuation of practices • History and development of relationships – personal, advisory and market 	
Attitudes	Farming Environmental Health Business	<ul style="list-style-type: none"> • Business/ lifestyle/ commercial/ philosophical • Working/ life goals • Historical view • Future plans 	
Motivations	- for conversion, maintaining organic production	<ul style="list-style-type: none"> • Role of 'outside' sources of information • Role and importance of organic mediators • Working/ life goals 	
Forms of Knowledge	Tacit, lay, local, folk, practice, expert, codified knowledge	<ul style="list-style-type: none"> • Techniques/skills/practices/habits described • Return to 'older production knowledges' • Conflict with 'expert' knowledge claims 	
Learning and learning processes	Change in activity/ practices Awareness/ non-awareness Formal and informal processes	<ul style="list-style-type: none"> • Use of knowledge/ information sources • Shift in perception and perspectives e.g. time management, planning, market knowledge, philosophical understanding • Holistic awareness • Relationship to other (farming/ business) activities • Social/ peer-peer interaction • Interaction with advisory agents 	

Observation Analysis

As suggested above a similar process of analysis has been undertaken for the material that was collected during participant observation fieldwork as that for the interview analysis. Hence, themes were identified and isolated from field-notes and interaction during these events that are informed by the theoretical discussion. These were noted in the last section and organised in a similar fashion to the method adopted for the themes for the individual farmers (in Appendix 4.2), with a summary of the group features resulting from the analysis. This further reflects on the theoretical discussion of Chapter 3 as features of the groups are compared in order to assess the degree to which the groups may be thought of in terms of practice-led organic farming communities.

As suggested above, the periods of observation with farmer groups has similarities to focus group events, and analysis of the events may borrow from the focus group approach. The strength of the focus group approach is that it allows the researcher to explore group norms and processes in a convenient and concentrated event. It brings together individuals that are relevant to the research, who exhibit common group characteristic, but also make individual contributions from a diverse range of sources and influences (Bloor et al, 2001). This is mirrored in the observation of the group event in this study where group characteristics related to the concept of Communities of Practice.

The composition of the group is vital to the degree and kind of interaction that will take place. With focus groups a choice can be made as to whether to have groups that will be made up of people who are friends, acquaintances, or strangers. For the groups included in this study there is a mix of these types, although as the groups become established the divisions reduce. There also appeared to be a difference between the groups in this respect. Group A had not met very frequently before the fieldwork visit and also generally suffers from varying levels of attendance by its membership. The membership is, as a consequence, made up of people who may not have the same level of acquaintance as would those of Group B who meet more frequently. Farmers in the Group B indicate that, as they become more used to discussion and to meeting, mutual confidence and trust has increased.

In focus group analysis, comments made by individuals in 'friendship' groups is often seen to be about shared experiences, and discrepancies between expressed belief and actual behaviour will be open to direct challenge (Bloor et al, 2001). This may inhibit some potential contributions, but if such challenges and debates can be encouraged they will provide useful insights into internal group processes and formal and informal group structures. This process may also indicate the degree of coherence within the group and the extent to which the group may be said to display the features of a Community of Practice as defined in Chapter 3.

'Stranger' focus groups are used by market research companies, arguing that opinions that are taken-for-granted are less likely to be expressed by members of a 'friendship' group (Morgan and Krueger; 1993). The relative anonymity of 'stranger' groups can allow people to speak more freely and openly with less fear of social or professional repercussions and more direct and incisive challenges may be forthcoming from group members than the kind a researcher might be in a position, or prepared to make during depth interviews or other research approaches. In this respect the focus group method can expose more quickly and directly the ways that a defined group generates meanings assigned to topics within the research area (Bloor et al, 2001).

A diversity of views is expected within a focus group, but a focus group that is too heterogeneous can lead to conflict and the repression of the views of some individuals. Very diverse group membership can also limit the depth of discussion. Members with firmly held views could discourage discussion in the group either by provoking destructive argument or by inhibiting debate. A wide variety of viewpoints may require that separate groups be formed in some instances, an arrangement that would allow comparison of views and processes without so much risk of disruption (Fern, 2001, pp159-162). These characteristics apply equally to the farmer groups in this study, and analysis of the group events take them into account.

Chapter 5

Social Learning and Organic Agriculture: The Institutional Context

5.1 Introduction

In this chapter the development of organic farming is discussed with reference to structures, both formal and informal, that work together to create the sector. It first reflects on an institutional view to the development of organic farming, with particular interest in the deployment of knowledge resources between individual participants. Building on a discussion of knowledge and learning in Chapter 2 various forms of social learning were discussed in Chapter 3 and in this chapter various forms of the kind of discursive institutions as suggested by Sabel (1994) are examined within which both inter- and intra-domain knowledge sharing may take place. It divides the organic farmer's knowledge into the three domains referred to already viz. the production, the market and the policy and regulatory domains and examines some of the major institutions that are active.

The institutional environment for organic agriculture in Wales as examined here is undergoing a process of change and two streams of development may be discussed, viz. the change in the institutions of general agriculture, and the development in the institutions of organic agriculture. The two streams inter-relate and influence the development of the other, although conventional agriculture remains in by far the most dominant position. Since the organic farmers considered in the thesis are farmers who have converted from conventional farming they may be said to connect the two streams. The knowledge and attitudes that they carry with them into organic farming are explored later in Chapters 6-8 whilst this chapter deals with some of the institutions and policies that influence their working lives and their decision making,

The levels of policy formation relevant to farming in Wales range from that of multi-state negotiation e.g. as in the deliberations of the World Trade Organisation (WTO), to the policy instruments of local governmental bodies such as the National Assembly for Wales (NAFW), but this thesis does not attempt to encompass such an extensive

hierarchy. The focus in this chapter will be on the policies governing the structures of knowledge generation and learning that impinge most directly on the Welsh organic farmer. The highest level that will be included in any detail, therefore, will be to that of the NAFW, informed by developments at the UK and the EU level. The main locus of interest is the viewpoint of the organic farmer and interactions with those institutions with which the farmer is directly engaged, depicted through official documents, other literature and interviews with key respondents.

The institutional context describes an environment in which diverse perceptions of organic farming develop. The chapter explores some of the main formal and informal institutional structures that contribute to the debate about organic agriculture and helps form the farmers' understanding of what organic farming entails. The farmer's viewpoint is further developed by following 'individual' (as opposed to a stylised) farmer-institution linkages through relevant networks in later chapters that deal with the empirical work (see Chapters 6-8). The direct involvement of the individual farmer in discursive institutions is explored in Chapter 8.

5.2 Building Institutions

5.2.1 Institutional Theory and Organic Agriculture

Whilst growth in the organic farming sector follows from the decisions of individual farmers, those decisions are made within an institutional environment that may encourage or inhibit conversion to organic farming. The institutional environment may be defined in a broad sense and within institutional theory the institution can be seen to be more than simply identical to formal organisations. An institution can be regarded as a coherent system of norms, rules, customs, routines and habits shared collectively and enforced on individuals by the collective. Institutions can also be regarded as being composed of groups of individuals who must subscribe to a set of shared values and behaviours that are co-ordinated in a relatively stable manner over time (Peters, 1999; Hodgson, 1989). Organic Farming itself, as developed and given legal recognition within the European Union, could be seen to be an institution in these terms, meeting the stipulations most obviously by producing a set of rules that are enforced upon practitioners.

The extent to which organic farmers share a common set of values, however, remains problematic, and a number of authors have referred to a division between those farmers who are considered to have a philosophical commitment to organic farming and those who have converted 'merely' on the basis of a commercial decision (e.g. Fairweather and Campbell, 1996). There is also some evidence that farmers who convert may become progressively more committed as their knowledge and understanding of the organic philosophy improves (Noe, 2004). Other authors celebrate the diversity in perceptions about organic and other systems of sustainable farming (see for example the Integrated Farming Systems approach Fisk et al, 1998) and argue that such diversity may be in danger from strengthened formal institutionalisation of the organic sector. Kaltoft, for example, supports variety in approach to the practice of organic and other forms of sustainable farming but sees institutionalisation as a force for limiting diversity (Kaltoft, 1999). As institutions are built up around organic farming particular perceptions of what organic farming entails are incorporated into their structures both from the organic farming community and from non-organic and non-farming actors. In the context of a rule-supported definition of organic farming (as currently obtains in the EU), where the mechanisms of control may be captured by the most coherent institutional forces, the diversity in perception can lead to tension about what is to be expected from organic farming (Banks and Marsden, 2001; Guthman, 1998). The shape and future of organic farming depends, therefore, on a range of co-evolving influences that emanate both from within the resources of organic agriculture and from market and regulatory institutions.

An institutional treatment of the growth of organic farming has been developed by Michelsen et al (2001). In this study the work of policy making institutions in six countries and regions of the European Union is explored. Following earlier work Michelson et al note that successful growth in organic farming seems to involve development in three domains of policy making which taken together create conducive conditions for growth. The domains are described as the political sphere, the food market, and 'other parts of the institutional environment of organic farming' (Michelsen et al, 2001 p5). The last of the three domains refers to those institutions

that relate directly to farming including both institutions within conventional farming as well as more narrowly within organic farming circles.

Michelsen et al concluded that the growth of organic agriculture required a six point framework for development. These were:

- To establish an identity for an organic farming sector
- To gain political recognition of organic farming through accepted production standards
- The introduction of state financial support for organic farmers
- The development of a 'certain level of co-operative inter-relationship' between organic farming and the general farming community including fora to develop comparable farming advice and research
- The development of recognisable and exclusive organic food markets through the use of logos and certification
- The establishment of 'an attentive and committed institutional setting' to facilitate further development.

(Michelsen et al, 2001, pp174)

This framework suggests that growth in the organic sector followed a progression from an internal focus on production issues, to engagement with the institutions of general (conventional) agriculture and the food market, and with engagement with the state and the multiple objectives of state institutions. The sector grows as it establishes itself in institutional terms within relevant societal domains and engages in a process of institutional interaction.

A study along similar lines and using Michelsen et al's framework was conducted by Moschitz et al (Moschitz et al, 2004), and considered in more depth the development of institutions that appeared necessary for growth in organic farming. They compared the situation in a number of countries across Europe, and classified countries into those with well-developed, growing and small organic sectors. They came to a similar set of conclusions as Michelsen et al, and added that they distinguish two phases in the development of an organic sector, namely a build up phase and a maintenance phase. During the build up phase the most fundamental aspect is the

creation and development of a well-grounded organic identity which must be unified and adaptable. An unified organic community may become a capable counterpart to other institutions in the policy, market and farming domains. Once the community is established it must continue to differentiate itself clearly from other actors during the maintenance phase.

Differentiation may be achieved by co-operation, competition or creative conflict between organic farming and its conventional counterparts (Lynggaard, 2001; Michelsen et al, 2001 pp10), where co-operation and competition are placed at the two extremes of a continuum. In the middle lies a zone of creative conflict where exclusive differentiation is modulated by areas of common practice and objectives that apply both to organic and conventional farming, but where essential distinctions are not lost. Converting farmers inhabit the 'middle zone' where fora for debate are created and where processes of social learning between the institutional actors of each sector may take place.

Converting farmers are products of creative conflict between institutions of organic and conventional farming and embody one kind of social learning that take place. They have modified their existing farming knowledge and practice to accommodate the organic system and may perform something of a linking role between the two systems. In the process of conversion the farmer must also substitute institutions of organic for those of conventional farming. Some commentators also suggest that converting farmers must undergo a process of forgetting (old practices and attitudes) as they adapt to new practices (Morgan and Murdoch, 2000).

Michelsen et al (2001) place the organic farmer in position as the 'materialiser' (p7) of organic farming and individual farmers must be recruited to enact organic farming practice. It is assumed that the institutions of organic agriculture have been created and developed in some isolation from the dominant paradigm of modern agriculture, and are now capable of offering a coherent and credible alternative to the conventional farmer. Hence, the institutions of organic agriculture must interact with existing (conventional) farmers- the 'farmers' civil society' to establish and to further develop an organic sector. The farmers' civil society constitutes one of the three relevant knowledge domains; the others being the market and agri-policy domains.



Michelsen et al depict this framework as in Fig 5.1 where the mediating processes between the three levels are those of information sharing, knowledge generation and knowledge sharing. The meso-level institutions, constituted both through formal organisations and informal association between actors, provide the sites for learning and exchange.

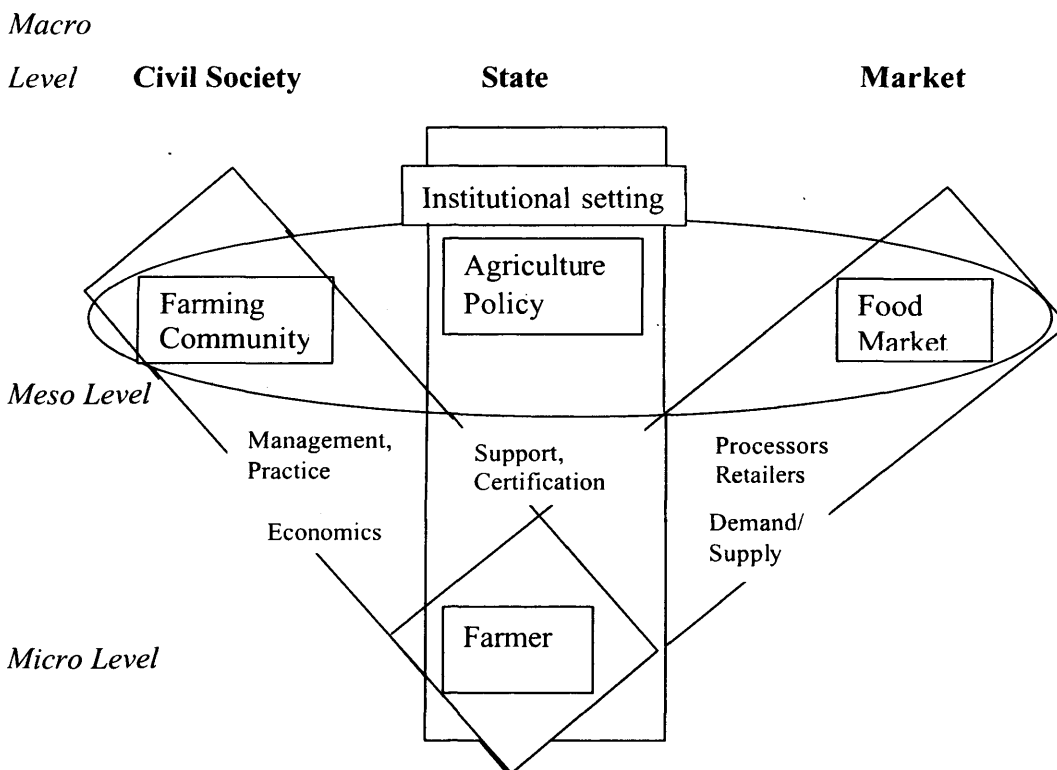


Fig. 5.1: Inter-relationship between the farmer and the institutional environment (from Michelsen et al, 2001)

The institutional framework as suggested here may lend itself to treatment analogous to Nonaka and Takeuchi (1995) and Nonaka's (1999) conception of a social learning processes structured according to the SECI model (see Section 2.45). Learning about Organic Agriculture spirals through the institutional framework from an origin at the Micro (farmer) level, and progresses upward and outward through the Meso-level environment to engage in the Macro institutional level where high-level conceptualisations of Organic Agriculture are formed and exchanged.

This process may be narrated in some more detail. In this instance, the initial Socialisation process takes place during the phase of farmer recruitment into organic farming. The converting farmer interacts with the institutions of organic agriculture and engages in an internal process of aligning personal (tacit) knowledge with the concepts and practices of organic farming. The Externalisation phase continues as converting farmers develop their organic practice and interact with other farmers, articulating (or codifying) their new-found knowledge and practices in face-to-face interaction with other organic farmers. The Combination phase sees institutions of Organic Agriculture engaging other institutions. During this Combination phase actors from the three domains depicted above are involved in inter-domain discursive institutions and each institutional actor modify and shape their conceptual offer⁴². The Organic Farmer; the focus of this thesis, learns about the constraints and opportunities of contemporary institutional environment through this process, where market and policy realities are added to the physical boundaries of Organic Farming. The final phase of the first complete turn of the SECI spiral is the Internalisation process where actors re-form their own knowledge of the environment to take into account the effect of the Combination phase, before continuing with another turn of the interactive spiral process of social learning.

The institutional story of the development of Organic Agriculture as depicted in Michelsen et al's model is thus entwined with the social learning narrative of SECI. Whilst a full and rigorous analysis of each of these models may not have been presented in this thesis, the general framework offered by each of these models, used with reference to an overarching economic-sociology approach, suggests a credible basis on which to frame empirical research. The SECI model offers a vision of the inter-domain learning processes that can be used in association with a model of institutional development as presented by Michelsen et al.

The SECI model lends itself to a technical process where a relatively bounded and well-defined set of actors participate, and for which the focus of interest is relatively narrow. In contrast, the conceptualisation of the agora in the Mode 2 framework

⁴² See Majone's discourse explanation of policy change – a model to explicate one aspect of social learning (Majone, 1989)

(Gibbons et al, 1994), whilst it also offers a forum for discourse between domains of knowledge, applies to discourse at higher levels of abstraction. In terms of this study the agora might be thought of as the forum where a broad discussion about Organic Agriculture as a sustainable form of agriculture might take place.

For the remainder of Part 1 of this chapter Organic Farming is represented as a coherent institution with which other institutions may interact in an abstract policy space, and an overview of development in the institutional environment is presented. Organic Farming as a coherent institution suggests that the Organic Farmer is to be regarded in stylised terms, where a particular form or perception of Organic Agriculture is assumed. This view fits in with Michelsen et al's model and their framework is followed in general terms in Section 5.3.1.

However, the empirical work of Chapters 6-8 indicate the individual and heterogeneous nature of organic farmers, which breaks down the assumptions of an institutionalist view⁴³ of the farmer. Hence, the second part of this chapter will explore how relationships between various formal organisations and organic farmers have developed in practice, and how these represent the learning processes that may be thought of in terms of the SECI model.

5.3 Part 1: Institutions of Production

5.3.1 Growth of the Sector: Establishing a Local Organic Presence

An organised organic farming movement has been in existence in the UK since the Soil Association was established in 1946. Before that time a number of individuals and groups had been actively developing ideas about organic agriculture. A number of these joined together in forming the Soil Association, but the process of accommodating various interests took time and the organisation did not see much progress until the 1970's (Reed, 2001, Conford, 2001, 1988). Following a general increase in environmental consciousness in the 1960's and '70s the SA both broadened its appeal (to involve consumer viewpoints) and focussed its interest in

⁴³ See also the treatment of 'the abstract individual' e.g. Hodgson, 1989.

production by developing a role as a certifier of a set of organic standards establishing Soil Association Certification Ltd in 1973 (Dabbert et al, 2004; Reed, 2001).

Organic farming and variants of sustainable agriculture going by different names continued to grow in a number of European countries through the 1980's (Michelsen, 2001, Curry and Winter, 2000) and had established a pan European presence to the extent that an EU regulation was issued in 1991 (EC Reg. 2092/91) to provide a legal definition for the term and a certification standard. This was followed in 1992 by a regulation (EC Reg. 2078/92) to allow state financial support to environmentally friendly farming methods (Lampkin et al 1999b). The sector went on to experience rapid growth in the 1990's throughout the EU and the share of organic land grew from 0.65% of total agricultural land in 1993 to 2.19% in 1998.

The increase in organic land was, however, very unevenly distributed. Austria and Sweden on the one hand had organic sectors that made up 8.43% and 7.26% of their land respectively by 1998 (Michelsen et al, 2001) but in Wales the share was still only 0.3%: a similar position to that in Greece and Portugal. Whilst the growth of organic agriculture in Wales had been slow compared to many other European rates, the presence of organic farming in Wales was not alien to local farmers. Brynlllys Farm near to Aberystwyth, for example, had been consciously farmed according to organic principles since the 1940's, and had, in 1952, become the first dairy farm⁴⁴ in the UK to be certified as organic (by the Soil Association). In addition, there was a new wave of organic pioneers⁴⁵ who had become established as farmers in west Wales during the 1970s and '80's. But organic farming had not expanded from this base until the late 1990's when there was a large expansion, and organic land in Wales increased to close on 4% of all agricultural land by 2003 (OCW, 2005).

The Soil Association is currently the largest of the Organic Certification bodies working in the UK and certifies over 70% of all produce (Soil Association, 2004) but it is no longer the only organic certifier. There are now ten certifiers accredited by the

⁴⁴ Brynlllys farm was the basis of Rachel's Organic Dairy Ltd.

⁴⁵ For example Patrick Holden the present director of the Soil Association began farming in west Wales in 1973 and Organic Farm Foods Ltd, was established in the same area in the mid 1980's subsequently becoming one of the largest organic vegetable wholesalers in the UK.

government sponsored Advisory Committee on Organic Standards⁴⁶ (ACOS), seven of which operate in Wales. The largest two by far are Soil Association Certification Ltd (SA) and Organic Farmers and Growers Ltd (OF&G), and these two account for 2237 and 951 holdings respectively across the UK out of a total of 4010 (of which there are 640 in Wales), with a total of 690,269 Hectares of organic land of which 54,771 Hectares is currently in conversion. This constitutes something like 4% of the total agricultural land in the UK and is distributed as shown in Table 5.1.

Each certifier must satisfy a minimum set of standards that are policed by ACOS, which is governed by the EC Regulation 2092/91. The UK organic standards are published as the Organic Products Regulations 2004 (Stationary Office, 2004) and the Compendium of UK Organic Standards (DEFRA, 2005) and supplemented by later amendments⁴⁷. However, each certifier may set its own standards over and above this minimum, and each publishes its own rule book of regulations.

Table 5.1: UK Organic Sector-Body Statistics, 2005

COUNTRY	FARMERS AND GROWERS	PROCESSORS AND/OR IMPORTERS	TOTAL
WALES	640	115	755
ENGLAND	2562	1695	4257
SCOTLAND	632	177	809
NORTHERN IRELAND	176	41	217
TOTAL	4010	2028	6038

Source: DEFRA; Organic Sector Body Statistics; January 2005

5.3.2 General Institutional Background and Developments in Welsh Agriculture

As organic agriculture increased in popularity, to eventually result in increased European Union support, changes occurring in the political landscape also laid the conditions for increased support for organic agriculture in Wales. The National Assembly for Wales (NAfW), set up in 1999, assumed responsibility for large parts of

⁴⁶ The responsibility for accrediting organic certification bodies has been first performed by the UK Register of Organic Food Standards (UKROFS) which was established in 1987 (Lampkin et al, 1999a)

⁴⁷ The main international grouping of organic organisations on a worldwide basis is the International Federation of Organic Agricultural Movements (IFOAM) that itself was only established in 1972. It sees part of its job as that of bringing together the various standards for organic agriculture that have been developed across the world and particularly through Codex Alimentarius, the Food and Agriculture Organisation (FAO) and the European Union.

agricultural and rural policy⁴⁸ in Wales. Agriculture and rural development initially enjoyed a strong profile within the Assembly (Midmore, 2004), and was coupled with the duty imposed on the Assembly to promote sustainable development in all its activities (Flynn and Morgan, 2004). Agricultural policy had already gone through a shift in importance at the UK level in the 1980s and 1990s (Winter, 1997), and by the time the old UK Ministry of Agriculture, Fisheries and Food (MAFF) was replaced in 2001 by the Department of Environment, Food and Rural Affairs (DEFRA)⁴⁹ environmental and rural development interest had been considerably strengthened, with the change being at the expense of former agricultural productivist priorities. The change in emphasis was exemplified most clearly by the report of the UK government's Curry Commission (Curry, 2002) that made proposals for a fundamental overhaul of agricultural policy aimed at enhancing quality attributes in agri-food production and at increased support for public goods such as environmental and amenity objectives.

The changes envisaged in the Curry commission report followed through on some of the changes that were gaining momentum under reform of the EU's Common Agricultural Policy (CAP) (e.g. see Clark et al 1997), and the same influences were apparent in Wales. Debate on the changing role of agriculture in the local Welsh and particularly the rural economy, prompted by changes at larger scales, saw the production of numerous papers and initiatives to reposition agricultural policy by the Welsh Office and subsequently by the National Assembly. Action Plans for the Dairy, Red Meat and Organic agricultural sectors were created in 1999 (AFP, 1999), which were followed by the establishment of the Agri-Food Partnership, a Welsh Assembly Government (WAG) strategy document on farming, entitled 'Farming for the Future' (NAfW, 2001), and by continuing policy developments, such as the promotion of agri-environment schemes: Tir Cymen and its successor, Tir Gofal (Banks and Marsden, 2000).

⁴⁸ Concordat between MAFF and the Cabinet of the National Assembly for Wales, published October 2000 <http://www.defra.gov.uk/corporate/devolve/walesconc.htm>

⁴⁹ DEFRA also incorporated elements from the old Department of the Environment, Transport and the Regions (DETR)

5.3.3 *The Welsh Agri-Food Partnership: Basis and Strategy*

The Welsh Agri-Food Partnership (AFP) was set up as a forum where government and industry actors were to be brought together to create the framework for public policy and support for the agri-food industry. In 1998 a set of Action Plans had been commissioned by the Secretary of State for Wales for three agriculture sectors in Wales, namely the Dairy, Red Meat and the Organic sector, and individuals from the industry were appointed to the three groups to develop plans that were to provide a framework for the development of each sector. These plans were agreed in early 1999 and were followed by the appointment of chairs for the new Agri-Food Partnership and its Sector Groups.

The AFP was developed in line with the political and economic strategy that was being set out in the economic strategy⁵⁰ of the National Assembly for Wales, and more directly by the 'Farming for the Future' document (WAG, 2001). The strategic objectives of the AFP were also influenced by the Rural Development Plan (RDP), which was being developed at about the same time, and geared to a wider view of rural Wales than simply the development of the agri-food industry. These influences were apparent to participants at the establishment of the AFP, underlining the shift in priorities in rural policy.

'There is a link (in the sense) that (at) the point in time when they are formulated that we all try to take cognisance of them (the strategies). They are remarkably consistent in many ways.....There has been quite a strong linkage because 'Farming for the Future' has been a synchro (sic) where we have all mixed our ideas.'

(AFP respondent)

The AFP was set up with support from the Welsh Development Agency (WDA), and since the WDA acted as the economic development arm of the Welsh Office (and subsequently of the National Assembly), the emphasis was firmly placed on the economic development of the industry, and with a strong orientation to the market compared with social or environmental considerations. The WDA exercised its responsibilities through the Welsh Food Directorate, which had also been created in

⁵⁰ Particularly 'Betterwales.com' and the Economic Development Strategy document 'A Winning Wales' (WAG, 1999)

1999 to address wider issues of agri-food business development downstream of production. The Food Directorate was given responsibility for providing executive management for the Agri-Food Partnership along with responsibilities for ensuring effective implementation of a range of programmes in support of the Action Plans and the wider Agri-Food sector at both national and regional level.

Once the Action Plans had been determined the AFP's main function was to provide guidance on their delivery and to review their impact (AFP, 2003). They had been created in the context of changes in consumption patterns and pressure on the commodity markets that Welsh farming had traditionally been supplying not least because of the continuing effects of BSE and the price squeeze on milk and dairy products. The plans had, therefore, a bias toward improving the capabilities of the local agri-food industry to reduce dependence on commodity markets, to add value and to develop mechanisms for public investment to support this transition.

The initial public sector investment was through direct grants to Welsh food companies through the Processing and Marketing Grant Scheme (PMG) and the Agri-Food Development Assistance Grant Scheme (now subject to greater scrutiny under EU rules) and funds have also been forthcoming from Local Authorities, Enterprise Agencies, and the private sector. Short term action was also required to aid the recovery of farming following the Foot and Mouth disease, and operationalised through the Rural Recovery Plan (WAG, 2001).

On a more strategic level, support was made available to develop stronger and more direct links between agriculture and a local food culture. These links were pursued through initiatives aimed at developing the hospitality sector, support for local initiatives such as Farmer's Markets and artisanal production such as the Cheese Association of Wales (CAWS). Large scale investment, in e.g. dairy processing equipment, has also taken place. Such intervention meant that specific companies were supported and helped to develop, through the management of what the WDA term as key accounts, comprising of companies that receive intensive one to one business development support. Other major processing-related developments included the establishment of three Food Centres in locations across Wales which offer technical support for innovation and development of food products, with

investment from WAG, WDA, and Local Authorities (Food Wales, 2005). Longer term development focussed on marketing initiatives and included establishing traceability systems for livestock, developing and co-ordinating export markets, and branding food production from Wales under an unified 'Taste of Wales' marketing banner.

Such a co-ordinated and marketing-led approach was new in the Welsh agri-food industry, with even the novel term 'Agri-Food' being accepted as emphasising the new relationship between production and the market. The origin of the change was to a large degree based on change in political perceptions of agriculture in Wales, and those rested on improved knowledge about the local industry and food market. For example, whilst base Welsh agricultural statistics had been available production figures were not related to processing or market information. The establishment of the National Assembly for Wales contributed greatly towards this new focus.

'..pre-1998 there wasn't a Welsh perspective upon which you could draw. There were lots of people who thought they knew what Wales needed and what they should get. There were (for example) no Welsh held dairy figures in the country in 1998. All the figures which had been created by the Milk Marketing Board had been for England and Wales and they weren't subdivided... The whole driving force in the MAFF days was England and Wales, and Wales were an adjunct'
(AFP respondent, 2004)

5.3.4 Structure of the AFP

The AFP was to actively promote the integration of various sections of the agri-food industry in Wales and to provide fora where actors from different areas may take part in consultations on policy. The inclusion of a wider range of actors continued what has been seen as a historical divergence from models of policy making dominated by the farming lobby and concerned primarily with production issues (Winter, 1996), and the establishment of the AFP could be seen to be continuing in the same vein. However, in spite of the intention to broaden the basis of policy support for the industry the membership and strategy of the AFP continued in practice to be biased toward producers in comparison to market actors, and had the strong involvement of various forms of public sector agencies. The bias of the institutions that were

involved and the knowledge that they embodied placed the initial focus of the Action Plans on issues that were understood best by those institutions, which was, in this case, centred on production. Policy makers interviewed for the project corroborate this view but also offer justifications that emphasised the historical weaknesses in the agri-food industry in Wales:

Interviewer: 'What is the effect of the AFP strategy pronouncement (now) on the industry?'

Respondent: 'Maybe not great because of weakness in inclusion of industry (and) private sector bodies, and lack of demonstration of the benefits of collaborative action. (The) AFP should be trying to do this as well.'

The widening of the base of consultation under the aegis of the National Assembly had also required time to become established, and an initial focus on production-related issues may have helped to establish the partnership as a sustainable forum. However, it may have betrayed a lack of confidence in the ability of industry actors to manage market relations, and also the lack of trust that existed within the agri-food chain.

Interviewer: 'Was there too much public sector and producer participation and insufficient buy in from the private sector?'

Respondent: 'I think that there was the buy off in a sense to make sure that the industry felt that it was something that they could support. There was a heavy - ish (bias) dedicated to production. That said – some of the people that we wanted to get on those strategies from the processing and the retail sales end were more difficult to get involved. Since we have got the strategies up and working we are getting far more interest from supermarkets and processors today than we were back in 1998 when we were starting the work. At that stage they saw it as just another initiative almost.....The suspicion factor which farmers have to the retail trade in particular is such that you have to be careful of a Tesco-led initiative, if you like, as a success story. Because the way they read it is that Tesco – all it's done is to take away their margins. There was a heavy farmer input but.... it (the AFP) wasn't something that was elected by the farmers- it was a nominated body.'

Producers were experienced at working with government actors but relationships with processors and retailers are qualitatively different to those with the state, and producers in Wales have a poor history in venturing into collective engagement with

market actors⁵¹. The emphasis, therefore, has been to build up resources on the production-side and in remaining within familiar knowledge domains.

The original structure of the AFP is shown in Fig 5.2, but continues to undergo revision. Some of the original delivery and implementation vehicles, such as the Training and Enterprise Councils (TECs) have since disappeared and replaced by ELWa, whilst Horticulture and Fish and Aqua-culture sectors have been added, together with Trade Development as a second cross-cutting task group.

5.3.5 The Welsh Organic Action Plans: The Place of Organics

The organic sector was included in the AFP regime from its inception, and introduced an element that was somewhat more attuned to working with market actors than conventional farmers may have been. To be involved so intimately in a government sponsored initiative was, however, a novel situation for organic producers and processors in Wales, and there was an imperative that the activities of the Organic sector strategy group integrated with those of the Red Meat and the Dairy groups.

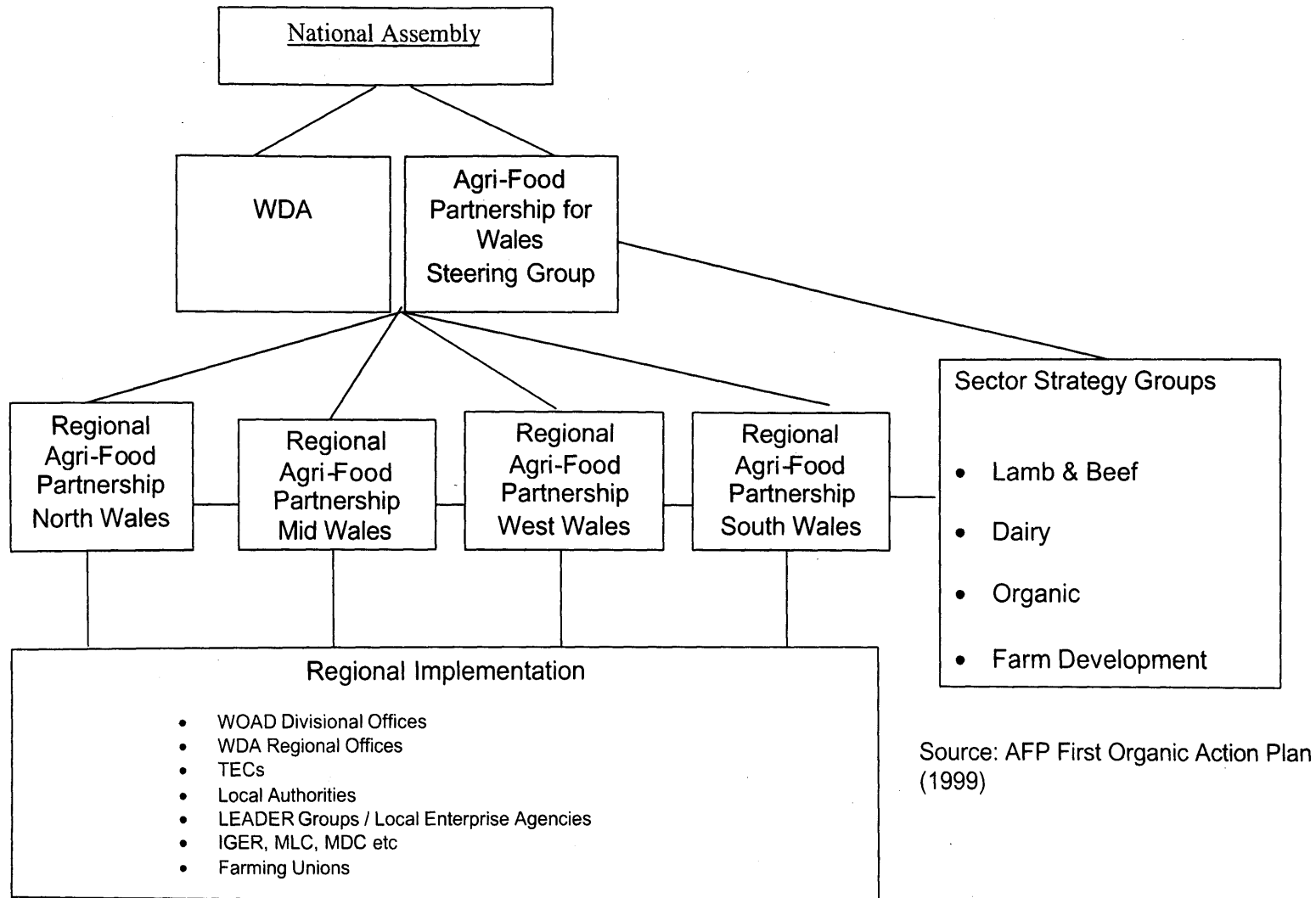
‘But for us in organics there was a couple of things- the fact that we were trying to pull ourselves together to put some structure in place and also we had to try to be part of Red Meat and Milk as well. The last thing we want to be is an island. We want to be a part of the industry so we had to create things and make sure then that whatever that was happening with the milk and meat that they were aware that they had to keep a slot to develop organics as well. They had a responsibility that they had to remember organics as well.’

(Organic Sector respondent)

There was opportunity to build up working relationships with conventional sector actors through the cross-cutting committees of the AFP as well as within the overall steering group. Organic producers were also able to attend the other two sector groups to represent the organic view, but were aware that this was an unfamiliar situation for their conventional counterparts.

⁵¹ There are a number of instances of failures in Welsh farming co-operative and collaborative ventures, including the failure of Welsh Quality Lamb Ltd (see Plunkett Foundation, 1987), and followed more recently by Cwmni Cig Arfon (see press report: Farmers Weekly; 2004).

Fig. 5.2: Place and Structure of the Agri-Food Partnership



Source: AFP First Organic Action Plan (1999)

Interaction between sectors was eased by taking advantage of existing ties. Organic milk producers had previous contact with local conventional milk processors, either from pre-conversion times or through more recent discussions on setting up organic processing lines in the commercial dairies. In the Red Meat sector the state-sponsored meat promotions body, Hybu Cig Cymru (HCC) had also already been open to organic producers, although collaborative ventures in the meat sector had a troubled recent history (e.g. see Plunkett Foundation, 1987), and individual producers in the sector were sensitive to change. Organic farmers were also aware that they might be considered an unwanted irritation and competitors for resources, but were confident that increased interaction would normalise relations and lead to more effective co-operation.

‘We had more problems with the meat sector (than with milk) because of the problems that they had then. The trouble with conventional farming is that they would hope that we would disappear, because all they see is that we take some of the money that they should have. Now things are much better. It takes a long time for things to develop. In five years things have improved a lot.’ (Organic sector respondent, 2004)

5.3.6 Action Plan Strategy and Development

The concept of developing action plans, and specifically Organic Action Plans, as used by the AFP, is replicated in England (DEFRA, 2002), a number of other European countries (e.g. Denmark, Scotland) and at the EU level (EU, 2004). It acts as a mechanism to crystallise the aspirations of a partnership of actors with a range of interests brought together to concentrate discussion onto a defined and targeted set of objectives. In Wales the Action Plan, as a product of an advisory body, may not claim full endorsement by the relevant minister⁵² in the Assembly, but may indicate the degree to which there is the space to advance support for the organic case. It also establishes a particular understanding of the definition and aims of organic farming and as such

⁵² The title of ‘the relevant minister’ is subject to change that reflects the relative importance of agriculture and rural issues within government. The current (2007) title is the Minister for Rural Affairs

operates as a way of communicating those ideals to the community of conventional farmers and to policy makers in general.

The European Organic Action Plan, which was launched in 2004 argues that organic agriculture is seen as addressing a number of objectives beyond the supply of food and establishes a wider role for organic farming.

‘Organic land management is known to deliver public goods, primarily environmental, but also rural development benefits and in certain respects may also result in improved animal welfare. Seen from this angle, the development of organic farming should be driven by society.’

(EU, 2004, pp2)

A similar assertion is included in the introduction of the Welsh Organic Action Plans (see also Jones, 2002), and its acceptance within the framework of the AFP indicates that the claims for the wider benefits of organic agriculture is recognised to some degree. Organic farming is, hence, to be seen as not just another farming system but as a way of integrating a number of agricultural, environmental and rural development objectives. Such acceptance is significant for the farmer since it reinforces the argument that organic farming should receive continued financial support from the state, and reduces the dependence of the organic farmer on premium prices to offset increased costs.

Policy actors are familiarised with the arguments for the wider significance of organic farming through exposure to the Action Plan and elsewhere. The organic farming sector has been involved in the same policy processes as were the various conventional farming sectors from the beginning of the AFP’s existence, and can educate other actors, not only in the basic tenets of organic farming but in its implications relative to common policy issues. The organic sector in Wales is engaged with the conventional farming sector at this level and operates as (formally) an equal partner in institutional terms. In this respect the organic sector in Wales meets the fourth of Michelsen et al’s six steps of development which was to attain a ‘certain level of co-operative inter-relationship’ between organic farming and the general farming community (Michelsen et al, 2001, p174), and the

Action Plan has helped place organic agriculture in the established institutional environment of Welsh agriculture.

Two Organic Action Plans have been prepared to date. The first was published along with plans for the Red Meat and Dairy sectors in 1999 and reflected on the situation of the organic sector in Wales. At the time there were a little over 70 organic producers with a further 45 in the process of conversion, generally small scale farmers and representing something like 0.3% of the agricultural land in Wales (AFP, 1999). An Organic Aid Scheme (OAS) run by the then Ministry for Agriculture, Fisheries and Food (MAFF) on an England and Wales basis had been in operation between 1994 and 1998 but had a low level of support payments and of take up by farmers. The OAS was replaced in 1999 by the Welsh Organic Farming Scheme (OFS)⁵³ which was incorporated in 2000 as part of the Agenda 2000 Rural Development Plan for Wales (NAfW, 2000) and offered substantially increased payments to farmers. Interest in conversion, as measured through contacts via a telephone helpline (provided by the Soil Association and paid for by the Welsh Office) and through requests for advisory visits increased consistently during this period following this improved support and in response to substantial premiums paid for organic products compared to conventional counterparts (OCW, 2003).

The first action plan looked to build on the potential in Wales by making organic agriculture a central part of agri-environmental policy. It sought to locate organic farming firmly within this context and looked forward confidently to a very large increase in organic farmer numbers and land areas being converted⁵⁴ to organic farming.

‘The Mission Statement is – to establish the key role of organic agriculture in agricultural and environmental policies in Wales, to expand the Welsh organic sector by increasing production of existing and new businesses to 10% of the

⁵³ With a similar separate scheme launched in England, and by which payments increased from £250 to £450 per hectare.

⁵⁴ A target of 10% in output was set, but the land area converted to organic farming was taken as a proxy measure because of difficulty in gathering the required data.

Welsh agricultural products sector by 2005 and to exploit fully the growing market opportunities within Wales, the UK and elsewhere.'

(AFP, 1999)

Three priority areas were identified to achieve the objectives, which included establishing a strategic co-ordinating body, an organic information strategy for research and development, education, training and advice, and co-ordinated through a 'Centre of Excellence', and to support the development of new organic businesses and organic markets.

The second Organic Action Plan was commissioned following a review of the progress made by the sector since the establishment of the AFP and the OCW published its own report on developments in the sector (OCW, 2003). The review demonstrated that many of the policy objectives of the action plan had been implemented. The strategic co-ordinating body had become established as the Organic Sector Strategy group of the AFP, the information service as the Organic Conversion Information service (OCIS) and the Centre of Excellence as the Organic Centre Wales (OCW). These developments had raised the profile of organic farming within the agricultural policy-making arenas in Wales and contributed to co-ordinating promotional and research activity, and in delivering information to both converting farmers and other actors. For example, a review of organic farming conducted by the Agriculture and Rural Development Committee of the NAFW (ARD, 2002) had invited submissions from a number of contributors including Farming Unions, supermarket chains, consumer and conservation bodies. Its report was generally supportive of the current aid to organic farming and for its further development, a view that was further endorsed by the Welsh Assembly Government.

However, the development of organic agriculture had reached somewhat of a plateau and the steep increase in the numbers of farmers converting had paused. Whilst the target of 10% of Welsh agricultural products to be organic by 2005 had seemed achievable in 1999, by 2002 the rate of conversions and number of requests for advice had fallen off dramatically. Even so, 4% of Welsh agricultural land had actually been converted to

organic farming by the end of 2003 which represented a significant increase on the 0.3% level recorded in 1998 (OCW, 2005).

The Organic Strategy Group was undaunted by the slower rate of conversions and persevered with setting a target for land conversion for the second Organic Action Plan. In this case the target was set more broadly at 10% - 15% of agricultural land to be organic or in-conversion by the end of 2010 to indicate confidence in the increasing strength of the sector, and the public commitment toward continuing support to achieve these goals. The production target, endorsed by the WAG through the Action Plan, was seen to serve as an assurance for current and prospective organic farmers that there will continue to be public support for organic farming (AFP, 2004), and the maintenance payments, introduced in 2004, continuing direct support following the conversion grant period further demonstrates commitment to the sector.

5.3.7 Developing the Organic Market

The target for the expansion of organic agriculture was set with a concern that it should be a sustainable development and, hence, the plan emphasises the development of the organic market. However, the action plan intends to promote an organic market that should become a means to integrate the interests of producers and consumers and to strengthen those aspects of an organic agri-food system that addresses public goods. There continues to be a bias towards producers but in the context of extolling the wider socio-economic benefits of organic agriculture. Health, through the claimed improved nutrition associated with organic food and the environmental credentials of the organic agri-food system are made more prominent, and the Action Plan explicitly links the development of the sector with a wider set of sustainable development agendas. Support for organic farming is argued to be consistent with support for the broad thrust of agri-food, environmental and rural development policies that the National Assembly and the WAG have been developing, for example, the increased emphasis on quality as opposed to commodity markets, and an approach based on a multi-functional⁵⁵ and family-run

⁵⁵ See Marsden et al (2002) for a discussion of the multi-functionality of agri-businesses

farming sector as expressed through 'Farming for the Future' (WAG, 2001), and the goal of improving diets in the Welsh Nutrition Strategy (FSA Wales, 2003).

The promotion of the organic market, however, raises dilemmas as the development of the market has become a central thrust of the AFP's Organic Strategy group. The development of the market is seen to be in danger of making organic agriculture into just another farming system, losing some of its more radical implications.

'... the idea of organic farming was developed with broader environmental health and those types of goals in mind, and that the market was developed quite substantially later than the first organic farming ideas as a way of supporting farmers to achieve those broader goals. But over the last ten to twenty years the market has become such a dominant force that it is now more of a goal than a means to an end. So the balance has shifted there.'

(Organic sector respondent, 2004)

Whilst the balance in emphasis may shift in this instance against original aspirations for organic agriculture, changing its nature and compromising some of its more fundamental ideals, many of the assertions in the Action Plan may be contested on a more direct basis. Empirical evidence for many of the implied superiority of organic over conventional farming is still limited both in terms of rural development (Banks and Marsden, 2001) and the environmental (Shepherd et al, 2003; Greenwood, 2000) and consumer health concerns (e.g. FSA, 2002; Williams, 2000): an acknowledged weakness and a basis for further research work. The establishment of the Organic Centre Wales (OCW) has provided a means of gathering and focusing relevant research, and its remit includes both encouraging further research and providing links between scientific expertise in organic agriculture with the producers, processors and consumers of organic food.

A conclusion regarding these concerns is outside the scope of this thesis, but the debate about the relative merits of organic and conventional farming, whether expressed explicitly or as sub-text, is unresolved and provides the core conflictual context for relationships between the organic and conventional sectors. This conflict has played an integral part in the development of organic agriculture, but its relative importance has

changed as conventional agriculture policy has shifted its ground in response to the change in importance of agriculture with respect to environmental, rural development, health and nutrition policy. Organic agriculture may be vulnerable to the ways that conventional agriculture has become more environmentally sensitive and animal welfare, traceability and quality concerns have been strengthened. The two streams of institutional development in Wales: the growth of the organic institutions, and the shift in mainstream agricultural institutions, referred to above have become closer. To maintain an identity, therefore, organic farming must communicate what continues to distinguish it from the quality driven and 'green' conventional sector.

5.4 Part 2: Interfacing Institutions and Organic Farmers

The chapter has so far discussed some of the institutional developments affecting organic farming. The institutions and their interactions have been reviewed at the macro level of policy development. In the second part of the chapter the focus moves to those institutions and actions that impinge on the individual farmer more directly. The review does not attempt to include all those actors that may be of relevance to Welsh organic farmers, but is largely guided by the responses of the farmers that were interviewed as part of the empirical studies discussed later in Chapters 6-8. Hence, included here are some of the organisations, occupying Michelsen et al's Meso level, that are currently operating in Wales or have been significant in the recent past in offering advisory and support services to organic farmers.

An overview depicting the range of organisations that are active is suggested by Fig 5.3. The figure does not claim to provide a comprehensive depiction, but it demonstrates the complexity of the institutional environment within which the farmer is situated. Individual organisations within this environment operate in more than one of the knowledge domains that were identified by Michelsen et al (2001), and so they may not be easily grouped into exclusive domains according to their main area of knowledge.

Representative organisations considered below begin with institutions of farmer training and education, and those of extension. These organisations represent efforts to improve the general level of competence of the farmer as a producer and act as vehicles for delivering some of the state's agricultural and rural development policies. They are followed by actors involved with the environmental impact of farming, signifying the challenge that the agri-environmental domain poses to organic farming. Finally organisations that are active in the food supply chain and their role in information and knowledge sharing are discussed.

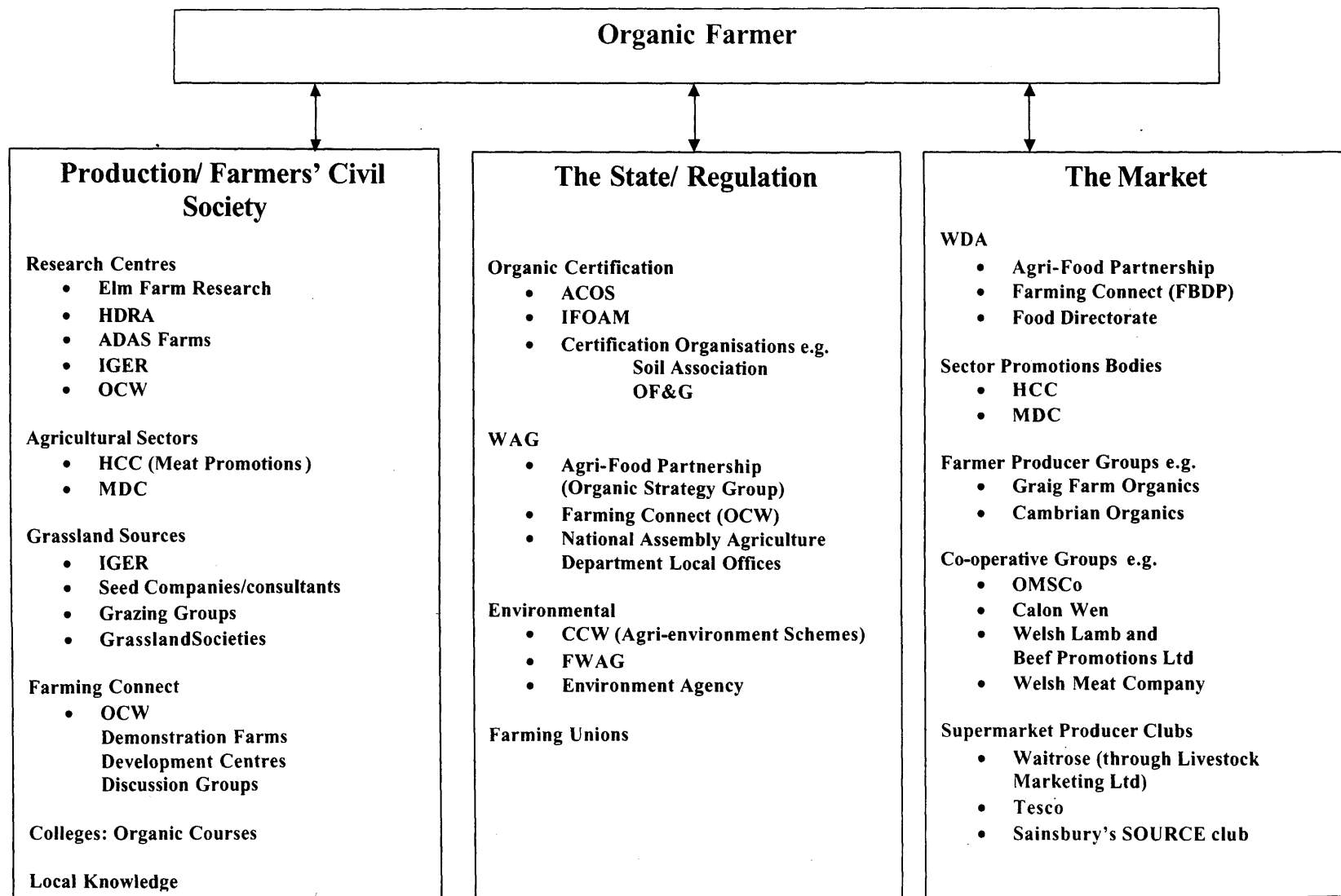


Fig. 5.3: Institutional Information and Knowledge Sources for Organic Farmers

5.4.1 Formal Agricultural Education

The formal agricultural education landscape within Wales has been radically altered in recent years. Development policy for the agricultural training and the agricultural education sectors, as expressed through ELWa⁵⁶, the government agency charged with developing all post-16 education and training in Wales (with the exception of Higher Education), has emphasised a more focussed approach to the provision of agricultural training and learning opportunities.

ELWa conducted a review of vocational training and education in agriculture (ELWa, 2002) following the development of the National Assembly for Wales's strategy for agriculture in Wales, and in particular the 'Farming for the Future' report (NAFW, 2001). This document directed ELWa to

'...review the provision of initial vocational education and training to ensure that content supports the new direction for Welsh agriculture and to ensure that key areas of specialist expertise are maintained.'

(NAFW, 2001; Action point 31, p54)

The family farm is the type of farming that the NAFW's 'Farming for the Future' envisages as the backbone of agriculture, and the ELWa review responds by concentrating on vocational courses at FEIs only, and the 'specialist expertise' maintained will also reflect this bias.

The recommendations following the review indicated that in order to adequately deliver the NAFW objectives, the provision and credibility of the Further Education (FE) providers had to be strengthened by concentrating resources at two FE institutions chosen to offer the two-year full time National Diploma (BTEC) accreditation of a general agriculture course scheme leading to a National Vocational Qualification (NVQ) level 3. This was a reduction from the contemporary provision in thirteen institutions that were spread widely throughout the country.

It can be argued that this rationalisation has come about as a consequence of the changing importance and role of agriculture in Wales, and reflects a shift in the

⁵⁶ ELWa has been designated as one of the quangos that will be absorbed into the Welsh Assembly Governments' civil service. Its existence as a separate body is due to come to an end in 2006.

opportunities, demands, and constraints on agriculture, on farmers and on the size of the potential agricultural student population. Demand for agricultural courses of all kinds has fallen by large percentages over the last decade (Uhlig, 2003; Errington and Harrison-Mayfield 1995), and these changes have occurred as changes in food production and food processing technology, and changing market and regulatory conditions have altered the scope for farming in Wales.

A major theme in the logic of rationalising traditional agriculture courses is that the farmer must be encouraged to be a more knowing agent, able to take advantage of opportunities available through the development of specialised, niche, quality or other market-defined demands on agricultural production. In parallel with these demands are the shifts in regulation and state support recasting relationships between production activities and the environmental and health agendas. The farmer in this schema must, therefore, be trained in new attitudes and knowledges and be prepared to regard conscious and continuing training and education as part of the expectations of farming life. In a consultation review on vocational agricultural training and education, ELWa noted that changed conditions demanded that the agricultural sector...

‘..will need to adopt more knowledge-driven methods of working and have access to higher calibre new entrants who are willing to engage in lifelong learning ,(and that)...those already employed in the industry (need) to re-engage with the learning agenda to equip them with the skills to successfully adapt and compete.’

(NC-ELWa, 2002, p2)

The learning agenda envisaged encompass what are referred to as best-practice techniques in husbandry, land management and business management, and explicitly states that knowledge gained through the experience of growing up on farms is no longer a sufficient base for becoming a professional farmer. A justification of this need for enhanced formal training is the reference to what is regarded as the growing pluri-activity of farmers, the importance of off-farm sources of income, regulatory changes, and a harsher market environment that increase the management demands on

the farmer. Similar conclusions have been reached by a number of other reports⁵⁷ commenting on land-based vocational training in Wales (Harris, 1996; FEFCW, 1998; Future Skills Wales, 2001; LANTRA, 2001a, 2001b).

This institutional view of the importance of formal training is challenged to some degree by the responses of organic farmers as recorded in qualitative interviews for this thesis (see Chapters 6-8). In these responses reference to formal and continuing training are ambiguous. Whilst a significant number of the farmers had received relatively high-level farming education many had not undergone much formal training. Support is expressed for training focussed on specific requirements rather than comprehensive agricultural or business training, and much of the specialist knowledge required by the farmer may be accessed through advisers provided through various support services (e.g. Farming Connect and other agencies). It is still the case that until fairly recently most farmers entered the profession through the inheritance of a farm business or by transferring direct experience of farm work and life into adult occupation on farms (Gasson, 1998). This is true for most of the farmers interviewed for this study (see Chapter 6) and these farmers carry with them an awareness of the basic practices of farming through experiences during their upbringing. In addition, much of the practical knowledge that is required to work a particular farm successfully is specific to that farm, dependent on variables such as the local climate, soil type distribution and drainage.

The farmers in this study are nearly all farmers who have converted to organic farming from relatively long experience as conventional farmers. Their experience of the provision of agricultural education in Wales is that of their conventional counterparts and from it they derive much of their initial attitudes and expectations of the industry. The way that it has been structured and changed will be relevant to understand the attitudes of current and future converters to organic farming.

5.4.2 Organic Courses

Organic farming courses were not specifically included in the overview of provision by ELWa, but have grown separately in response to local demand. In this respect they

⁵⁷ See also a report by Winter (1995) on the provision of research, advice, training and education for UK farmers

reflect the ‘two streams’ of institutional development referred to in Part 1 above, where organic courses are established first in informal manner (see for example the Cambrian Organic Group, Box 5.1 below), and gradually gain status as optional components of general courses and eventually as stand alone options for agricultural students.

Organic farming course availability in Wales, however, remain limited (see Table 5.2), but they range from evening courses at local agricultural colleges such as Coleg Sir Gâr⁵⁸ to the horticultural courses in north Wales, a BSc. degree course in Organic Agriculture offered by the University College of Wales, Aberystwyth. Aberystwyth also offer supervision for PhD level research.

Table 5.2: Agricultural Courses with dedicated organic farming components (2004)

Institution	Course Title
Carmarthenshire College of Technology (Coleg Sir Gâr), Carmarthen	BTEC 1 st Diploma in Land Based Industries (Organic Option) BTEC National Diploma in Horticulture (Organic Option) (full time)
Centre for Alternative Technology, Machynlleth	Specialist Short courses
Welsh Institute of Rural Studies (WIRS), Aberystwyth	BSc in Agriculture with Organic Agriculture BSc in Rural Resources Management (organic option) Higher National Diploma in Agriculture (organic option) PhD Studentships in Organic Farming
Welsh College of Horticulture, Northop, Flintshire	Higher National Certificate/ Diploma in Organic Horticulture

5.4.3 Extension Support and Advice Structures

The fourth Strategy group that the AFP established, in addition to the original three sector groups, was the Farm Development Group by which, along with management input from the National Assembly’s Agriculture Department, the Farming Connect service has been developed. Farming Connect has been developed as an extension organisation that addresses both agricultural production issues and farm business

⁵⁸ See a reference to such a course attended by a farmer Chapter 7

development. With the establishment of Organic Centre Wales (OCW), the organic farming aspects of farmer training were delegated to the OCW, whilst the Farm Business Development service remained on a cross-sectoral basis, providing similar service to both conventional and organic farmers.

The advice services developed by OCW on behalf of FC were, however, preceded by a looser arrangement of organic farmers that became organised as the Cambrian Organics Group (COG). The experience gained in these groups was useful in the later groups. To provide some historical context to the FC service, a brief description of the COG network is given in Box 5.1.

5.4.4 Organic Centre Wales

The Organic Centre Wales (OCW) has become the most extensive co-ordinator of support services for organic farmers in Wales. Housed at Aberystwyth University, it was formed in 2000 by the collaboration of five organisations active in organic farming in Wales. These were the University of Wales Aberystwyth's Institute of Rural Studies (IRS), the Soil Association, Elm Farm Research Centre (EFRC), ADAS, and the Institute of Grassland and Environmental Research (IGER) also based at Aberystwyth.

Its original function was to provide a focal point for the collection and dissemination of information on organic food and farming, much of which is generated by the partner bodies. In 2003 its remit was extended to include public education, the procurement of food by public bodies, and policy and strategy development. Funding comes from WAG, along with EU Objective 1 funds, for the delivery of the Organic Conversion Information service (OCIS), public education provision and the organic components for some of Farming Connect's (FC) programme.

OCW's role in FC is as a subcontractor, supplying services to support FC extension activities structured for organic in the same way as it is for conventional farming. A description of the main features of the Farming Connect service, including some of its organic components, follows.

Box 5.1:***The Cambrian Organic Groups (COGs)***

The Cambrian Organic Group (COG) was developed out of an EU funded Objective 5b project that ran for two years from January 2000, entitled 'Developing the Infrastructure for Organic Farming in Wales' (Cambrian Organic Group, 2002). This was a project that was in turn a continuation of a previous Objective 5b project under the title of 'Developing Organic Farming in the Uplands of Wales' and run by ADAS. The original project, started in October 1996, was managed through a steering committee that took representation from an existing grouping of interested organic farmers. By the middle of 1999 the burgeoning interest in organic farming in Wales had become too great for the relatively small membership of the steering committee to deliver the project aims. It was also recognised that a wider remit than organic farming in upland areas was required.

An informal organic farmer group had been set up and had met regularly during the period of the first project. It was based in the south-west region of Wales, an area in which there already was a relatively strong concentration of organic farmers and those interested in conversion. This group became the template for the later regional Cambrian Organic Groups (COGs) that were established at the commencement of the later Objective 5b project in January 2000. This project, managed by ADAS, employed two co-ordinators to develop the activities of six regional Producer Groups that were distributed across the Objective 5b area of Wales, with two in each of North, Mid and South Wales regions. Continuity with the previous project was maintained through the co-ordinating personnel at ADAS, and by the continuing interest of the original group of organic farmers.

The regional COG groups were spread over Wales to encourage contact with up to 3500 farmers who had expressed an interest in organic farming and were registered on the COG database, although only about 2500 farmers formally became members of COG; and 600 farmers applied for organic status (Cambrian Organic Group, 2002). The regional COGs attempted to provide a service to the whole of organic farming in Wales, and organised events ranging from farm visits and walks, evening talks to farmers, seminars and organic courses. They also attempted to provide a focus for other interested organisations, acting to promote organic farming to the wider farming community and to develop links between producers and consumers. The two co-ordinators, providing administrative support to three groups each, were to develop the service that the groups' membership requested.

The inaugural meetings of the six regional producer groups set the initial agenda, with farmers identifying such topics as local food marketing, organic feed sources, and parasite control as of greatest immediate interest. At the local group level the farmer voice was to be relayed via meetings of a committee that met every two months, and which decided the kind of activity in which the farmers were interested, with events held in the intervening months. Meetings to organise and participate in learning events were, therefore, available to farmers in each group once a month and COG was committed to supporting 36 events per annum distributed across the six regional groups in Wales. This level of commitment was maintained for the two years of the funded period of COG, although the second year was severely affected by the advent of the Foot and Mouth epidemic.

Each COG group was different in terms of membership, level of activity, and expertise, but each had a membership drawn together by common interest and a felt need for improving local knowledge about organic farming. The membership of the six regional COGs included representatives from LEADER groups, the Agri-food Partnership, and from local groups of organic farmers consisting of between 612 farmers in any particular locality. The groups also maintained contact with organisations developing other initiatives relevant to producers and that could be of benefit to organic farmers, and a bi-monthly newsletter (The Cambrian Organic Newsletter) was produced to disseminate information about events and information about organic farming. In 2000, the Organic Centre Wales (OCW), was set up, and took up the general dissemination of organic farming information in Wales, but COG maintained a presence on its website for a period of time.

**Box5.1 (continued):
The Cambrian Organic Groups (COGs)**

However, support for the COG groups and its activities had become severely constrained by the impact of the Foot and Mouth (F&M) epidemic in 2001. COGs had barely a year of operation before the advent of F&M, and with it the cancellation of most farm-based activity. No farm walks, farm visits or even in some cases free movement for individual farmers was possible during this period. Some activity was resurrected at the end of 2001, with interest from the farmers whetted by the period of enforced isolation. But by December of 2001 the Objective 5b funding for the project had run out, and a new arrangement for organic farmer support was put in place that also set up the Organic Centre Wales (OCW), and an adaptation of a general business support project run by the National Assembly for Wales (NAfW) and named Farming Connect (FC).

The ending of the Objective 5b funding brought to an end direct financial support for the COG network, and the network of regional groups in this form was gradually abandoned. The decline of COG groups occurred at the time of a combination of events and effects that included the disruption created by F&M, the ending of funding for full-time co-ordinators and switch to the new arrangement for support. It would have been possible for COG to continue, but the responsibility for doing so was laid with the farmers.

‘If COG wishes to continue as more independent producer groups, there will be a network of services to support them, and OCW will have a major role in providing and maintaining this’
(Cambrian Organic Group, Appendix 7 p37, 2002)

Whilst support was available from OCW to continue with COG, the emphasis of state support had switched to a new network organised by the National Assembly as Farming Connect. Organic farmers were brought into the same advice and support arrangements as conventional farmers but in the process lost some of the local control and ownership that had been previously apparent. The COG network, although funded through EU support monies and managed by ADAS had been explicitly based on a bottom-up approach.

5.4.5 Farming Connect: Set-up and Objectives

The National Assembly for Wales Government (WAG) launched Farming Connect (FC) in September 2001. The service was designed to provide all farmers in Wales with free access to a wide range of business advice, specialist technical information, training and capital grants. The emphasis of the services reflected the importance attached to encouraging farmers to consider themselves more in business rather than in traditional producer terms (see Box 5.2).

Box 5.2:

The Farming Connect Vision:

‘To enable farming families to maximise their income and foster an entrepreneurial culture within a framework that is environmentally sustainable.’

(Farming Connect, 2001)

This strand of thought had become commonly expressed in all major rural and agricultural policy documents produced in Wales by the 1990’s, and supported by political opinion.

‘The vision is of an innovative agri-food industry, creating high-quality, value-added food products that are closely targeted on what consumers are prepared to pay for.’

(Carwyn Jones, Minister for Rural Affairs, Wales Assembly Government; NAFW, 2001, p5,)

Hence, a key element of Farming Connect provision is the preparation of a Farm Business Development Plan (FBDP), and much of the funding for FC is devoted to providing a team of business consultants for this purpose.

5.4.5 Facilitators and Local Farmer Discussion Groups

Farming Connect has also set up a network of local farmer discussion groups that are formed initially by invitation through a local facilitator who draws on personal knowledge of the local community of farmers in establishing the group’s nucleus. A group is normally limited in its size in order to maintain a manageable unit and to allow farmers to build up mutual confidences. In 2002, Farming Connect had 32 facilitators spread across the whole of Wales. They are drawn from locally based organisations, such as enterprise agencies and initiatives, national parks, and further education colleges, and chosen on the basis of direct knowledge of local farming experience and issues. Examples of the activities of a FC facilitator are presented in Box 5.3.

Box 5.3

Farming Connect Facilitators and Service

P is a facilitator with Farming Connect (FC) in Wales, and in common with the majority of the FC facilitators has close ties with her local farming community (P interview 14-11-02). She was brought up on a farm, and following her school education attended an agricultural college, enrolling on a Craftsmanship in Agriculture course. Since that time she has been involved in running a farm and a related milk processing business. P has also been active in a number of other agriculture-related jobs. These have included part-time case work with the Farmer's Union of Wales, working on projects such as CWYSI which aims to help farming families adapt to a more business oriented culture in agriculture (Menter a Busnes, 1999), and as a local facilitator for the counselling service Farm Crisis Network. She subsequently joined local enterprise agency Menter a Busnes and through this organisation became a lead facilitator for FC.

P quotes the influence of the New Zealand Farm Monitor scheme on her understanding of the structure of the Farming Connect scheme directly, and features such as the network of Demonstration Farms across Wales are borrowed from the New Zealand model.

As a lead facilitator, P co-ordinates FC facilitators in her area, all of whom had previously been engaged in a number of rural and agriculturally oriented initiatives and organisations. These include three local enterprise agencies and the local National Park Authority. The facilitators' individual backgrounds and strengths include environmental, tourism, and commercial experience, and the team attempts to make use of each team member's specific attribute. Training for the role was provided by LANTRA, the government sponsored land-based industries training authority. There are no dedicated organic farming facilitators, with each FC facilitator running conventional and organic groups as required.

Facilitators act as the link between the central Farming Connect office, organisations that may provide technical advice and support, and the farmers themselves. Among other roles the facilitator disseminates information about various grant schemes that are available for farmers (e.g. Farm Enterprise grant, Farm Improvement grant, Farm Tourism grant, Timber Processing grant, Processing and Marketing grant, and Shelterwoods grant). However, accessing the various grant streams is dependent on the farmer being eligible and approved for the Farm Business Development Plan (FBDP). Farmers are, therefore, encouraged to develop a long-term business perspective by means of a structured approach to farm decision making.

5.4.6 Farming Connect Open Days and Discussion Groups

A major part of the facilitator's work is to organise farmer discussion groups and to encourage the use of the local demonstration farm venue for extension activity such as Open Days and farm walks. Open Days have developed to become regular FC events (see Appendix 5.1 for a typical advertisement). They are normally combined with a walk around a host farm, and focussed on a particular topic that is discussed by invited expert contributors. Open Days are held for conventional and organic farming topics, and organic open days give conventional farmers an opportunity to explore

some of concepts, ideas and practices of organic farming without making any commitments. Such Open Days, therefore, may act as fora for debate and comparison between the two systems and can be important as ways to contribute to the practical credentials of organic farming.

Open Days and discussion events, however, must be targeted toward subject areas about which the farmer regards as important to learn. Farming Connect discussion groups have followed the general direction of the COG approach in encouraging the members to identify the subject areas that they wish to discuss. The activities of the Discussion Groups are, therefore, formally controlled by the farmer and, hence, may attract more sustained interest and support from the farmers. Open Days cannot, by definition, follow the same practice since they are not attempting to retain a core of group members, but as they attempt to attract as many farmers as possible they must also be aware of those areas that are of current interest to the farmer.

5.4.7 Development Centres and Demonstration Farms

The extension function of the Farming Connect initiative has led to the creation of Development Centres, Development Farms and a network of Demonstration Farms. Development Centres have been established with the intention to facilitate contact between research institutions and expert knowledge with the farming community to..

‘...co-ordinate the transfer of technology in each (farming) sector and to pass information between Research and Development institutions, market information organisations and commercial farms in Wales’

(Farming Connect, 2002, p12)

The suggestion is that the centres will facilitate information flow between the three actors identified, helping to modify decisions and knowledge about production and technological developments on the basis of market conditions and the economics of running farm businesses. The tools used to achieve these objectives are open days and specific events during which information is given ‘in a practical way’.

Three Development Centres were developed initially, and run by three different organisations. The Beef and Sheep Centre is run by the Meat and Livestock Commission, the Dairy Centre by Coleg Sir Gâr (a Further Education institution), and

an Organic Development Centre is run by the Organic Centre Wales (OCW). A Horticultural Centre and an Alternative Land Use Centre have subsequently been set up. The development centres channel much of the practical production research and extension activity through designated Development Farms. The Sheep and Beef Centre has identified eight of these farms, whilst the Dairy group has three and the Organic group has two, all of which are associated with a teaching organisation or ADAS. In addition the Development Centres have also designated Demonstration Farms, which are commercially run enterprises who work with allocated consultants to improve business performance. These farms then work as local centres for farmer discussion groups and as additional venues for open days and farm walks. By June 2002 there were 24 such farms, ten of which focussed on conventional sheep and beef, ten on dairy, and four that were different types of organic farms.

5.5 The Farm as a Business

The type of activity undertaken by farmer discussion groups is dependent to a certain extent on the type of farmer in the group's area and their requirements. However, each facilitator group offers the core FC service, and a major part of the FC service is the Farm Business Development Plan (FBDP). About 90 consultants are employed to provide the FBDPs across Wales (mostly on a part-time basis) and in 2002 there were in the order of 4600 cases in the system. In P's area (see Box 5.3 above), out of 3006 farming holdings, 471 had started the FBDP process.

The stated aims of the FBDP is to offer the farmer a rational approach to managing the farm, to evaluate the performance and prospects of the business effectively and to plan a course of action that will yield the greatest benefits to the farmer from the business in commercial terms. The most beneficial course of action, according to business criteria identified by the FBDP, may actually entail the farmer leaving the industry or at least to sell up his/her present holding. Outlining the consequences of their decisions and the process by which they may be carried out to the best advantage involves persuading the farmer to view the farm as a business and to relinquish, or at least to demote other beliefs that may be held about farming, and possibly to relax personal attachments to particular farm holdings

Farmers in P's area, however, exhibit some resistance to viewing the farm principally as a business and find it difficult to let go of some deeply held beliefs about farming, attachments to the land and feelings of responsibility with regard to local socio-cultural structures⁵⁹. P reports her experience of farming families who have often been the backbone of support for Welsh cultural activities, and their fear that the failure of farms weakens the general rural socio-cultural fabric⁶⁰. Whilst these comments convey specific and impressionistic knowledge, they are supported by research on the embeddedness of farmers and its influence on the way that they make decision (e.g. Lobley and Potter (2004)). Similar commitment to the land, to farming and to the local community is found among the organic farmers reported in Chapters 6-8, which helps to establish the farmers interviewed as embedded in the local farming culture.

A further obstruction to the business-orientation of the FDBP reported by P, partly related to family embeddedness in a farm that often has been owned by the family for generations, is the problem of succession where the transfer of control to the next generation is delayed or carried out in a manner that puts the business in a disadvantageous position. P's anecdotal evidence is supported by research on the rates of exit from farming that show low rates of retirements can inhibit the development of farm businesses and reduce the opportunities for younger entrants to gain experience and to implement changes in farm management (ADAS, 2004). Whilst business transfer is eased, if family relationships allow, by a FC administered scheme which adds an extra 10% to grants applicable to the farm in cases where one member of the farm owning partnership is younger than 40 years old, take up of this scheme does not always mean that older members of the family relinquish significant influence. This influence can be seen to be both a drag on the development of the farm, or on the other hand can be used as a valuable resource of experience and local knowledge. The experience of many of the farmers interviewed as part of this study (reported in Chapters 6-8) seems to suggest that access to older methods and attitudes of farm management, and knowledge of the farm's specific characteristics learnt over

⁵⁹ An illustration of attachment to the land is the practice in many areas to know the farmer by the name of his/her farm e.g. John Ty Llwyd, where Ty Llwyd is the name of the farm.

⁶⁰ Also noted in Jones, (1993) depiction of Welsh rural life

generations of family involvement is important not least in providing reassurance and confidence when deciding to convert to organic farming.

5.6 Environmental Policy Actors

The general attitude of environmental policy actors has moved from specific response to environmental degradation on farmland to attempting to deal with the natural environment and farming activity as a holistic system (Clark et al, 1997). The strengthening and increased sophistication of agri-environmental thinking has provided support and justification for Organic Agriculture but has also posed a challenge for the system to differentiate itself more clearly from modern conventional farming.

The interactions of environmental policy actors with farmers are significant in establishing knowledge about the relationship of organic farming practices to environmental objectives⁶¹, and which, because of the public involvement of environmental organisations, helps in disseminating perceptions about organic farming and food to a wider public. Organisations ranging from the local such as Wildlife and Woodland trusts, to national non-governmental organisations such as the RSPB and the National Trust, statutory agencies such as the Environment Agency and the Countryside Council for Wales, and to partnership organisations such as Farming and Wildlife Advisory Group (FWAG)⁶² and Linking Environment and Farming (LEAF)⁶³ are active and are able to provide advice and guidance as well as challenges to the farmer. Such a wide array of individual organisations is not surveyed here, but one organisation that participates extensively in policy formation, policy implementation and in extension services to farmers consistently and across the whole

⁶¹ Research on the relationship between organic farming and biodiversity, nature conservation and general environmental quality is widespread and outside the scope of this thesis see for example Stolton et al, 2000

⁶² FWAG was established in 1983 as a limited company by guarantee, registered as a charity, and provides advice on environmental practice to farmers and landowners throughout the UK. It has core funding (amounting to 16% on income in 2003/4) from DEFRA to which is added a number of other sources of support (see FWAG, 2004).

⁶³ LEAF was established in 1991 and is a registered charity to promote Integrated Farm Management techniques funded through farmer membership, corporate membership and sponsorship, LEAF Marque fees and government grants

of Wales, is the Countryside Council for Wales (CCW). A brief description of its structure and involvement follows.

5.6.1 The Countryside Commission for Wales

The CCW is an advisory body⁶⁴ appointed by the National Assembly to advise on countryside and wildlife matters including wildlife conservation, landscape protection, public amenity and education. Its activities impacts on farming issues in many of these areas, and it has been represented on the Organic Sectors' AFP working groups and has been active in supporting research into the impacts of organic farming on upland areas in Wales (Fowler et al, 2003). Its main influence on sustainable farming practices arise through its administration of agri-environment schemes, which currently primarily entails the Tir Gofal scheme. In its remit letter for 2004/ 5 CCW was encouraged to increase the areas of land covered by the scheme (by 50,000 Ha) and to assess with the National Assembly the socio-economic effects of the scheme, hence integrating further the agricultural, environmental and rural development agendas of the Assembly.

Tir Gofal was launched in April 1999 and builds on the earlier Tir Cymen and Environmentally Sensitive Areas (ESA) agri-environment schemes. It is designed as a whole-farm scheme such that measures and restrictions apply to the entire holding and not to specific sites within the farm. The aim is to encourage agricultural practices which will protect and enhance the landscape, cultural features and associated wildlife.

The scheme has attracted applications from around 5500 farmers, with some 1600 agreements achieved by 2005 covering an area of 160 000 Ha. It comprises of four elements including land management of the whole farm and of key habitats, creating new permissive access for the public, capital works to protect and manage habitats, and training on managing specific habitats and on practical skills such as hedge-laying. Some of the work that may be supported is optional, so a farmer may choose how much they commit to the scheme.

⁶⁴ Formally an Assembly Sponsored Public Body (ASPB)

Tir Gofal replaced a number of schemes such as ESA, Tir Cymen, Habitat, Moorland, and Countryside Access schemes and can be run alongside schemes such as the Woodland Grant Scheme and the Organic Farm scheme. Under proposals for a new 'entry-level' agri-environment scheme (ELS) Tir Gofal will be incorporated along with the Organic Farm Scheme into a multi-level system of farmer commitment and payments on agri-environment support that will provide additional payment over and above the reformed CAP payments that will themselves be subject to environmental cross-compliance regulation (ARD, 2003).

5.7 Supply Chain Perspectives

Supply Chains and Supermarkets

A potentially major influence on knowledge management in Welsh agriculture is that of the multiple retail chains. The multiple retailers became seriously interested in developing closer ties with individual farmers following the BSE crisis in beef production and in the mid 1990's a number of so called producer clubs dedicated to individual supermarket chains were set up (Fearne, 1998). Supply chains in the dairy industry have not yet become identified with single supermarket chains, but a process of increased concentration of market power also appears to be in train in this sector.

The first supermarket producer clubs that were set up did not differentiate between the conventional and the organic producer, but as organic farming grew in size more dedicated services were provided for organic farmers. As the influence of supermarkets increased some organic producers saw a need to try to protect their interests from what they perceived as the controlling aspirations of the retailers. Their response was to develop farmer-led organisations to try to retain control over marketing their produce either on a collaborative basis or a more tightly defined co-operative model.

'We realised in the mid 90's that the supermarkets were going to come in, and we attempted to offer farmers an alternative to going directly to the supermarket....

..... It was actually to say 'the organic sector, the livestock sector within this region needs protecting' because, its common knowledge, but the effect of the

supermarkets has not always been beneficial to the farmers and it's been achieved by divide and rule, effectively. And if we can act as a buffer, with farmers coming together and acting as one, then the feeling was that we have a better opportunity to... in a kind of way slightly redress the balance.'

(Farmer-Led Producer Group founder, 2002)

The farmer groups that have been set up have, confusingly, become known as producer groups, and will be referred to as groups to differentiate them from the clubs that are associated with individual supermarkets. A brief description of the activities of each type of association follows.

Supermarket Producer Clubs

The producer clubs set up by some of the main multiple retailers were initially formed to be communications channels as much as supply channels. Through these clubs retailers may communicate industry standards and market information and demands to a stable and known group of farmers (conventional and organic), and provide information and advice on improving their product and business performance. The chain become a 'learning chain' as retailers, interested in developing closer links with their trading partners, recognise the value of improving the learning capacity of each partner in the chain (Fearne, 1998). The clubs are operated by a dedicated management structure, whether through an independent company (as is the case with Waitrose), an intermediary such as a sole supplier meat processor (as is the case for Tesco) or through an internal division of the company (Sainsbury). Examples of these clubs and learning chains are given in Box 5.4.

Producer Groups

A producer group may be defined as a group that is run by producers for their own benefit, and may in that case include both co-operatives and looser collaborative type arrangements. Two such groups acting on behalf of Welsh organic livestock farmers are Cambrian Organics and Graig Farm (see Box 5.5). These groups act to co-ordinate the marketing of their members' production, to amass knowledge about the market, and to share this knowledge with their members. They differ from the supermarket producer clubs in that they cannot offer producers a guaranteed market, but neither are producers tied to a single marketing outlet.

Milk Supply Chains

Since the ending of centrally regulated milk marketing schemes and the Milk Marketing Board (MMB)⁶⁵ in 1994, the milk processing chain has gone through a series of changes including the break up of Milk Marque, the MMB's successor, and the growth of some farmers' co-operatives. To date the supermarket chains have not become involved in developing dedicated chains of suppliers and the milk processors, therefore, operate as the main channels of information and knowledge sharing for dairy farmers.

The processors operate information and extension services for farmers, on the basis of milk quality and composition measurements, and these services have become more refined over the last ten years.

'Up to 1994 we bought milk from the MMB, so we didn't have much influence, but since then we have been successful in getting the producer to produce milk of the right standard. We divide our producers up into different classes- you don't want the same quality milk for the fresh milk section as you do for the cheese. You want high protein and high fat for the cheese section but not for the fresh milk. There is no point in the producer producing it. So we go through a process of education to get the producer to produce what is really wanted by the business.'

(Processor interview, 2002)

The processors, whether co-operative or dairy companies, run similar types of services for their supplying farmer in order to maintain or improve quality, and these normally include written information, discussion groups, and field visits by dedicated field officers. Farmers are also encouraged by the payments system to consider changes in their work practices that would affect milk standards. For example if the processor wants to encourage the production of more protein they pay more for the protein and less for something else. They back up the financial incentives with suggestions about the type of feed, silage quantity and quality that would help to produce what was required the field managers can advise the producer what is needed by the dairy. The processors may also influence the farmers' practice by penalising

⁶⁵ Specifically this was the England and Wales Milk Marketing Board (EWMMB) which was one of four operating in the UK

payments during those times of the year when there is an oversupply of fresh milk, and encourage the farmer to change their herd's calving patterns so that the supply is more closely matched to seasonal demand.

There are some three or four dedicated organic milk marketing companies operating in Wales, although some mainly conventional processors have also been able to offer supply contracts to organic farmers. The largest organic processor is Organic Milk Suppliers Co-operative (OMSCo), established in 1994 and based in Somerset. The first certified organic dairy in Britain was set up near Aberystwyth in west Wales in 1952 and developed into Rachel's Organic. Rachel's Organic has a range of products, from fresh milk to various forms of yoghurt and other processed milk products which is marketed to a number of multiple retailers. It has built up its supply base within its own locality, but has also more recently begun taking supplies from Calon Wen, a farmer's milk co-operative.

Box 5.4 **Supermarket Producer Clubs**

Livestock Marketing Ltd

One of the first retail chains to engage with this form of supply chain in Wales was Waitrose plc, which became involved with a local company, Livestock Marketing, Ltd. (LSM) that was set up in Aberystwyth in 1993. Much of the operation and control of this chain is ceded by Waitrose to LSM who work with farmers that can offer stock certified by the Farm Assured Welsh Livestock (FAWL)¹ scheme. A marketing channel for organic lamb was introduced in 1998.

J. Sainsbury plc

Sainsbury's Supermarket launched an organic producer club named Sainsbury's Organic Resourcing Club (SOURCE) in 1997. The club offers information and advice on conversion to organic farming and to support further development of organic farming for its members with much of its advice material produced by the Soil Association. It was set up with eleven founder members that included Organic Farm Foods and Rachel's Dairy from Wales

Tesco plc

Tesco's Producer Group was set up in 1996 and runs producer clubs that are open to conventional and organic livestock farmers. The club, run by St Merryn Meats through whose abattoirs the meat is processed, offers a guaranteed market for livestock and the farmer is given information on stock selection, grading and marketing. The club also allows Tesco to trace animals to their source farm, which are obliged to be Farm Assured, enhancing their control over quality.

Box 5.5:**Producer Groups***Cambrian Organics*

Cambrian Organics was set up in June 2001 as a co-operative group. They source and market finished stock through abattoirs and processors to multiple retailers, whilst some stock is processed by the co-operative and sold by direct sales. The group is based in west Wales but is open to farmers throughout the country, and currently has in the order of 35 members. They do not have a formal structure of knowledge management but since they are based on the remnants of one of the erstwhile Cambrian Organic Group scheme local discussion groups have a similar attitude to sharing knowledge.

Graig Farm Producer Group

Graig Farm was established in the early 1990's as a local marketing venture which has expanded to become a large collaborative enterprise with over 200 suppliers. Producers pay an annual subscription fee and commit themselves to supplying a certain number of livestock per annum. There is no compulsion to sell all of the producers' stock through the group but producers are committed to supplying 90% of the agreed amount. The membership is divided into eight local groups which run discussion groups, farm visits and training events. The group also employs a field officer to provide advice to farmers on livestock and market issues.

Graig Farm sells its output to the main supermarket chains, but also run their own direct sales operation. It is also a member of the Organic Livestock Federation which acts as a co-ordinating venture between a number of organic farmer organisations.

Calon Wen is based in west Wales but has members located in all areas of Wales. It is still relatively small with a membership of some twenty farmers to date. It does not have its own processing facilities, using the facilities of South Caernarfonshire Creameries (SCC) in north Wales and Rachel's Organic dairy in Aberystwyth. SCC is itself a farmers' co-operative, being one of the most successful and enduring farmers' co-operative in Wales. It was set up originally in 1938, producing fresh milk and cheese, with its main output utilising conventional milk.

Other relatively small scale organic milk marketing ventures have been created in Wales such as the Trioni company which was formed in 2002 by three neighbouring farms to process, bottle and sell their own milk in the local market. These companies,

together with farm based cheese makers, and other direct-sales producers in the livestock sector can take advantage of some of the AFP's schemes to encourage diversification and value adding activities. Their 'learning chain' is short and directly applicable to their own requirements.

5.8 Conclusion

This chapter has explored part of the institutional environment in which organic agriculture develops in Wales. Michelsen et al's (2001) framework for development has been an useful guide for analysing the sector, by which growth is first traced through the development of internal organic institutions, and progressively through an increasing level of interaction between organic and conventional agricultural institutions, and with other social (market) and regulatory institutions. But the development of the organic sector takes place as a process of co-evolution with its institutional environment, and as the sector grows its interaction with the conventional sector becomes more intimate and the organic farmer as a stylised figure changes as more conventional farmers convert their holdings to organic farming.

The interaction between organic and conventional agricultural institutions can be depicted in terms of the image of creative conflict, where each system is influenced and modified by interaction but retain elements of incompatibility. Each system is undergoing a process of change, which provides opportunities and challenges to the organic sector. The organic sector has achieved a level of institutional acceptance where the sector is represented along with other production sectors in the AFP's Agri-food strategy and features within the overall policy vision for the future of the agricultural industry in Wales. The claims of organic farming to fit in with environmental, health and rural development agendas is given space to develop, but is also under challenge as approaches to conventional farming change in response to policy, regulatory, and market pressures.

Change in the relationship between the organic and conventional sectors is also woven into the political changes that have been occurring in Wales during the late 1990's and early years of the 21st Century. The establishment of the National

Assembly for Wales, with its focus on sustainable development along with the larger significance of the agricultural economy to political and social life in Wales (in comparison to its status at the UK level), has given the development of agricultural policies an added impetus. Notwithstanding the larger policy and regulatory changes afoot as the CAP is reformed, the local agri-food, environmental and rural development policy areas have been actively recast.

The discussion sketched the agricultural institutional environment, and the intention was to identify actors divided into the three main influences on the farmer, namely institutions of the farmers' civil society, the state and the market. But since the activities of organisations straddle knowledge domains they may not be neatly divided into those distinct domains. However, as Fig 5.3 (p104) suggests organisations may be clustered according to their core activities, but may also be allowed multiple positions across the institutional landscape. As a result the Agri-Food Partnership may be represented in more than one domain as its functions impinge on the farmer through more than one type of activity. This is also the case to varying degrees for organisations such as the Organic Centre Wales, Farming Connect, the Soil Association and other Organic Certification bodies. Organisations such as Elm Farm, IGER, the Grassland and Breed Societies as well as commercial entities such as ADAS and seed companies⁶⁶ are firmly within the production domain although they may relate some of their work to market and regulatory concerns. In contrast organisations such as milk processing firms, supermarket chain buyers and farmer-led marketing groups view the process of knowledge generation from the market perspective but combine this focus with the necessary production knowledge. Finally organisations that are based within the regulatory domain encompass a range of primary concerns from environmental sustainability (e.g. CCW, FWAG, the Soil Association) to trade, nutrition, food and public subsidy issues.

The progression of institutional development and knowledge generation (following the SECI model) from an internal dialogue within organic agriculture to interaction with conventional farming institutions and then to wider social institutions expressed through state, civil and market institutions exposes organic agricultural conceptions to

⁶⁶ Mostly not explored in this thesis due to lack of space

progressively greater scrutiny. The basis of organic agriculture is tested first on production grounds, and progressively through its range of claims for superiority in respect of wider benefits such as environmental impact, health, and rural development. Its claims also oblige other actors to respond, either with negation or with some form of accommodation. The development of greater animal welfare and agro-environmental policies, whilst they may not be wholly in response to the growth of Organic Agriculture, illustrate this shift in attitudes. They also represent a challenge to Organic Agriculture to justify its more radical claims as an alternative system.

Informal action is a necessary pre-requisite for formal institutional development and is by nature difficult to capture and describe. Informal action forms a central aspect of the empirical work in Chapters 6-8. In the current chapter informal relationships may be seen as a necessary part of the process of social learning as personal and tacit knowledge is employed to create shared understanding. The traces of informal action, however, are also easily lost as personal links are broken and their intangible products dissipated or assumed by formal relationships.

The development in the institutional environment has occurred on a number of different level and in different domains, and the Organic Farmer is envisaged as being placed within a network of influences, interacting with different areas of knowledge and with associated actors. The study explores how organic farmers are placed as partners in relation to the institutions of different knowledge domains and how they draw on and utilise these resources. In this chapter the focus has been on an abstract Organic Farmer which may be represented through the main features of organic institutions, and the aims, objectives and attitudes of those institutions assume the identity of individual organic farmers. The institutional view in this chapter requires a relatively undifferentiated view of the farmer, whilst the heterogeneous nature of organic farmers is explored in Chapters 6-8.

Chapter 6

Locating the Farmers: Embeddedness and Conversion

6.1 Introduction

This chapter focuses on a description of individual farmers, on their personal histories, circumstances, attitudes, and motivations in farming. The chapter conveys farmers' self-presentations in semi-structured one-to-one interviews and traces out some of the themes that emerge. The descriptions intertwine the places in which the farmers live, their family and working connections, farming practices and the ways of life in which they are engaged, and attempt to provide a view of the farmers by which to judge the level of mutual understanding that farmers may have with their peers and the ways by which they may interact in forming associations. These descriptions fit between the descriptions of institutions in Chapter 5 and descriptions of farmers as they interact with various institutions in Chapter 7 and in association with their peers in Chapter 8.

Since farmer experience is varied, the differing physical and commercial conditions, personal and family experiences, attitudes, motivations, degree and quality of embeddedness, commitment and confidence provides a wide ranging description of the world of family farmers in Wales. Evidence from the interview transcripts is given in direct, indirect or implied terms, and portrays the farmers in some part of their 'lives as lived'. The stories that the respondents present about their own and their families' histories, whilst individually unique, are narrated within a frame of reference that is common to family farms in Wales, and so the picture of farmers that emerges from this process, whilst it may not necessarily represent universal experience, recognisably belongs to Welsh family farming, and experiences of conversion to organic farming in Wales.

The chapter is a presentation of the fieldwork that was undertaken with organic farmers in Wales over a period of a year during 2002/3. Information from twenty

three semi-structured in-depth interviews is included. As has been discussed in Chapter 4 evidence from the fieldwork is distilled through a procedure which analyses the interview transcript for theoretically informed themes and identifies instances of those themes in the individual farmer's context. Illustrative quotations are given in the body of the text, with some additional supporting quotations presented in appendices.

The chapter is divided into two parts. The first part is a description of the individual farmers, establishing common descriptive themes but also attempting to preserve aspects of the diversity that the sample of farmers exhibit. The focus is on the farmers' attitudes and motivation and on describing the farmers within their local context. The second part of the chapter is a description of the process of conversion, exploring the reasons for change and the motivation of the farmers. The farmers may be categorised in different ways according to the features or characteristics by which they are described in the chapter, and the conclusion of the chapter is a summary of these categorisations which together may offer a typology of the organic farmers that make up the sample.

Part 1: Locating the Farmers: Defining Embeddedness

The farmers are initially located simply in terms of the characteristics of their farms and major relevant enterprises. These characteristics indicate the constraints and opportunities that are significant to the farmers. The description of individual farmers is further organised around a notion of the embeddedness of the farmer, and of their attitudes, and motivations.

6.2 The Farms

The farmers included in this study were divided into three groups, namely Groups A, B and C. Groups A and B were based on existing associations of farmers, whilst Group C was formed for the purpose of this study from a group of farmers that were close neighbours (see also Chapter 4). The farmers included have a long commitment to farming and, for the main part, have a long relationship with the locality within which they live. The sample does not contain new, hobby or part-time farmers.

Farms in Group A are mainly hill farms, with sheep and some store cattle being the main farming enterprises, although one farmer (A3) also rears chickens and keep horses. Farms in Group B are predominantly dairy farmers, with some beef and some sheep rearing whilst farms in Group C are lowland farms that are predominantly dairy enterprises with some beef production, and with one farm growing potatoes. In most cases the farms are run as a family unit using family labour, with a couple of exceptions (B4, C6) that employ permanent farm labour.

There is a wide variation in farm size within each group. For Group A the range is from around 40 to 220Ha, although four of these farms are less than 55Ha. The range is larger in Group B, going from 19 to 600Ha, with six of the eight farms in Group B being between 40 and 160 Ha. Farm sizes for Group C range from around 70 to 180 hectares.

For the purpose of the discussion in this chapter, however, the three groups have been amalgamated into a single sample of organic farmers who had converted to organic farming roughly around the same time. The characteristics of each farm will not be further described in individual terms. Relevant information will be discussed where the farm's characteristics become significant to the description of the farmers, their attitudes and knowledge about farming, or their participation in the three groups. A further summary of the farm characteristics is provided in Appendix 6.1.

6.3 The Farmers

The farmers included in the study are described in terms of their embeddedness, their attitudes toward farming and their farming motivations (including motivations for conversion to organic farming). These features are recognised to be mutually influential and evidence for each one, as identified in the interview data, often overlaps.

6.3.1 Farmer Embeddedness

Embeddedness is used here both to indicate the personal, familial, and social ties that farmers have with farm and locality, and to indicate those links that farmers have

within the industry. An exploration of the embeddedness of the farmers first locates them within their social context and indicates the degree to which their experiences may be seen to be representative of, or relevant to other Welsh family farmers. Secondly, the farmers are embedded within the practices of the industry, illustrated by the links that the farmers have with other actors including feed suppliers, fertiliser and seed merchants, vets, and various advisers (including private consultants) as well as practice-focused linkages with their peers either through informal or more formal associations of farmers. Hence, the embedded farmer is placed within a web of personal links with other actors that reflect social and practice based communality. Whilst the capacity of the farmer to successfully maintain the farm may be reduced to the farm's commercial viability and to decision-making that is judged on narrow economic criteria, the embeddedness of a farmer with the farm, the locality, and the industry, broadens the basis on which the farmer makes his/her business decisions, and gives a fuller explanation of economic behaviour. These links are illustrated in both Part 1 and 2 of this chapter and continued in Chapters 7 and 8.

The networks in which the farmers are embedded convey information and perform as exchanges of knowledge for the farmers, and the process of conversion to organic is seen to be one in which some of the linkages that engage farmers are broken and new ones are formed. This may be depicted in terms of processes of dis-embedding and subsequent re-embedding in new associations. Hence, thirdly, farmers' experiences, either as individuals or in association with other farmers, serve to orient them in particular ways that may influence the kind of new associations that they may be capable of forming (or entering) during the process of re-embedding in new networks. This re-embedding, and the new networks into which the farmer enters following conversion is important in what is learnt about organic agriculture, and what the farmer may contribute to the development of knowledge. The farmer's orientation and networks, therefore, may intimately influence the farmers' knowledge about organic agriculture, and the range of experience and characteristics found among farmers can reproduce different types of organic farmer, and encourage different conceptions of organic agriculture.

6.3.2 Embeddedness on the farm and in the locality

The family connections with farming of nearly all the respondents extend for at least two generations and in many cases for three or more, and had been formed within the contemporary conventional farming paradigm. Hence, whilst the farmers in the sample have broken away from that paradigm, many of the characteristics of the organic farmers that are discussed here are applicable to their conventional neighbours. The personal histories of the farmers, however, indicate some variation in the ways the respondents have entered farming, in their degree of embeddedness in farming and the locality, and in their attitudes to farming. From Group A, farmers A1, A2, A3, and A5 all had family connections with their current farm that extended to at least a couple of generations. From Group B, the farmers had all been born and brought up on a farm with most of them also having close family ties to their current farm. B1, B3, B6, B7, and B8 are farmers who had not moved away from the area, staying to continue working on the farm after leaving school or by way of a first level course in agriculture at a local college. Of group C, farmers C1, C2 and C6, moved to the area after being brought up on farms elsewhere, whilst the remaining farmers in the group were all born and bred on their current farms. Six respondents had become full time farmers following a change of career, viz. A4, A6, A7, B2, B4, and B5, although all, apart from A4 had been brought up on farms or had close farming connections and, hence, could be regarded as ‘returnees’ to farming. In all cases, however, these individuals had been full time farmers for a number of years before converting their farms to organic farming. A summary of this classification of the farmers according to their origins, entry into farming and length of time on their current farm is given in Table 6.1.

Table 6.1: Relationship of the farmer to the farm and to farming

Category Designation	Category Description	Farmer
Home-stay	Local born and have stayed on the family farm	A1, A2, A3, A5 B1, B3, B6, B7, B8 C3, C4, C5, C7, C8
Returnee	Local born and career changer/returnee to locality/ family farm	A6, A7 B2, B4, B5
In-mover	Moved into area/ Long term farmer	C1, C2, C6
Entrant	Moved into area and career change to farming	A4

The largest category in Table 6.1, termed 'Home-stay' farmers, refers to family histories ranging from that of A1 whose family have owned the land since 1780, to A5 who notes that he had 'always been here'. Whilst not all of the farmers could document a family history to the same extent as A1, they are aware of their families as rooted in farming and in the locality where they continue to live. B1 also expresses the connection simply as:

'This is the family home...always been here farming, and my father before..'; and C4, who gives evidence of a continuation through a number of generations:

'[*name of farm*] was my grandfather's farm and my father, and now my turn and my brother. So I farm in partnership with my brother who is now in poor health, and myself and then [*name*] my brother's -(son) (my) nephew⁶⁷, who have now come into the business to take over from [*brother's name*].'

Other examples, illustrating the relationship of the farm to the history of the family, are given in Appendix 6.2.

The 'Returnee' classification is applied to those farmers who had been brought up on the farm that they now work or with which they have had close ties, but had been employed in other careers before becoming full-time farmers. Of the five farmers included in this group, B2, B4 and B5 are similar in having gone to university and had for a few years subsequently pursued non-farming careers. A6 and A7 had both strong farming connections but had been working in other jobs before being able to return: A6 had been employed locally in a manufacturing company, but having been brought up on a farm had always been interested in returning to farming, whilst A7's farm had been her uncle's until his retirement. The returnee farmers had kept in close contact with their family farms, and/ or with farming, and could immediately draw on those linkages when they decided or were able to return to become full-time farmers.

'In-movers' are farmers who had been brought up on farms and had moved to the area in which they now farm. The three that appear in Table 6.1 all moved from farms in England and became established conventional farmers in their present properties before making the conversion to organic farming. They had a strong relationship to the industry before moving to the locality in which they now lived, and had been

⁶⁷ The confusion between son/ nephew was cleared up in ensuing conversation

resident in those areas for a considerable period of time before converting to organic agriculture.

A4, the only farmer regarded as an entrant to the industry, had also moved from England. The term 'Entrant' is relative to the other farmers in the sample and refers to the fact that there was no farming experience within his immediate family background rather than having been a recent entrant to the industry. In fact, A4 had, by the time of this research work, been a farmer for 18 years⁶⁸.

Nineteen out of the twenty three farmers included are shown to have been born 'on'⁶⁹ the farm that they now worked, whilst only one of the twenty three came from a non-farming background. This distribution indicates a relatively strong coherence within the sample in terms of family and personal embeddedness in the locality and the industry: a feature that is relevant in terms of considering the identity of the farmers, the capacity for peer learning and potential for forming communities of interest and /or of practice.

6.3.3 Embeddedness in farming

Different expressions of commitment to, and confidence in, farming is found within each of the four classes of farmers shown in Table 6.1. Most of the farmers, particularly the 'Home stay' and the 'In-mover' farmers, indicate that taking up farming was seen to be a natural progression in their lives. Comments from a number of these farmers indicate that they had not seriously thought of alternatives, particularly since home and place of work are so intimately entwined (see both Appendix 6.2 and 6.3). B6, for example, is one for whom farming is the only work that they have considered

'It's in the blood- my grandfather and father both farmed here. I have been brought up with it. I don't know anything else- I wouldn't do anything else'

(B6)

⁶⁸ The relative categorisation of A4 applies also to some of the other farmers who may be placed within more than one category. Hence A6 can be regarded as a 'Returnee' or 'Entrant' given his relatively late change of career to full-time farming. A7 is regarded as having sufficient farming background although technically may be counted as an 'Entrant' given she was not brought up on a farm and had changed career to become a fulltime farmer, and C3 is a farmer whose family moved to their present farm from a different part of the country.

⁶⁹ That is their families were already living on the farms prior to their births.

and in a more indirect way B1 expresses acceptance and even contentment in his way of life and what he gets from it.

‘Our income compared with a lot of people (is not high).... but the deep freeze is full, and we are not hungry- the car and house is paid for’

(B1)

Others ‘Home-stay’ farmers have continued to farm because of similar although less explicitly expressed observations, and the ‘In-mover’ farmers (i.e. C1, C2, and C6) whilst lacking a long local pedigree, have a similar degree of embeddedness in a farming way of life and mentality through upbringing and family history. They demonstrate an aspect of embeddedness that is related to depth of experience in the industry, and the network of commitments that the farmer builds up within the industry.

The ‘Returnee’ and ‘Entrant’ farmers exhibit their commitment by their conscious decisions to become farmers, and do so for a range of individual reasons, derived from a range of circumstances. A6 and A7’s connections to farming have been referred to in the previous section, and B2, B4 and B5 had decided to return to their parents’ farms after a period engaged in training and employment that had taken them away from practice as farmers. A4 had persevered against professional advice not to enter farming and, whilst he is the only example of a well-educated, urban and inexperienced farming entrant in the four categories, he had practiced as a conventional farmer for a number of years before conversion to organic.

Whilst they have a strong connection with their farms and their locality, B2, B4, and B5’s experience of other livelihoods (which is also applicable to a different degree for A4, A6, and A7) adds another dimension to the way that they view farming, and their deliberate decision to enter the industry suggests a different quality of commitment. These farmers introduce deliberation and choice (in comparison to those farmers who had always remained in farming), and have to form or re-form networks as they become (re)-embedded. This more conscious process of re-embedding is replicated for all farmers as they convert to organic agriculture (see further in Chapter 7).

6.3.4 Confidence and expectations of the future

Many farmers could look back to generations of the family having farmed but not all were confident that the connection would continue past their own time. Three farmers in particular (A3, C2, C8) report feelings of disillusion and frustration which threatens their own, or their family's continued involvement in farming. However, commitment to farming is not unchallenged, nor uncritically held by any of the farmers in the sample. Even with some of the farmers who give an impression of confidence and enthusiasm there is an acknowledgement of the inherent uncertainty in the industry.

Appendix 6.4 provides a number of comments made by farmers related to their confidence in the future of farming and, as an indication of their expectations for the industry, some of the farmers comment on the likelihood or desirability of their children becoming farmers. Five of the seventeen farmers who have children may be said to be certain that their children are, or will be, following them into managing their farm (A2, A5, A6, B1, C4) and six of the farmers whose children are too young and about whom a realistic forecast can not be made have a reasonably positive outlook about continuing farming and are open minded, if not positively expecting their children to continue farming (i.e. B2, B3, B6, B8, C3, C6). Of the remainder, B7's and C8's children show little or no interest in farming, while C1 thinks that his daughter, who is currently working in agriculture elsewhere, may be able to return to the farm. The childless farmers⁷⁰ (A1, A4, A7, B4, and C7) are all either reasonably positive or enthusiastic about the future of their farms without reference to who may succeed them.

Of the farmers with the more negative expectations of a future in farming A3, (representing a couple still in their twenties) whose farm had been owned and worked by family members for three generations, were now actively reconsidering their future in farming. They had been disappointed by their experience of farming and conversion to organic farming had not improved matters.

⁷⁰ B4 is the only one young enough to still be able to start a family

‘(A) year ago in May we sold the cows, and for six months after that we weren’t enthusiastic about farming. We didn’t want to give up on it but we felt we had been let down...’

(A3)

Both had attended college courses in agriculture; A3 had an HND and his wife a degree in Agriculture, and both considered themselves to be capable farm business managers.

‘We did a five year cash flow and we stuck to our budgets and were quite keen to keep that going. We won an award three years ago in *[name of college]* because of our cash flow - and doing what the banks wanted us to do. They were keen as well- wanting to lend us money because that is where they are being pushed toward as well.....(It) all becomes irrelevant when there’s no market at the end of it, - its been a difficult twelve to eighteen months.’

(A3)

They were now in a process of re-assessing their options and were exploring new farm enterprises. They had sold their organic milking herd, and had moved into organic egg production, suckler cows and sheep. A3 (wife) had taken a full-time job, related to agriculture but off the farm, while A3 (husband) managed the remaining farm enterprises. A3 (husband) was conscious of the attachment of the family with the farm, and the fact that both his father and grandfather had milked cows there, but he had felt that changes had been necessary. They were still interested and committed to farming, but in addition to alternative farm enterprises felt that they also had options and interests that could be developed away from the farm

‘..there’s a lot more to life than having to work, and you need a reasonable income for the amount of work that you do. There are plenty of jobs that will earn a lot more money than farming- (but)...we like where we work and where we live so that has a lot to do with it as well..’

(A3)

C2 had also developed a pessimistic outlook and was considering interests outside the industry. His considerable disillusionment with farming had not been dissipated by conversion to organic agriculture, and he felt that he was at a cross-road in his working life. His non-farming interests included holiday letting and other leisure developments which he felt could be developed on his land. He had changed his main

enterprise to potato farming from beef following the BSE crisis and the cause of his current frustration were poor market prices and a general lack of direction and interest.

‘I didn’t enjoy doing the potatoes and the vegetables last year under the circumstances. I fancy a bit of a change really and not be as dependent on the farm for an income. Depending on how things go on this other enterprise will depend what I do on the farm. I wouldn’t mind keeping some organic beef again possibly... I’m just not very positive about anything at the moment concerning farming. That’s fairly general really – a fairly (general) lack of interest in (by) the public, and from the government, in farming and the way that it has gone.’

(C2)

C8 is similarly concerned about the future of the farm on which he was born and brought up. He farms in partnership with his brother having inherited from their father a farm clear of debts. Even so he fears that farming profitably had become too difficult for a relatively small family farm, and in concert with such expressions of disillusion members of the next generation are showing less interest in staying on the farm, and their parents express reservations about the wisdom of their children committing themselves to farming.

‘...it’s always a problem we had that we were always a size that would be too much for one man. If I was here on my own I would have to employ somebody, but the farm’s chief struggling point is that it has to make a living for two families...I am fifty two and my brother is forty four. I tell my two sons that there is a better life outside farming... My brother’s boy, I don’t think he wants to go into farming. I feel very sad (at) the fact that generations of *[family name]* that have farmed is probably going to come to an end.’

(C8)

Although he feels a responsibility for the future of the farm and his family’s relationship with farming, he tempers the sadness with a hard-bitten opinion of the life of a family farmer.

‘I hate it when people say it’s a way of life. That really pisses me off because - it’s a different way of life, I agree- but there is nothing special about being up at 6am in the morning, on a cold dark morning, being splashed with cow shit,

and you are struggling to keep your head above water. I don't think that any father would want that for their son - really'

(C8)

B5, whilst not as negative, generally agrees with C8's pessimism about the prognosis for small family farms, and declares that his son will be encouraged to make sure that he has secured alternative career options rather than be dependent on an income from farming (see Appendix 6.4). It is somewhat ironic that B5 is a 'Returnee' farmer who, having begun building a career off the farm, decided that there was still an opportunity for him back on his parents' farm. In his case, however, the opportunity was a combination of farming and diversification into cheese production, and it is in diversifying activity that C2 has also seen more possibilities in the near future.

Diversification has been the response of many of the farmers to the challenges that they have been experiencing as conventional farmers, and is coherent with the mentality that led them to consider conversion to organic farming. However, whilst diversifying sources of income might not take the farmer away from the industry it may shift the networks in which they are involved to encompass new relationships. Whilst the conversion to organic farming is itself an example of such changes in the farmer's network, and changes the farmer's degree of embeddedness in established relationships, this may also be true of the general diversifying activities that are undertaken. New networks that develop specifically due to organic conversion are considered in Chapter 7.

6.3.5 Business Attitudes and Behaviour

The challenges faced by farmers in this study contributed to a search for alternatives, which is shaped by the farmers' general attitude to farming and their identity as farmer. In addition to the farmers' observations discussed in the section above a strong indicator in this respect may be said to be the way in which the farmer regards his/her farm as a business, and conceives of its development in business terms, and on this basis the farmers may be divided into a further three groups.

Firstly there are those who look to use the farm as a base for building a business that includes non-farming interests. They may be termed as 'Diversifiers' and may be

contrasted with those whose focus is (more) limited to the farm and who present themselves as focussed on improving income through increased production or increased quality of production (the 'Production' group). The third group who, whilst interested in securing the farm's commercial future also highlight their interest in other aspects of farming life, including a more explicit awareness of the environmental impacts of farming (the 'Holistic' group). These three groups are categorised in Table 6.2.

Table 6.2: Business Attitudes

Category Designation	Category Description	Farmer
Business/ Diversifier	Active Diversifiers	A2,A3, B4, B5, B7, B8,C2,C3, C6,
Production	Focussed on improving quality/quantity of core outputs of the farm	A5, A6, B3, B6, C1, C5,
Holistic	Committed to maintaining the farm as a producer and highlight lifestyle and/or environmental concern	A1, A4, A7, B1, B2, C4, C7, C8

The categorisation in Table 6.2 is made on the basis of the most prominent features that are apparent in the farmers' self-presentation during this study, and on the extent to which they have developed other enterprises and used their farms as the basis for off-farm activities (as tabulated in Table 6.3). The categories in Table 6.2 are not strictly defined and farmers in one category may also exhibit some characteristics from either of the others. Some of the farmers are particularly difficult to categorise in these terms being capable of placement in more than one category.

The business activities and sources of income that the farmers referred to during fieldwork are shown in Table 6.3. The additional enterprises that were being developed by the farmers were of differing scale and ambition ranging from B7's organic egg business to C6's expansion into a farm management and commercial property business. Others, including B2, B3, and C5, report that they have explored alternative income streams but had not been able to develop their ideas to date or the attempt had not succeeded. A1, A5, A7, B6, C1, C4, C7, and C8 did not identify specific diversifying or additional enterprises in which they are engaged. A3 and C2, who have become disillusioned with the commercial returns from farming, whether organic or conventional, have explored alternative enterprises but were currently seriously reconsidering the direction of their farming future. B8 is the only farmer in

the sample to have decided to return to conventional production in order to improve his farm income (see Box 6.1).

Table 6.3 Farmers' Business Activity and Income Sources

Business Attitude Designation	Farmer	Business behaviour: Diversifying activity and alternative income streams
Business/ Diversifier	A2	Separate and unrelated business located on farm property; has considered a 'ranching' future
	A3	Wife has off-farm job; organic egg business, horse husbandry, and wholesale re-appraisal of farming future
	B4	Has a well developed downstream dairy venture
	B5	Has a well developed cheese making venture
	B7	Developing an organic egg business
	B8	Wife works off the farm. Has developed a milk bottling operation (returning to conventional production)
	C2	Reconsidering future in farming; attempts at beef and potato enterprises; developing holiday accommodation
	C3	Developing off-farm property investment
	C6	Developing farm management collaboration on additional farms and off-farm property investment
Production	A5	No identified alternative/additional income stream
	A6	One organic and one conventional farming units; considered converting farm buildings for holiday lets – not developed; wife has off-farm job
	B3	Concentration on stock improvement. Have explored possible joint downstream dairy ventures - not developed
	B6	Concentration on stock improvement/ breeding (Shorthorn cattle). No identified alternative/additional income stream
	C1	Concentration on milk yield. No identified alternative/additional income stream
	C5	Attempted alternative production systems (beef hormone – failed) Considering tourism project
Holistic	A1	Winding the business down
	A4	Experimenting with low intervention husbandry; Bed and Breakfast and external income
	A7	Husband acts as organic consultant
	B1	Converting farm buildings for holiday lets; hobby furniture making
	B2	No current identified alternative/additional income stream but looking at possible farm building conversion to tourism
	C4	Concentration on quality beef production. No identified alternative/additional income stream
	C7	Small scale fishing
	C8	No identified alternative/additional income stream

Box 6.1: B8's Business

B8's search for improved income had taken him into developing a milk bottling and delivery business, but has also meant that he has re-converted his herd back to a conventional status. B8's business activity is significant in that he is the only farmer to return to conventional production. He runs the smallest farm in the sample at 19Ha, and on conversion to organic had decided that milk production was more profitable than the organic beef that he had been producing initially. He also began to bottle his own milk and had started a local milk round, selling directly to the public and to local shops. However, he had found that the local market was unable to support organic milk sold with the organic premium, and had to sell his produce at the conventional milk price. He was, therefore, reluctantly converting his herd back to a conventional status. However he was also planning to maintain his land in an 'organic' state by not reverting to fertiliser and pesticide use, partly to keep costs down given he was now confident of the farm's ability to produce sufficient fodder, and partly with a view of possible conversion back to organic at a future date

The three Appendices 6.2, 6.3, and 6.4 provide some indication of the farmers' attitudes, and Appendix 6.5 provides comments that are more explicitly about the farmers' business attitudes and activities. Comments in Appendix 6.5 are related to differing issues (depending on the farmer), and the differing context from which they have been taken confirm the farmers' areas of interest and hence their categorisation in Table 6.2.

The observations range from C3's frank assessment of the ordinary farmers' business acumen contrasted to his own business focussed approach, to the more relaxed attitude expressed by B2, C5 and C8.

'Most farmers have family farms, they have had no training except possibly at agricultural colleges, (the) training would be in practical farming as opposed to business management, the people they know and meet at markets and such like are farmers, they tend to have excellent practical and physical skills, high level, and they do the job very well, but they don't really work out which job they should be doing and they – there is a general belief that if I produce it I should be paid enough to make a living from it - which is bonkers. It should be the other way round. The market should come first- the market always

comes first. But they have lived in a market support apparatus for sixty to seventy years and that is the mind set. They get terribly upset if when they produce milk and it's not being paid enough – 'someone should do something about it'...

(C3)

B2 agrees that many of the older generation of farmers have the 'wrong' priorities, but whilst he is interested in making his farm work well as a business, his motivation seems to be related to the kind of lifestyle he wants.

'Many (farmers) are old fashioned and think that they can say that they have milked every day for forty years and that means that they have achieved something by saying that. But I prefer- I don't mind working hard – every winter I do a hundred hours a week but I prefer to have the time to enjoy life – you make money to enjoy it. Retiring and dropping dead with three hundred cows will help no one.'

(B2)

C8 also treats farming as a job and also keeps farm work within definite boundaries.

'No (membership in other groups)- that is the way I stay sane. I finish farming at the end of the day – I finish farming! I train myself – when I walk through the yard gate at night I live like a normal person.....People in this part of this world are very laid back. There are grassland organisations and some one or two organic farmers attend them, but no – there will be farming discussion down at the [*name of local pub*] pub or watching the cricket match at [*name of local village*] or...that is just about right for me- we aren't great about 'right just finished milking lets get in and have a quick shower and go and talk farming again!'

(C8)

The attitude of farmers to their farms and to the development of the farm as a business is of importance when farmers interact with each other in situations of social learning. As discussed in more detail in Chapter 7 (Section 7.4) farmers appear to learn best from peers who have similar goals and aspirations, and categorisation such as that represented in Table 6.2 is relevant to the extent that individual farmers are able to identify sympathetic characteristics in their peers.

Part 2: Conversion to Organic Farming: Processes of Dis-embedding

6.4 Reasons for conversion to organic farming

Change in farm operations and enterprises are thought necessary by the farmers for a number of reasons, and conversion to organic farming is one change among a number which has been considered by farmers. An explanation of farmers' reasons for conversion is dependent on each farmer's individual situation, and their differentiated responses to the challenges of farming provide different routes toward the decision to convert. The following reasons for conversion, which include general as well as reasons specific to organic farming have been quoted:

- worsening trading conditions;
- a need to improve income from the farm;
- a need for changes in working conditions to accommodate changes in personal circumstances or changes in enterprise;
- a need to accommodate, to some level, concern for the environmental, animal welfare and human health effects of conventional farming;
- reducing workload and a search for better farming practice;
- increasing income through more efficient use of subsidy regimes;
- reducing or re-assessing commitments to farming;
- increasing income through taking advantage of new subsidy opportunities coupled with price premium;

Individual farmers quote different combinations of this list of reasons, however, the range of reasons presented may be reduced to three overarching themes namely: commercial, managerial, and the thematic areas of environmental impact, food quality and health taken together.

Each theme is awarded different importance by different farmers, but in many cases the divisions are not absolute or clear cut. Each farmer has a degree of interest in both commercial and environmental sustainability, whilst managerial concerns are based on a combination of the farmer's approach to farming and conditions specific to the farm. In this section the main themes have been identified, abstracted from individual context, and discussed separately with reference to evidence provided by farmers. Farmer observations to support this discussion are presented in tables within the text.

and in Appendix 6.6. A discussion at the end of the section combines the themes and a further categorisation of the farmers as types of organic farmers is made. Appendix 6.6 arranges comments by farmers according to these themes: Commercial, Farm Management, and Environmental/ Health/ Food Quality, and also according to the organic 'types' that are developed in this chapter.

6.4.1 Commercial Reasons: Challenges and Market Opportunities

Commercial motivation for conversion follows the same logic that may apply to most changes to the operation of the farm namely to secure the position of the farm in response to changed circumstances and market pressures. Differences in attitude toward farming in commercial or business terms has already been alluded to in Section 6.2.5 above, and these differential attitudes are reflected in the reasons that farmers give for considering conversion to organic farming.

The commercial consequences of conversion are central to all farmers in the study, but farmers' observations on their experiences of conversion reflect differing expectations and differing levels of what may be acceptable in commercial terms. It is clear that there are some farmers who are wholly committed to the organic system and, hence, may be prepared to accept lower levels of commercial success. Others may have a long term commitment to organic farming, but which is tempered by the ability of the system to deliver at least a comparable level of return as a conventional farming system. A third group of farmers, attracted by premium prices and the conversion grants, appear to have undertaken conversion for more opportunistic reasons and for immediate commercial gain.

Table 6.4 provides a range of farmers' observations on the role that their commercial expectations played in the decision to convert. As with all the farmers' responses those in Table 6.4 are often multifaceted. In some cases the observations directly place commercial considerations as the main reasons for converting to organic, whilst for other farmers these are moderated by other considerations that may only be fully understood on an individual case basis. Some farmers express their commitment to the organic system quite clearly both in responses which are made in commercial terms and in responses that highlight non-commercial reasons for conversion.

Table 6.4: Farmers' Observations on the role that their commercial expectations played in the decision to convert

Farmer	Observations
A1	'We sold our cattle just before the Foot and Mouth and we sold our quotas and we sold our quotas on sheep and now we have only got 120 ewes. But at that time I started to wonder whether there was going to be enough for me to do and I was looking for extra income. So we began looking at two things. We looked at a habitat scheme - something like 80% of the farm is under an environmental scheme and then we went organic at the same time.'
A2	'...(in) Organic farming – (there's) less stock, you are doing it better, (there's) more time...and big up-front payment was available'
A3	'...we were quite keen on this idea (organic conversion)- wouldn't say that we were typical organic – a lot of people are 100% for it- we were quite keen for the commercial reasons as well. We wanted to convert the farm because we thought it would be better for the environment, but also we needed to maintain a good income from it. It was pointless doing it for the fun of it, and we were on a tenancy farm so you have to pay your bills. We had borrowings to cover on it so you can't just do for the fun of it.'
A4	'I was more or less organic and when the organic scheme came along I thought that it was a bit of extra money there and since one has to fill in so many forms one might as well fill in more and get the premium.'
A5	'(The) main incentive to change was the cash plus the thought of premium on the livestock- which is a bit disappointing at the present'
A6	'The grant for conversion and the lamb price premium [<i>were reasons for conversion</i>]...(1) had £42 for the organic lambs last year compared with £38 conventional at the market - and there is a demand for them'
B2	'I had always said to my father that we would go organic after he retired, but he started to think as the milk prices went down to change then as the grants were there. So I was glad that the grants were there to change his mind. So we went organic, but I did it because I wanted to go organic- nothing to do with the money. I would have gone without the money at some time.'
B3	'...we were happy enough to milk 50 – 60 cows. We felt that was enough for a family farm – for what we were doing, and we could see that you could get a bonus on organic milk- even though it was 29.5p at that time we were realistic enough to realise that any bonus would be enough.'
B4	'It was ... the fact that we (as conventional farmers) seemed to be spending it (money) and the price just seemed to be dropping. So it seemed the more you spend the more production you get the less price you get – it was the world commodity market type of thing, and it seemed to be the way that the country was going. You produce more and we can sell it for less. And the chap in the middle always gets his margin and the consumer will always get a ...price. But the producer will progressively get less, and in terms of margin per acre we weren't actually going anywhere.'
B6	'When we made the parlour investment, things were unstable (financially), but we decided that turning organic would combine the strength of the short horn (cattle) and the organic system, and organic price was good'
B7	'I've got to be honest if it wasn't for the grants-that was the whole reason we went organic. It wasn't the only thing- we farmed more or less like that...So we just felt that if we kept the cow numbers down and we could have that price for our milk it was nearly double the conventional- our 60 was equivalent to their 120- we could make a living on that and still stay small. It hasn't quite turned out like that by no means but that was the idea'
B8	'...so we changed in 1996 and were fully organic by 1999. I then thought that turnover was slow in beef, and since so many people were coming out of milk so I decided to go into it. Parlours and livestock were cheap so it seemed a good idea- especially organic...'
C1	'...and the higher rate of grant for conversion to organic came in about six years ago and so that made me think what the alternatives might be and we've got a near neighbour who had been farming organically for about five years before I had really thought about it, and he seemed to be doing ok. The other thing was that there seemed to be a big demand for organic milk.....Oh yes that was an attraction - the organic premium on milk- that was a big attraction. And there was this useful grant as well to help with the conversion process. So the two together made it look more viable'

C2	'Ten year s ago I took on this place on my own doing intensive bull beef and had been doing it for a while – for 20 years or so now, until the BSE thing when we gave that up. Didn't really know what to do. We had a neighbour who was organic and there seemed to be quite a good opportunity at the time- not for beef as we were doing but we went for potatoes and vegetables'.
C3	'Although in '97 the (premium) price of milk was going to appear, though it duly disappeared again- so there was a financial element in it'
C4	'Getting perhaps 22p for a litre and leasing in at 16p was slowly going to cripple us. I didn't know how to solve that. That probably stumped me.....If we were going to make money we would have probably to lease substantial quota or buy. So we said instead of doing that- we've still got to lease - and we don't buy but lease. But then openings came in then whereas you had (the) Organic Farm Scheme now - was (the) Organic Aid Scheme in '95. You was paying so much a hectare. Of course when you was going from one first of January to 31 st of December, tremendous hours spent- real brain twisting decisions and making not a penny. You know – quite tough. So this seemed to be a good logic way, whereas you step back a bit. Still got to lease in but could you become more efficient like. And certainly the Organic Aid Scheme payment did help'
C5	'There seemed to be a good return on it. It seemed the best way to go. We either had to expand our dairy herd right up to 150, forget about the beef system and just concentrate totally on dairy- really push the cows, or lean towards organics and when we looked at it there was good returns coming back- in milk prices, so it was milk prices. Obviously the grant - to help you get set up and get your lays all going – so that was what we decided to do.....But that was when our neighbour had nagged us for years saying that we should go organic. We was talking to him one day and he showed me the returns he was getting and I thought that we are fools – because we are farming practically the same as him and we are not getting any benefit out of it. That was our main reason to go organic and besides from the rotation of the land our system hasn't changed a great deal.'
C6	'(The) main reason probably was (that) consumer demand seemed to be high – it was what people seemed to want so that is the main reason why I went really . The demand for conventional milk wasn't that high, and at the time there was a huge demand for organic milk. That's changed a bit, but there was an actual price differential when I first went organic was probably very similar to what it is now- about 4 or 5ppl. Conventional prices at the time were 24p and organic was about 29.5p. So in the meantime – there was a huge gap in 2001 – the organic price was double the conventional.'
C8	'Going organic was 50% probably – we like the thought of it and the other 50% was down to commercial reasons.....Conventional milk prices were falling and we realised that if we had carried on like that drastic action would have been required – get rid of dairy, keep beef, and go and get a job'

The dairy farmers in the sample, e.g. B3, C4, C6 provide the most acute observations on the commercial attractions of organic conversion. Farmers perceive that the economic conditions of conventional dairy farming suggest that it would be difficult to make money from small dairy farms, and farmers had been looking for solutions to the continuing squeeze on their farm's profitability. C4 (Table 6.4 above) expressed one of the arguments that is recognised by all the farmers for conversion to organic in terms of straightforward commercial calculation.

Commercial information in support of the decision to convert was gained through meetings designed to attract more farmers to convert (see further in Chapter 7). The commercial message at the time that most of the farmers were considering conversion

was that the organic milk market was expanding and that it was a good time to enter conversion. The buoyant forecasts for the organic milk market provided some security that a choice of a less intensive method of production could maintain or even improve income levels. The organic market appeared to provide a suitable solution to the need to change their enterprises in some way to cope with uncertain and declining prices.

The improved price for milk was the basic factor for the sample's dairy farmers, and this was also reflected in the premium prices that meat producers were obtaining (e.g. A5, A6) in their decision to convert to organic. C6 quoted the price premium, and the apparently high consumer demand, for his decision to convert, but conceded that market conditions (in dairy) since the late 1990's had tested the resolve of those farmers who had converted mainly on that basis. However, the commercial credentials of organic farming remained the basic driver for conversion with the conversion grant scheme supporting premium market prices in providing a measure of security for the farmer⁷¹. Even so the decision to convert, and the conversion process itself was stressful as farmers took a step into the unknown. C4 had felt the stress keenly, particularly since he converted ahead of many other farmers in his area, and at a time when government support was not as extensive or secure.

6.4.2 Managerial Considerations of Conversion

6.4.2.1 Near-organic farms

The characteristics of the farm, and the farming systems that were already in operation were important to the farmers when considering conversion. Farmers in this study observed that their farms were 'suited to' conversion, and this observation is made by most of the farmers either as explicit statements, following a considered description of the farm and the decision making process involved in conversion, or in less structured discussion of the fit between the farm's characteristics, their own working practices, and what they understand to be the requirements of the organic regime.

⁷¹ Premium prices for dairy farmers are, however, dependent on obtaining an organic milk contract, and a number of farmers had failed to get one as the market for organic milk had become over-supplied during the period of this research.

In addition to some of the comments in Table 6.4 above, Table 6.5 following provides explicit references made by farmers, which are related to their farms' suitability for conversion. The comments refer mainly to the input levels on the farm and to the extensive nature of the conventional system that had been employed prior to conversion. Farmers considered that their practices were near enough to those of the organic system to make conversion if not an easy process, then at least one that was feasible. Further comments are included in Appendix 6.6.

Table 6.5 Observations of farm and management fit to the organic system

Farmer	Observation
A1	'..And we were in a good place to do it (convert). Up on an upland farm- not a hill farm- you don't have that intensity anyway, so we thought we were in a good place'
A3	'..Because we weren't a high producing unit we weren't buying in a lot of concentrates, we weren't ploughing a lot of ground for corn and this and the other..'
A4	'I had always been fairly extensive as a farmer..'
A7	'..it (conversion) was a mixture of because it had always been a traditional [<i>farm</i>]..'
B1	'..people like myself (who convert) who were virtually organic anyway and I only had to tweak a few things and I have had to change hardly anything at all'
B3	'..(we) looked at our system here – it wasn't very intensive – not using a lot of cake...and we weren't using too much fert. (fertilizer)..'
B4	'..we knew the way we really wanted to farm was we didn't want to go down the way of becoming more and more intensive..'
B6	'When we made the parlour investment, things were unstable, but we decided that turning organic would combine the strength of the short horn (cattle) and the organic system'
C1	'The other alternative (to intensification) was to go organic and put the whole farm to grass but stay with the same number of stock- a lower stocking rate...and that seemed a lot more attractive and easier to make it work as well'
C2	'We hadn't been using...intensive input use of conventional inputs up until then'
C5	'Never been a big fertiliser user and my father has always been leaning towards the organic side....and never really been heavily stocked...'
C7	'..we wouldn't (had not) been using much fertiliser before..'

6.4.2.2 Workload, Investment and Intensity

The relative merit of conversion to organic against remaining conventional also involved a calculation about the workload, investment and the farmers' attitude to intensive farming. For most of the farmers in this study it was clear that remaining conventional would require either a change to more intensive farming or an expansion of production. Both of these options required an increase in livestock numbers, which implied increased investment in most cases. An increase in stock numbers entailed attendant increase in workload, pressure on grazing, and stress on the stock, and an increased demand for land or/and for an increased stocking rate. Increased numbers

of stock would also entail, particularly for dairy producers, an increased demand for building space, and improved facilities such as milking parlours and slurry pits. It also demanded increased quota, husbandry, use of antibiotics, concentrate feed requirement and a likely increase in fertiliser and pesticide use.

Different farmers had to juggle different combinations of these management variables (see Appendix 6.6). For example, for B3 and B4 the problem was straightforwardly that of either getting bigger and incurring extra costs or looking at organic production as an alternative based on quality. Similarly C5 chose organic as an alternative to expanding the dairy herd and to 'really push the cows'. He preferred to 'make a comfortable living' rather than to 'make a fortune' and saw the organic system as offering him the opportunity of achieving this goal. C8 also saw conversion to organic as a way of controlling workload and limiting investment

'...(it is like) increasing your herd by 50% without having to go out and buy cows, and increasing the shed space and things like that'. (C8)

And C4 chose organic in part because of his frustration at the treadmill of conventional farming.

Other farmers who made the same sort of calculation on these management variables used a combination of the 'quality over quantity' argument with reasons specific to themselves and their farms. C3, for example, opted for organic because it required a reduced capital investment demand, and made the decision to convert in conjunction with a decision to end the arable contribution of his mixed arable-dairy farm, and concentrating his enterprise on dairy. B7, meanwhile, was under pressure to change her system because of a logistical problem of managing unconnected rented parcels of land spread around a village and the problems of walking cattle to a milking parlour at the farmyard. The lease on some of the land was also being ended and B7 had to decide on whether to manage with fewer stock numbers, intensify, or rent more land elsewhere. The choice of organic had appeared as best because the premium prices on organic milk offered a way of maintaining income levels with fewer livestock and, hence, a more manageable use of resources. Similarly, for C1 the motive was to reduce his workload and the reduced stocking rate in organic farming offered that possibility. In contrast A5's decision to convert to organic coincided with, and supported, a decision to extend their farmed area, and to take up their full existing

livestock quota allocation. The extra stock required extra land and the two combined gave the farm a stocking rate that complied with organic regulations.

These management concerns in themselves were not quoted as being the most important in making the decision to convert, but the prospect of increased investment, increased running costs, increased workload, and a poor outlook for conventional prices worked strongly in favour of deciding to convert to organic farming. Management issues may be said to have acted as a secondary or supporting reasons for conversion, but their use as significant factors by the farmers also reflects on the preference of most of the farmers in this study to manage farms at the same scale that they had been used to. There may be exceptions to this attitude among the farmers who were described as business-oriented in Table 6.2 and Table 6.3, but even for them the prospect of a lower capital investment was attractive.

6.4.2.3 Farming Skills and Control

Whilst the management issues discussed above reflected on the farmers' scale of farming it also could be said to reflect on their preferred way of farming. Organic farming offered a set of practices that appeared as a 'better' way of farming. B1's view of organic farming, for example, is of a system that makes sense because it employs more farming skill and self-reliance compared to the loss of control to other decision makers that modern farming techniques imply. Such preference was not an issue that was prominent for many of the farmers, and was often mentioned almost as an afterthought following consideration of other factors that affected the decision to farm organically e.g. see A5, C6 in Appendix 6.6. The reasoning against going down an intensive production path seems to be a mixture of management decisions, familiarity and inclination toward a particular type of farming over another, although it is unclear which of these factors would have been the most significant. Table 6.6 illustrates the responses made.

One or two of the farmers felt, however, that the change of practices that were being demanded, particularly as they seemed to a farmer considering conversion and, therefore, inexperienced in the organic farming system, to be extreme.

Table 6.6: The Attractions of Organic Farming Practice

Farmer	Observation
B1	'I was being rewarded for thinking – a lot of people don't think.' 'The most important thing said to us was that organic farming is not just an attitude of farming but it is an attitude of mind.' 'A lot of people do miss the point – it is an attitude of mind not just farming practice'
A4	'...and I want to see how I can farm extensively with as few outside inputs as possible in the next few years.....As a first principle it (organic method) is keeping the soil naturally fertile and in good order and in good heart so that in the grand scheme of things I can hand on to another generation and not say that in the last fifty years I've knocked the shit out of it and here is a piece of barren land and see what you can do with it.'
B2	'(I would have changed) because I believe in the system. Its sustainable farming. I have always been a little bit into alternative energies and the more natural ways of doing things. As I said I used to work with the Hydroelectric power scheme- and that was interesting and a lot of the Mechanical Engineering course had to do with buildings and efficient houses and so I was always around these alternative energies.'
A2	'(We) were chasing our tails at the time...Organic farming – (there's) less stock, you are doing it better, (there's) more time...
B4	'We knew the way we really wanted to farm was we didn't want to go down the way of becoming more and more intensive, because I think he had enough of forking out big bills for spray etc. etc, where we seemed to be lining everybody else's pockets.'
B7	'...our 60 (organic cows) was equivalent to their 120 (conventional cows)- we could make a living on that and still stay small.'
C1	'I think it was The farming and the lifestyle I think – you know running a less pressured system, less pressured for us and less pressured for the livestock. And the other thing was that it was a new challenge as well- an interesting challenge to actually farm without (inputs)'
C3	'I have always played with the organic when I first came back from college I was quite keen to go organic on an arable enterprise, but couldn't work out how to do (it).....Quite a few (reasons for conversion) – not simple. Main reason- (I) was bored with conventional farming...I needed a challenge. Been there and done it really.'
C4	'Well there you are. Can't really put your finger on it really. I suppose the fact that we had tried conventional farming and very much a dairy farm-cum-beef (farm). Getting perhaps 22p for a litre and leasing in at 16p was slowly going to cripple us. I didn't know how to solve that. That probably stumped me. You had no control. You had control over your stock. If you want to sit down in the house and let them die then they will die. But you had no control jumping in your car and going to a market where an auctioneer is leasing or selling quota. That's market related. That was totally, I found- not stressful, but no control.'
C5	'We love the way of farming –its not a lot different to the ways we used to do.... It wasn't called organics in those days. He (father) loves this system as well. He is not greatly involved now but its going back to his youth and he can see how its been brought on by the seed breeding and stock and so on. He can see the difference in the farm since converting to organics – he can see the farm changing again to what it used to be before we started using fertiliser.'
C6	'If it was neck and neck I would say Organic. I do enjoy the system but we have got to be paid to do it.'

They identified what they suggested was an idealistic approach by some organic enthusiasts and experts which did not appear attractive to a practical and commercially oriented farmer. For example, C6 referred to the advice he received as being 'too organic', while C3 complained that one advisor that he saw was giving advice more suitable to hobby or very small scale farmers than to the kind of commercial operation that he was running.

'There was little organic advice to be had and what (there) was (was) a bit... in 1998.. .was *very organic* – the advice I got there was – a lot of it wasn't particularly- it was sound advice but the organic system should be run probably on <unclear>.... I always use slurry when they say you should always use composted manure, but the system I run works well for me - its simple and its easy to operate'

(C6) (Italics added, and the unclear section implied that the organic advice was too 'pure')

'I expect he (organic consultant) would have been very good if I had twenty sheep and three goats and a cow and a large veg. patch which is what he was used to – he was used to people with fifty acres up in the hills somewhere or smaller. I have four hundred acres milking two hundred and fifty cows - how do we do it, where do we go? And I thought I knew more than he did. He didn't understand that – that's just personality nothing to do with the scheme...He wasn't aiming at smallholding but that was his experience- very much on a mixed farm- you have to compost all your muck and he was spending money like water, he had me in for half a million pounds of capital expenditure.'

(C3)

Both C3 and C6 considered themselves as business oriented farmers but even B2, who had strong sustainable agriculture motivations found that his interaction with other organic farmers was sometimes inappropriate because of their focus on the 'organic' element in organic farming rather than on the business element.

'..... but I feel that it is more like a 'way-of-life organic' and how to get things to work organically and weed control and how farmers work as organic farmers rather than motivating you to make it into a business.'

(B2)

Many farmers, however, were more definite about the benefits that organic methods brought to their own working lives, and relished the challenges and opportunities that organic farming presented e.g. see A4, A7, C1, and even C3 in Appendix 6.6. Others (e.g. A1, A2, B1, and also B2) saw the organic farming system as returning more

control to the farmers, both in terms of daily farming practice and in terms of the implications for the farmers' own workload.

6.4.3 Environmental, Food Quality and Health Reasons

6.4.3.1 Environmental Impacts

The environmental features of organic farming appear to be, for the majority of the farmers, a secondary issue, and there were few direct references to the environmental impact of their farming practices volunteered as reasons for conversion by the farmers. The environmental impacts of farming became more significant when the changes that the organic regime required were considered, and /or the attention of the farmers were drawn to it by the interviewer.

For farmers the environmental significance of the system was primarily based on its extensive nature and on the lack of chemical application (e.g. A3). Many farmers referred to their practice of being low nitrogen users, and that consequently their farming routines would not need to change dramatically on conversion. The closeness of their existing practices, as perceived by the farmers, to those of an organic regime was significant to the decision to convert, as noted in Section 6.4.2.1 above, and appeared to be more decisive than the intrinsic environmental impact of a farming practice.

Some of the farmers, however, were aware of the wider environmental implications of organic conversion (see Appendix 6.6). B2, for example, referred to his interest in organic farming based on a particular analysis of the sustainability of conventional farming with reference to resource use and exploitation. B1 recognised that a change of attitude and mentality was required, and a similar understanding became clearer to some of the other farmers as they became more experienced with the organic system. Farmers expressed the impact that conversion had made, (C5, C8) in reference to biodiversity, and their own preference for reducing the environmental impact on the land, river systems and wildlife (A1, A3, A4, A6, A7, B1, B2, B4, B5, B6, C4, C5, C6, C7, C8), but were as A3 and C6, for example, also concerned to ensure that commercial aspects were positive.

6.4.3.2 Animal Welfare, Food Quality and Health Implications

Perceived improvement in animal welfare, animal health and concern for food quality were issues that farmers mentioned in support of the organic system once the fundamental decision to convert had been made on commercial grounds (see Appendix 6.6). These issues feature in the continuing process of learning that the farmers undergo after conversion, and may become more prominent for the farmers as they become more proficient in, and committed to the organic system. It is not possible to comment further on this aspect in this study since most of the farmers were still relatively new to the organic system at the time of the fieldwork.

The effects of BSE and then the later Foot and Mouth disease had been significant in some farmers' decision making process contributing to declining confidence in conventional markets, and a couple of farmers referred to what they saw as the insidious effects of agro-chemicals. However, interest in the organic system for its merits in animal welfare and food quality terms or the implications for the farmers' personal health had not, for most of the farmers, been strong contributors to the decision to convert.

6.5 Categorising Converters

The farmers' responses from the fieldwork may be categorised in a number of ways, and Tables 6.2 and 6.3 present categorisation on the basis of the farmers' business attitudes. The reasons given in Section 6.4 for conversion to organic farming provide a further basis and one of the farmers in this study volunteered his own categorisation based on what he had observed to be the motivations of converting farmers.

'...(Converters include) the commercial people who do it solely on the financial – three more p (pence) a litre – '(so) we'll change'.....and those people who are doing it because they get the conversion grants. Then people like myself, who were virtually organic anyway'

(B1)

A similar designation of the farmers is given in Table 6.7 with the proviso that the boundaries between the categories are very uncertain, and they have been categorised in the table on the basis of the farmers' primary concerns as volunteered in the interviews. Farmers, as noted above, have been sometimes ambivalent about what constitutes their primary reasons for conversion, and could have been placed in more than one category as a result, and their responses in Appendix 6.6 further demonstrate that these categories have shifting boundaries.

Table 6.7: Categorisation of the principal reasons quoted for conversion

Category Designation	Category Description	Farmer
Philosophical	Environmental concern and general attitude to farming considered most significant	A4, A7, B1, B2
Commercial- Opportunistic	Conversion support and current premium quoted as most significant without much reference to other reasons	A5, A6, B8, C2
Commercial- Long term	Commercial farming business reasons most prominent (including state support), with a mix of other motives e.g. Environmental, health, management, issues expressed as secondary concerns	A1, A2, A3, B3, B4, B5, B6, B7, C1, C3, C4, C5, C6, C7, C8

It has been assumed that the main reasons for conversion are those that were volunteered most clearly during the interviews, and that these shape the farmers' attitudes and commitment to organic farming. Secondary concerns are identified as those issues that were volunteered by the farmer as supporting reasons for conversion, or were elicited by supplementary questioning. The various grounds for conversion that are discussed in Section 6.4 are found across the whole sample of twenty three farmers and no significant differences may be seen that correlate with the three groups (Groups A, B and C) that had been identified prior to the fieldwork being carried out.

Philosophically-inclined Converters

A4 and A7 were the only farmers who volunteered environmental concerns as primary reasons for conversion. For both, interest in conversion to the organic scheme followed from their general interest in an explicit environmentally sensitive way of farming and conversion was seen as an obvious decision to take. B1's concern for environmental impacts and his commitment to organic conversion emanated from his general attitudes about what good farming practices meant, whilst B2's approach had been based on an existing conviction about sustainability that he espoused before becoming a full time farmer. All the farmers in the study are aware of the demands of

commercial sustainability, but the four included in this group are ones who volunteer more definite commitment to the organic system for its intrinsic merits. B2, for example, indicates that he would have converted to organic farming almost regardless of whether there were conversion grants or premium prices available for organic products. Some of the other farmers (e.g. B5's father, C3, C4, C7's wife) indicated that they had a latent sympathy for the organic system, but had delayed conversion because of a variety of reasons. Having converted they appear committed to the system.

Commercial- Opportunistic Converters

Farmers that have been included in this designation volunteered a mix of reasons for conversion, but who appear not to be wholly convinced that the conversion will be the best choice in the long term. They chose the system because of the offer of support during conversion, the prospect of continuing state support thereafter, and either the actuality or strong expectation of premium prices. On the whole they did not volunteer any philosophical beliefs about organic farming, and were open to the suggestion that they might convert back to conventional if the commercial conditions favoured it. However, experience of the organic system has changed some attitudes e.g. B8, the only farmer that had in fact converted back to conventional, who felt that he had enjoyed learning about the system and believed that the organic method was the better way of farming.

Commercial- Long Term Converters

In common with the 'opportunistic' converters, farmers in this group privilege economic or commercial reasons for conversion, but they also volunteer reasons that are related to longer term goals than simply state support or current premium prices. The availability of conversion grants and continuing state support, along with the prospect of premium prices, figure strongly, but the farmers express a preference for the kind of management changes that conversion to organic would entail in comparison to those related to other alternatives (mainly farm expansion and intensification). Most of the farmers had come to the conclusion that some change was necessary to the farm business and the management implications of the required changes were important considerations.

The management regime of the organic system was selected by many of the farmers as suited to the physical characteristics of farms and because it would not require extensive changes to their existing practices. A common calculation is that which is made on the relative merits of conversion against expansion (as the main alternative) in terms of the extra expenditure on farm buildings, equipment and other facilities (e.g. slurry pits, improved milking parlours), livestock numbers, and the purchase of quota.

Expansion was also expected to entail an intensification of work and/or increased need for manpower, and the choice for organic conversion often included considerations along the lines of a better work-life balance that could be expected from the organic system. The organic system was perceived to offer better control over workload and the day to day decisions about farming that the farmers felt were valuable.

6.6 Summary

The farmers included in the fieldwork may be considered as professional farmers, who have been embedded in the industry and for the main part the locality. In this respect they can be regarded as a valid sample of local farmers who have been, or are in the process of converting to organic farming in Wales during the period covered by this research, and their experience of conversion to organic farmers is relevant to other Welsh conventional family farmers. They may be contrasted with those organic farmers who are new to the industry, recent incomers to the localities in which they farm and those who may be part-time or hobby farmers.

In deciding to convert the farmers in the sample have provided a range of reasons that reflect on their attitudes to farming and their understanding of the requirements of the organic system. These attitudes and expectations of the future as organic farmers inform the categorisations that have been made in the chapter, and a summary of these are presented in Table 6.8 below.

Table 6.8: A Summary of the Farmers' Categorisation

Type of Converter	Business Attitude	Farmer	Expectation for future in Organic and Farming
Philosophical	Holistic	A1	Winding down; retirement soon
	Holistic	A4	Committed to continue
	Holistic	A7	Committed to continue
	Holistic	B1	Generally positive; expects sons to take over
	Holistic	B2	Committed to continue
Commercial-Opportunistic	Production Focus	A5	Generally positive; son taking over
	Production Focus	A6	Generally positive; son to take over
	Diversifier	B8	Committed and enthusiastic, but reconverting to conventional
	Diversifier	C2	Disillusioned, uncertain future
Commercial-Long term	Holistic	C4	Committed; nephew preparing to increase involvement
	Holistic	C7	Generally positive; not far from retirement
	Holistic	C8	Frustrated about farming; children not interested in farming
	Production Focus	B3	Committed to continue; not encouraging children to become farmers
	Production Focus	B6	Committed and enthusiastic; son enjoys being out on the farm
	Production Focus	C1	Committed; daughter possibly to return to take over
	Production Focus	C5	Committed to continue, uncertain future
	Diversifier	A2	Generally positive; son currently taking over
	Diversifier	A3	Disillusioned about farming, uncertain future
	Diversifier	B4	Positive for future of farm and business
	Diversifier	B5	Continues but wants other options outside farming for son
	Diversifier	B7	Positive; son not currently interested in farming full-time
Diversifier	C3	Committed and confident	
Diversifier	C6	Committed and confident	

The categorisations made are applied with a 'broad brush' and many of the farmers have characteristics that may place them in more than one category. They are also researcher-defined categorisations and dependent on the self-presentations made by the farmers during in-depth interviews. However, given these provisos, the table suggests some agreement between the primary motivations suggested for conversion and the categorisation of the farmers according to their attitudes to farming in general. The table suggests that those farmers that are seen to have a 'Philosophical' interest in organic farming are those that have a wide ranging 'way-of-life' attitude to farming. They describe their motivations and attitudes in terms of an interest in improving the

farm, but with a definite interest in the ecological diversity and environmental sustainability of the farm, and in attaining a balance between working life and other activities and interests (represented as the 'Holistic' categorisation).

The distinctions between farmers in the two categories of 'Commercial-Opportunistic' and 'Commercial-Long Term' are less easily defined and are separated because of their apparent commitment to their conversion to organic farming. Neither of these two categories wholly matches the way that the farmers have been characterised in terms of their attitudes to the farm as a business, and their primary reasons for conversion. The primary reason for the two 'commercial' categories is that of the perceived commercial opportunity that the organic system represents for the farm. They differ in that the 'Opportunistic' commercial converter displays a less stable commitment to the organic system. Therefore, for the majority of farmers - who had not converted for philosophical reasons, the survey may conclude that given the broad range of motivations and conditions that affect their decision and motivation to convert to organic farming, the commitment to organic farming is uncertain. However, particularly in the cases of the 'Long-term' commercial converters there is evidence to suggest that these farmers have sufficient commitment to continue as active learners to enhance their knowledge and commitment to the organic system.

Diversification and conversion to organic farming illustrate processes which may be described as those of dis-embedding from established networks. Chapter 7 continues with an examination of factors that may contribute to this process of dis-embedding and through various ways of learning about organic farming examine processes of re-embedding in new networks.

Chapter 7

The Farmers as Learners: Processes of (re)-embedding

7.1 Introduction

The preceding chapter discusses farmers' reasons for considering conversion to organic agriculture. A common motivation was a perceived need to change their enterprises in some way or other and farmers had come to a conclusion that organic farming appeared as a suitable system. This chapter explores the ways by which farmers had learnt about organic agriculture as they made the decision to convert and subsequently as they became more proficient as organic farmers. This process illustrates a search for new network links and a re-working of links with peers and other actors with whom the farmers interact (e.g. vets, agricultural business consultants, seed merchants, agricultural suppliers, local offices of government agriculture departments, and the farming press). In this sense the chapter is an examination of the embedding of the farmer in new knowledge networks; a process that is challenged and influenced by extant relations.

The chapter also explores the extent to which the farmer acts as an 'aware' learner and is purposeful in the process of learning about organic farming. It is based on farmers' observations about interactions and processes that are relevant and important to their learning experience, and explores a learning trajectory that is delineated by formal institutional definitions of relevant knowledge, commercial curbs on the organic system as an alternative agri-food system, and informal, social relations that influence the farmers' understanding of organic agriculture. The farmers' relationships that have embedded them within extant networks of knowledge are invoked in the processes of differentiation that have already been described in Chapter 6, and these influences are further explored in the varied learning processes of farmers and the formation of associations of different kinds in this chapter, and continued in Chapter 8. The chapter also surveys the interaction of farmers with various sources of advice and information during the period when they contemplated and when they undertook conversion to organic farming.

Farmers in the study approached organic farming in a number of different ways, and their expectations of and the extent to which they used the various sources of information and advice available differed. Some farmers were relatively methodical in their approach, using published material, taking advantage of free consultation advice, using advice from private consultants (both organic and conventional), organic courses at local agricultural colleges, the promotional and extension activities of organic organisations and food processors, and making use of the experiences of local organic exemplar farmers. Others were more ad-hoc in their approach making use of fewer sources of information, few if any visits to organic farm Open Days, and relying more on the advice of peers, free consultation from OFS and OCBs, and most importantly their own judgment. The farmers' judgment of the relevance and value of the various sources of information also differed (markedly in some cases). Observations by farmers of the kind of support that they sought and experienced during the conversion period and later as they became more proficient organic farmers are provided in a series of Appendices referred to below in addition to examples included in the following text.

7.2 Formal, Expert Advice and Information Support

Formal sources of information about organic agriculture were accessed by farmers in a number of different ways. They generally took advantage of the standard period of a day and a half of free advice about conversion and subsequent organic farming practice under the Organic Farming Scheme (OFS), largely as part of the process of discovering whether their farm was a suitable candidate for conversion. This was supplemented by advice available from the Organic Certification Bodies (OCBs), from dedicated organic research organisations such as Elm Farm Research and the Henry Doubleday Research Association (HDRA), the Institute for Grassland and Environmental Research (IGER), university agricultural departments, and in some cases from food processors and packers. In some areas farmers were able to enrol on evening courses at agricultural colleges and Farming Connect⁷² offered Open Days at organic farms and demonstration farm visits (see also Section 5.4). Farming Connect

⁷² Farmers were not always clear which organisation actually offered the services that were available and there was some confusion between the OFS, OCIS, OCW, IGER and Aberystwyth University, and with Farming Connect which was often the co-ordinating body that contracted other organisations to provide extension advice.

also organised organic discussion groups in some areas, an example of which constitutes the basis for Group B and which is considered in more detail in Chapter 8.

Once the decision had been made to convert, the process of conversion was seen as relatively straightforward, and the information and advice offered through the formal OFS conversion advice scheme was seen as useful by most farmers (see Appendix 7.1 for a collection of comments from farmers about access to information on conversion). However, there was some frustration that there could not be a more comprehensive advice and information service at the initial stages of conversion. The A3 couple, for example, who, in addition to having converted to organic in their first few years of managing a farm, felt the need for greater support. The service had been adequate as far as it had gone, but A3 suggested that the service would be improved by providing introductions to individuals with whom the farmer could build up further links in order to learn about the organic system more efficiently. Similarly, A7 had noted that a conversion support service could be more useful if it offered an opportunity for farmers to meet with their peers, and at the same time to have access to expert knowledge. A7's suggestion is of a more open and flexible service akin to what ADAS provided in its period as a state advisory service.

'Was that not how ADAS used to work in the old days, when they had these general agricultural advisers and then they had the specialists? So they had the general ones who did the case work and look after a group of farmers and when they needed a poultry adviser or a cereal adviser....'

(A7)

Both A3 and A7 suggest that the OFS scheme should go beyond the provision of initial one-to-one support and to act as a more active facilitation service providing an introduction to relevant knowledge networks, both formal and informal.

The development of sympathetic peer networks and continual focussed advice is a prominent theme in the exploration of how farmers learnt about organic agriculture as discussed in the remainder of this chapter, and the activities of the various discussion groups are also noted in Chapter 5 (Section 5.4) and in Chapter 8. The evidence from the farmers (for example in Appendix 7.1) is that whilst there is a range of learning strategies employed, both formal and informal, interaction with peers is a common

and essential element that contribute to, and reinforces information and knowledge acquired from a variety of sources. The following sections first explore the formal and codified sources of knowledge that the farmers use including organic certification regulations, printed material, courses and the influence of commercial actors in the farmers' knowledge networks. They continue with an exploration of informal and 'local' sources of farming knowledge, the relationship between informal and formal sources and between information, knowledge, trust and credibility.

7.2.1 Regulation of the Organic System: Learning by the Rule Book

Certification was central to the conversion process for the farmers and the organic certification rule book was the single most important piece of codified knowledge that they could access both during conversion and in the period during which they became practicing organic farmers. Most of the farmers used the rulebook as something akin to a formal curriculum for their organic education, which together with the advice services of the Organic Certification Bodies (OCBs) helped to identify the parameters and the limits of the system⁷³. However, as the farmers became more experienced they reported some dissatisfaction with the certification system and in some cases with the organic rules themselves. Farmers commented on the interpretation of the rules by the OCBs and their officers, and questioned the necessity of some aspects of the rules and the certification system. Appendix 7.2 presents a collection of observations by the farmers related to their relationship with the OCBs, and their attitudes towards complying with the organic regulatory system.

Farmers report instances of actions that they pursued which were later subject to examination and criticism from the OCB. Whilst the farmers in this study did not suggest that they wilfully broke or bent the organic rules, they accepted that some of their actions might have been stopped or modified had they checked early enough with the OCB. But farmers were also critical of some of the rules that the OCBs tried to police, suggesting that some appeared not to have been well enough thought out to cover some eventualities, and being in some cases overly strict and limiting.

⁷³ Some farmers found similarities in the experience of abiding by the organic rules to the rules of agri-environmental schemes such as Tir Gofal, which also acted as learning devices.

In examples where the farmers are critical of the regulations, particularly where there is a lack of clarity, there appears to be scope for some negotiation on the interpretation of the rules. For A1 negotiations about the application of organic rules involved extensive implications for farm management (see Box 7.1). In these cases farmers drew authority from their own expertise as practicing farmers to argue the point with OCB officials (see A3, A4, A5, B6 and C5 in Appendix 7.2). Farmers also drew authority from veterinary advice, sometime evoking a pointed disagreement between the conventional and organic system. In most cases, however, where there was disagreement, and negotiation did not change the interpretation of the rules, farmers felt that their infringements had not broken the spirit of the rules and quoted, in cases such as the administration of drug treatment to livestock, the core concern that animal suffering should be avoided (e.g. A1 in Appendix 7.2). Farmers were prepared to accept that they were going through a process of learning during which some of their own beliefs had to be changed and new expertise gained⁷⁴. It was also accepted that the OCB adopted an enabling rather than a sanctioning approach, allowing the farmers to work through short term difficulty by the use of derogations (see for example A7).

One farmer (B1), however, objected strongly to what he saw as the lax application of organic rules. He saw the easy allowance of derogations and other instances of relaxed application of the rules as detrimental to the whole organic project⁷⁵, risking the loss of public confidence in the system and its policing systems. This fear was echoed by a number of farmers (C8, C4, B8), whilst other farmers, however, appeared to agree with C3 in his belief that the farmer should work to the limits of the system and take advantage of whatever leeway existed. These contrasting views mirrored in many cases the differing attitudes of the farmers to the system as a whole, illustrated by B1's generally holistic approach to farming in opposition to C3's more business oriented attitudes (see Chapter 6, Section 6.2.5).

⁷⁴ A process that could also be perceived as a shift in knowledge networks

⁷⁵ The most general derogation from organic ideals, which was that allowing livestock to be given feed that contained up to a certain maximum percentage of non-organic feed, was still in operation during the time of the study. The tightening of this derogation caused much discussion among farmers as they considered how they might cope, but also in reflecting on how the consumer might regard such derogations had they been more widely known (See Chapter 8 for a report from farmer discussions.)

Although there were thirteen OCBs operating in the UK at the time of the study the main choice for farmers was that between the Soil Association (SA) and the Organic Farmers and Growers (OF&G). Not all farmers seem to have made considered decisions about their choice of OCB, with many following the choice of other organic farmers in their area and/or the suggestion of producer groups or other actor. Some farmers noted that there was a difference in emphasis between the OCBs with the SA being considered to be working to a more strict interpretation of the rules, with the OF&G apparently offering more leeway in applying organic restrictions and offering more generous derogations (see A1, A2, A3, A4, B1, B3, B7 in Appendix 7.2). Whilst B1 was afraid of the risk to the credibility of the organic system of lax application of standards, other farmers saw too much involvement of consumer and other lay interest groups as making organic certification more onerous and, hence, less attractive. There is some suggestion by farmers that the OF&G were seen as more 'farmer friendly', but also more relevant to larger, more commercial farmers, whilst the wider membership and concerns of the SA was seen to subject the farmers to more rigorous regulation procedures than necessary.

A further, general source of complaint about the certification system was the amount of paper work that the farmers had to undertake. This administrative burden is exemplified by the Farm Health Plan, the preparation and recording of which was, as A5's opinion, an unnecessary requirement for a competent farmer. Other farmers, e.g. B2, B5, C3, whilst grumbling about the administrative demands of the certification system recognised that conventional farmers were now also liable to have to deal with much more administration and certification through Farm Assurance schemes, animal passports and so on.

The amount of administrative and regulatory burden, however, appeared greater for organic farmers as Farm Assurance schemes became more prevalent, and in many cases did not take into account areas of overlap that occurred between them and organic regulation. For example, B1 pointed out the situation that he encountered both with his dairy and with his relatively small lamb enterprise.

'...and we have paid our £480, (to be) Soil Association inspected, but we have still have to be Farm Assured as well.....(and)...the only extra thing that I had to do for the Farm Assurance was to have a rodent control policy-

written. I am spending around £550 now on assurance schemes- whether you are milking 100 or a 1000 cows it's the same.....I have to do it because I sell my lambs to [*name of organic meat processor*] and find I have to photocopy my certificate and send that with my lambs, and they say 'fine but we have a problem- we can sell the back and the legs as organic but the rest has to be sold (on the) conventional market'. So we need the farm assurance certificate for the lot- two markets.'

(B1)

B1 was frustrated by what he regarded as the double burden, but in the same way that he was frustrated by the lax application of organic rules (see above), he was also critical of the operation of the general Farm Assurance inspection regimes.

'...and the more farms I visit I wonder how on earth did they get Farm Assurance but they got it- it's a joke.....'

(B1)

The way that the organic certification system operated illustrated that rather than being well-defined and tightly prescriptive, the system appeared to be accommodating to farmers who were in a process of change, and contained subtleties that the farmer could exploit, as with any other regulatory system (including the Farm Assurance scheme). Alternatively, the way the certification system seemed to work could be viewed as offering a participatory role and a channel for farmers' contributions toward developing organic agriculture. It could further be argued that the attitude of individual farmers to these alternative ways of dealing with the regulatory system reflect their general approach to farming (as discussed in Chapter 6).

These aspects of the conversion process and the detail concerning the wider issues of farm regulatory systems were outside the main area of interest of this study, but farmers' choice of OCBs and farmer attitudes to the objectives of regulatory regimes are useful tools in exposing tensions within the organic sector (and the general farming industry) in the UK that reflect on differing conceptions of organic and sustainable farming systems. B1's criticism of the operation of regulatory systems reflected his opinion of other farmers and their farming practices as much as his frustration about lax standards. Farmers expressed views about their peers in sometimes quite trenchant ways and their evaluations of other farmers reflect upon

their own farming identities. This identification of farmer-type is made explicitly by some farmers and influences the kind of associations that they make and, hence, the kind of social learning in which they may participate.

Box 7.1: Organic Farming By the Rules

An example of farmer interaction with an OCB, illustrating a process of negotiation:

H: 'We had had trouble this year with the OF&G meeting the requirement for grass keeping....we decided that of the 100 acres we wanted something like 50 acres for ourselves and our stock. So we got 50 acres to let. Now we have an organic contract with the Welsh Assembly and that doesn't end until March 2005. So we can not rent our land because then somebody else is farming it, otherwise we have to pay all our organic subsidy back. So we have to run the contract through till then. But I'm 67 now so what we've said is we'll grass keep it, and we will do it slowly.... Because there aren't so many organic farmers we have out our way. We let 30 acres last year to see if we could let the whole lot organic and we didn't. This year we are letting 50 acres.. We took on an organic farmer last year and he has taken up a bit more land- another 34 acres. And then it's been a hell of a year for grass. We had to find something to graze it. The OF&G standards says that you can let it but only for 4 months- 120 days – to non-organic farmers, and there are certain conditions- the animals have got to be in their own fields for a period of time before they come here, and they musn't be on concentrates during that time – which can't be controlled. If you let it to more than one farmer- you cant have 4 months for one farmer and 4 for another farmer. Its got to be the same 4 months in any year. So we found another farmer and we let land which is about 1km away from us. He has put his sheep on it and he is non organic.. We have a written organic contract with him to say that he can only keep it for 120 days. Then another neighbour said- and we have a field we still haven't let and it was nearly a hay field- he could use that field. So I said ok, and we will get an organic contract. So we have over here 34 acres let to an organic person and two non-organic contracts over here and us in the middle. I then started to read the organic rules and regulations. It said that 'normally' you are not allowed to have non-organic and organic animals of the same species on the same unit. We had done that- and what does 'normally' mean...surely they mean different breeds. I thought I would come clean with the OF&G.....'

H: 'One of the problems with their standards are that they are changing. So I have a written set of standards and it isn't the standards have changed but the interpretation and what they mean. And that is going on all the time. And you don't know what those standards mean all the time. Our contact in OF&G said that they had not come across this before and we had to wait for the certification officer. We got a letter back and said that we were all right but that it must not happen again. Whether that means its all right.....'

W: 'You need a map of the farm showing that these non-organic sheep were half a mile away from us. Had you not done that I think that they might have doubted our word. Because they say that you must not have organic and non-organic with just a hedge or fence in between. Our tenant down here has got his organic sheep (and cattle) and on the other side is our neighbour who is not organic. So it is very difficult – we are surrounded by non-organic anyway so you can try to

H: 'It is an unreasonable rule, but they have tried to do it. However, the way that they did it – and one of these things about these certification bodies of course, and particularly about the OF&G is that they need us more than we need them in a way. So if they can get you out of some sort of a logical argument they will do so....That is what I feel- I may be quite wrong. We said that there are non-organic sheep- miles from the farm. They are on the same unit, but they are a km away. Here we have got non-organic cattle and next to them are our organic sheep so we haven't got the same species across the fence. And then we have got organic cattle and sheep next to our sheep. They are separated even if we haven't quite met the standard.'

W: 'It would be useful if there is somebody on the end of the phone who could answer questions.....'

H: 'There is but they don't know the answer and these things are complicated. Everyone has a different one.'

Interview with farmer A1: husband (H) and wife (W)

7.2.2 Codified Information: Organic Books, Magazines and Courses

7.2.2.1 Self-Directed Learning

To comply with organic certification standards farmers have had to become more active in sourcing relevant material. Few complained ⁷⁶ that it was difficult to find written material and guidance but reported a widely varying range of interest in accessing codified material on organic farming (see Appendix 7.1 for farmer observations).

Most of the farmers use the farming press to keep abreast of developments in organic farming and in farming generally, whilst other sources of published material are certification bodies, the National Assembly (in the form of industry magazine 'Gwlad') and representative bodies such as the farming unions and the CLA. Much of the material specifically related to organic agriculture is taken from the certification bodies, the Elm Farm research centre, or the Organic Centre Wales. In addition specialist monographs such as Organic Handbooks (e.g. the Organic Handbook published annually by the OCW) or even academic books on aspects of organic farming are used by some farmers to fill gaps in their background knowledge.

However, few of the farmers claimed that their reading habits had changed appreciably on conversion from conventional farming and farmers, when asked about their own information gathering and reading activity, expressed their preference for learning through discussing and comparing experience and practice with other farmers or professional advisers. One or two of the farmers did find that they had devoted more time and effort to learning more consciously through reading, and the conversion to organic farming had provided a focus by which basic knowledge about farming could be re-visited and confirmed⁷⁷. B7, for example, found that learning about organics seemed easier than it had been to learn about aspects of conventional

⁷⁶ Mainly C4 who had converted to organic farming by the mid 1990's at which time the provision of advice and guidance was less well developed than by the end of the decade. This experience also applied, although to a lesser extent, to C6.

⁷⁷ A similar increased general enthusiasm is noted by farmers in their interaction with other converting farmers as is further discussed in Section 7.3 below. As is suggested in the discussion on the differentiation of organic farmers this enthusiasm may be a temporary phenomenon which is dissipated as a re-embedding process matures.

farming, but conceded that it might have also been due to a greater effort on her part and the greater availability of basic farming information related to organic agriculture.

‘Sometimes it is not easy to understand it (farming information), (but) its easier now to get access to it since we have become organic, or maybe I have got out there and have to find things. We might not have been putting the effort in before’

(B7)

B7’s comments suggest a need to reconsider what had been taken for granted, and in the effort of learning about the organic system assumptions and existing farming knowledge were being challenged. B7 also read material from a wide range of sources in an effort to maintain her own independence, felt a need to question the motives and trustworthiness of her sources, and used her reading as part of a deliberate strategy to look for unbiased advice (see Box 7.2). A similar suspicion about the motives and trustworthiness of expert advice is expressed by other farmers, as is further demonstrated, with regard to advice from commercial actors, consultants and agricultural colleges in Section 7.2 and which suggests a healthy scepticism among farmers who had decided on conversion to organic farming.

Box 7.2: Reading for Independence

B7 suggested that farmers had a tendency not to enjoy reading, and depicted this as a specifically male problem. Reading for her was a natural activity and by it she felt that she could obtain the information that would help her to manage the farm more effectively, to identify trustworthy and credible sources and to avoid biased information and advice.

‘I read an awful lot, and a lot of things that I want to know- only way I can find the information...Information from breeders, dairy farming booklets- anything that I can get my hands on.... at the moment I’m reading a novel- most of the people you (the interviewer) have interviewed probably don’t read- so its nothing new for me to pick up a book to look for the information whilst most of the men wouldn’t do it.....He (her husband) leaves me to do all that side of it (book keeping and planning) and I make all the decisions and he is quite happy about that – ‘I get on out here and you get on with that’- if we disagree about it we just have to talk’

(B7)

Reading had been an activity that B7 had thought necessary as a conventional farmer and choosing sources and reading a wide range of material helped to create part of her knowledge networks. She was conscious of the role that agri-supply businesses and commercial consultants had in shaping farmer’s decision making, and was keen to maintain her independence by reading and discussion.

‘... and I have a few big ones (books) on organic farming- and I just feel safer picking something like that up- and talking to the old men around here that have done it and don’t have anything to gain from it..... I try my best to use a source that hasn’t got money involved- not selling something..... I prefer to use colleges - to use (them) because they haven’t got personal gain. If you have people coming selling you things - and I haven’t got a lot of confidence in that - and I would rather try it out myself first and then find out. Yes - that doesn’t come across very good does it- not a very trusting person. At the end of the day you have got to carry the can- it’s just us here and it’s just us going to have to sort it out’

(B7)

7.2.2.2 Formal Agricultural Education and Organic Courses

Sixteen of the twenty three farmers in the sample had attended a formal general agricultural course at either a local college or, to degree level, at an university before they had become organic farmers, with the remainder claiming that they had learnt all they knew about farming from growing up on the farm and interacting with their peers in the locality (see Table 7.1).

Table 7.1: Farmers' Agricultural Education

Farmer	Route into farming	Main form of agricultural education (conventional) and other relevant Education
A1	Home Stay	Learnt on the job
A2	Home Stay	Learnt on the job; son attended HND
A3	Home Stay	HND and Degree (husband and wife respectively)
A4	New Entrant	Learnt on the job/ Local College short courses
A5	Home Stay	Learnt on the job; son attended HND
A6	Returnee	Learnt on the job; son attended local College courses
A7	Returnee	Zoology degree/ on the job
B1	Home Stay	Learnt on the job/ Local College short courses
B2	Returnee	Degree in mechanical engineering
B3	Home Stay	HND (husband and wife)
B4	Returnee	PhD in agriculturally-related subject
B5	Returnee	Degree in agricultural engineering
B6	Home Stay	HND/ Local College courses
B7	Home Stay	Learnt on the job/ Local College short courses
B8	Home Stay	Learnt on the job/ Local College short courses
C1	In-Mover	Degree in Agriculture
C2	In-Mover	HND/ Local College short courses
C3	Home Stay	Degree in Agricultural subject
C4	Home Stay	Learnt on the job
C5	Home Stay	Learnt on the job/ HND
C6	In-Mover	Learnt on the job/ Local College short courses
C7	Home Stay	Learnt on the job
C8	Home Stay	Learnt on the job/ Local College short courses

Two of the farmers (B2 and B4) had attended evening courses in organic agriculture at a local agricultural college either during or after conversion, whilst seven had attended one-off day courses at various colleges⁷⁸ (see for example A4, B2, B4, B6, and B8 in Appendix 7.1). The participants saw these courses as being useful in bringing individual farmers together in a way similar to Open Days and Farm Walks, allowing farmers to make new contacts with their peers and to extend their network of links. B4 commented positively on the course that he had attended and how it brought a diverse set of people together and extended his own horizons.

⁷⁸ It must, however, also be noted that the provision of organic courses has been patchy. For a brief discussion on provision of courses see Chapter 5, Section 5.4.

‘Yes (the course was for) commercial farmers. I met a few folks there- some were working for the National Trust, some for the National Assembly, some had gone into the job to work with the organic scheme (OFS) and were told to go along to the course. There were a few farmers there – some who had been converted a while, some who were still thinking about it- a good mix. And we got enough confidence from that to say right we’ll do the whole shooting match in one rather than mess about with this field here which is half way through and so on- which would be a headache at the end of the day.’

(B4)

The range of people at the course had confirmed B4 in his decision to convert and to go for a whole farm conversion in preference to a staged or more cautious conversion, and for him reinforced the credibility of the organic system.

In contrast to B4’s experience of the evening course, farmers had some caustic remarks to make about standards, the farming attitudes encouraged and, hence, the value of the largely conventional farming courses that the agricultural colleges provided (see Box 7.3). These comments referred to those general courses that are offered at these colleges, which do not necessarily include tuition on organic farming principles. However, the comments focus on the mind-set that the farmer-critics saw represented in the system, which appeared to oppose the skills and experience that these farmers felt that they, as working farmers, possessed. In contrast, respondents gave the impression that they held more store by their own experience, and by the knowledge of peers - who could demonstrate practical application, and dealt with common conditions and level of resources. In this sense farmers privileged their own well-understood knowledge networks in which they were well-embedded and in which they could participate.

B1 illustrates the gap between the capabilities of the practicing family farmer and what may be demonstrated on college farms.

‘This is where you are teaching the farmers of the future....Automatic milking machine- the technology for the small farmer – so that you can go out to work and leave the machine to do the milking - £88 000 just for the machine and

£130 000 for the machine and for the set up- I would *have* to go out to work to make it pay – but they seem to think that this is the way forward’

(B1)

Whilst B1 gives an example that is applicable to any farmer, the same mismatch in capabilities and expectations is highlighted by B7 from a visit to Organic Open Day at a college farm.

‘I hope that we are open minded enough to go there and its up to you what we take out of it or leave it on the day- I always find that when we go to these places that they spend money that we haven’t got, and they are working in systems that we haven’t got and sheds that we haven’t got, and I think that’s all very well in a perfect (world) – can’t have a go at it when you haven’t got all them thousands to spend on machinery and labour and everything else’

(B7)

More generally colleges were seen to have a tendency for a negative attitude, either explicitly or by implication, toward the kind of sustainable farming represented by the organic system. Farmers suggested that colleges provided a major conduit for the pervasive influence of agro-industrial manufacturers and recognised that many of their peers, including their parents, had been profoundly influenced by the agro-industrial practices encouraged in colleges. This realisation signifies an acute separation from some aspects of conventional knowledge networks, and as is discussed further in terms of the influence of peers on farmer learning in Section 7.3 challenges the converting farmer with a possible need to form new networks.

Box 7.3 Farmer Criticisms of Agricultural Colleges

Farmer B1 was critical of the farming practices that a college seemed to allow. Whilst the college only ran an organic unit for comparison purposes its practices contrasted starkly with the expectations of an organic system, putting into doubt the competence of the college more generally.

'The point is that the animals must have access to shelter, but how can anyone with an electric fence and paddock system achieve that?.....I was down at [name of agricultural college] the other day and it was collar turn up job, hands in pockets etc and there were these cows huddled up against an electric fence - and where has the compassion gone?' (H)

'Or the set of rules that they are meant to abide by in terms of animal welfare - no hedge to huddle underneath because it was a subdivided paddock' (W)

'.....(and).. e.g. (using a) pneumonia control course (antibiotic) and what the vets say is you need more ventilation...In [name of agricultural college] three hundred animals under one roof- and they wonder how they have TB and so on spreading'

B1 (H): Husband; (W) Wife

Farmers also report that some colleges have always tended to favour the more industrialised farming practices, and by implication, if not directly, disparage organic practices:

'Our eldest son does think that it is - organic farming - is a bad idea. The organic ethos is not part of the curriculum in college and (they) mock it...He did not feel that it was something to be proud of'

B1 (H)

'That's modern young farmers - college people (laughs). It's the way they have been brought up. You talk to people and they ask how do you manage without fert (fertiliser) and they are so well entrenched in their minds that they have to put fert on that they can't think of any other system.....Colleges teach high fert usage.'

'Some people think that you are simple for going organic - it's the way they have been educated in farming.....(My) son didn't go to college.... - went to tech. (technical college) for a couple of days a week - doing agriculture but didn't learn a lot....It comes automatically as a farmers son.'

'No (Don't have a high opinion of what they teach in the colleges)(I) have experienced of one or two of them (college people). They are like calendar people - the date is important. Can't make silage on a wet day - (the) stage of the grass is more important than the weather... (They work) by the book.'

A5

'I think it's a general mentality, and you can understand why because I think back in the 60s and 70s when chaps like dad were in college they were pushed into industrial type farming with lectureships sponsored by ICI and halls of residence sponsored by Monsanto and all this sort of stuff. Their college training has been to use this spray and that spray and this fertiliser and so when you have been trained to do that it is very hard to change and think about it in a different way.'

B4

'In college it was drummed into you that you needed to use these chemicals.'

B5

7.2.3 Open Days, and Farm Walks

All the farmers in the sample attended an Open Day presented by some organisation⁷⁹ at one time or other. They are by their nature intended to attract farmers of all kinds and particularly to try to reach out to those farmers who do not normally become involved in formal discussion groups, or who may not have become members of a producer or other type of marketing group. Open Days⁸⁰ are one of the main method by which most farmers could access much of the extension activities that are offered in Wales (particularly by Farming Connect). They are generally organised around some specific theme, and farmers are free to attend any type, whether organic or conventional. The open days discussed in Appendix 7.3, with a short summary in the section below, present three examples that were held on organic farms in 2002, and observations about Open Days from farmers in the study are presented in Appendix 7.4.

7.2.3.1 Three Open Days

Appendix 7.3 contains accounts written from field notes of three Open Days that were held in 2002 on two lowland farms, one in north Wales and another in the south, and the third on a hill farm in mid Wales. In north Wales the Open Day was on demonstration farm as designated by Farming Connect, in mid Wales it was on a research farm set up to explore management practices for organic hill farms, whilst in south Wales the farm is run in association with the National Botanic Gardens of Wales and is managed to explore the implications of developing an organic farm in conjunction with an array of agri-environment schemes and practices and to maximise environmental and biodiversity objectives.

The three Open Days were organised by Farming Connect and were attended by experts from IGER, OCW, CCW, ADAS, Coed Cymru, and the OCIS. Each day was organised around a principal theme, viz. organic livestock husbandry; balancing enterprises on a mixed farm; and the general management of an organic hill farm.

⁷⁹ Farmers were not always aware of which organisation was responsible for organising many of the events to which they were invited.

⁸⁰ See also note in Chapter 5 Section 5.4.7

Some forty farmers attended each of the farms in north and south Wales, whilst a smaller number of just fifteen turned out to see the hill farm in mid Wales (including a small group of agricultural students). These numbers varied during the day as a few farmers came and went.

The type of attendees for the three meetings also varied. A large proportion of the south Wales meeting, with its stronger focus on environmental conservation, was made up of small-holders, many of whom were new, hobby, and/or part-time farmers. Only four farmers at the Open Days in north Wales and three for the south Wales meeting claimed to be registered organic farmers, although a number of the others said that they farmed in a near-organic manner. The mid Wales farmers were more reticent about their organic status, but a number claimed that they regarded themselves as virtually organic due to their low use of fertiliser and pesticide, and the extensive nature of their upland farm systems.

In each Open Day the interactions of the organic system with agri-environmental schemes, both in terms of farm management and in terms of managing relationships with the various regulators were explored. The discussions varied depending on the interests of the attending farmers, but those farmers that participated in discussion often engaged the relevant expert in some considerable detail. In unstructured discussion between farmers, either as they walked around the farms or during the refreshment breaks discussion often turned to general farming issues and away from the main topic of the Open Day or from a discussion of organic farming.

7.2.3.2 Farmer Observations on Open Days

Comments from farmers in the sample, on the form and function of farm Open Days and Farm Walks, are presented in Appendix 7.4. The themes that emerge from this evidence are discussed below and are re-visited in Chapter 8 as the activities of the three case study groups are discussed. The comments highlight variability in attendance, relevance, and success of Open Days and Farm Walks.

The collection of farmer observations in Appendix 7.4 includes those of farmer A7 who had worked as an extension officer before becoming a full-time farmer, and had

subsequently become the facilitator for a producer group (a group that is considered as a case study in Chapter 8). She is in a position to comment on Open Days and Farm Walks from both the organiser and the farmer viewpoint, a position that encourages her to reflect in a more general manner on the way that these events operate, and the ways that organic farmers interact and learn in addition to her own experience of learning as an organic farmer. A7's relatively privileged position is also relevant in the discussion of farmer associations in Chapter 8 and is discussed further in that context.

From the farmer observations and the field notes in Section 7.2.3 above it is apparent that the farm visit can be popular, is valued for its social function by both conventional and organic farmers, and serves as a relatively untaxing method of gathering information. Farmers are aware that there is no demand to contribute to proceedings and that they may act as passive participants (A7 in Appendix 7.4). On a farm visit the farmer is allowed to make unobtrusive comparison, to discuss and listen to discussion on specific and common problems arising from, for example, the conversion process and the operation of an organic system, and to draw conclusions on its applicability to their own situation. But such learning can also be unstructured and unfocussed, with a corresponding possible limitation on effective learning. However, farmers maintain that there will always be something of value gained from such events even where much of that is gained through private discussion between individuals.

As noted in Section 7.2.3 above, attendance at Open Days depends on the timing, the location of meetings and the relevance to personal circumstances of the discussion or the specific kind of farm or farming that is to be discussed. Participation in such events has generally been a minority activity as has been recorded in the extension literature. It is also evident to organisers of such events and points to a well-known weakness in this form of extension activity (see A7 in Appendix 7.4).

Farmers were also prey to what might be termed 'extension fatigue', where they became overloaded with information and invitations to extension activities such as Open Days. Farmers in this sample generally recognised the limitations of many of the discussion or farm visit events that are offered by various organisations. In

relation to conversion to organic, and in improving knowledge about organic farming, farmers became more discriminating about the events that they attended (see A1, A2, A4, A5, A7, B4, B7, C1, and C2 in Appendix 7.4). Even though B4, for example, was an enthusiastic learner, and had taken advantage of organic courses and extension events, he was critical of this aspect of the formal system of support and advice. He noted, in particular, that the relevance to him of the activities offered changed over time as he developed his knowledge and experience of organic farming, and his comments were echoed by other farmers (e.g. A1, A4, and A5).

B4 was suspicious of the proliferation of extension events, while conceding that there was some value to be gleaned from any interaction with other farmers and from the specialists that present their material at such events. However, it was the immediate and specific nature of local interaction that offered him most value. The farmers' need in the early days of conversion was to cover the basics of the system, but learning-needs increased in sophistication as time went by. Many of the generic Open Days and discussion events, therefore, become less valuable as learning events, even if they may be still valued as social occasions. Farmers note that they have increasingly limited their involvement, not least because of the pressure of time, to specifically relevant events and with groups of other farmers that are at similar levels of knowledge and interest, and/or who have common objectives (See also in discussion of farmer associations in Chapter 8).

The discrimination shown by farmers as they became more proficient organic farmers is also indicative of the differentiation of farmers into the different types of categories that were discussed in Chapter 6. The farmers were strongly biased toward evaluating the usefulness of meetings with respect to their own immediate needs and their own judgements of the standards and competence of the host farmer or the organisation running the event (e.g. A2, A5). A5, for example, criticises the approach illustrated by a local farm which is operated as a demonstration farm under the auspices of IGER and (as a consequence) emphasises close measurement of the outputs of the farm. This mentality is foreign for A5 who, classing himself as a 'traditional' farmer, suggests that his skills are based on experience and a more tacit understanding of what good farming practice entails. His distaste for the method employed on the

demonstration farm is mirrored by his dismissal of the approach adopted in agricultural colleges and is matched by other farmers.

7.2.4 Advice and Support from Agricultural Supplier, Private Consultants, and Other Actors

Farmers obtained information about organic farming from a range of sources other than explicit extension services such as the OCW, the OCBs and agricultural colleges. These include what may be termed commercial expert sources as well as farming unions and other actors that contribute to creating the farmers' network. The interaction of farmers with buyers is not considered in this section (see Section 7.2.5), but private agricultural consultants, agricultural suppliers such as seed and animal feed merchants, and veterinarians are included (See Appendix 7.5 for a collection of farmer observation on these sources).

Farmer representative organisations such as the farming unions and the CLA were also available, but at the time that the farmers in this sample were converting, these organisations did not appear to be significant sources of advice for the organic farmer. Other organisations became useful for those farmers who were considering relevant schemes such as the agri-environmental Tir Gofal scheme (e.g. Coed Cymru, CCW), and the interaction of these schemes with the organic scheme helped these farmers to learn about some aspects of the organic system.

Farmers in the study did not all use the same type of source or used their sources to the same degree. Some farmers used their sources quite extensively while other farmers hardly used any external sources of advice beyond the certification bodies and the OFS. Many of the sources referred to above were seen as useful for general advice about farming as opposed to being specifically related to organic farming, and whilst general farming advice was often relevant to organic farmers, the conversion to organic shifted the significance of the advice as it was fitted into the relationships that organic farming privilege. Additionally, some of the sources of advice, particularly seed merchants, became more important on conversion as the changes of practice that the organic system entailed directed the farmers to asking different questions and demand a different level of service from their suppliers and other contacts than they had done as conventional farmers.

The relationships that farmers have with other actors are, therefore, changed in a number of ways as the farmer takes up organic farming. The change of farming practice also entailed involving (or enrolling) those actors who were already in the farmers' network into the new networks of knowledge that builds up around organic farming. The converting farmer, therefore, acts as an agent of change that extends its influence beyond the network limited directly to organic farming.

Agricultural Suppliers

The seed merchant becomes an important actor in the organic farmers' network as the focus of the farmers' interest moves from fertiliser and herbicide input to the inherent characteristics and sustainability of grass leys. The preparation of leys, nitrogen fixation, stocking and rotation regimes become the new references for the farmer, and knowledge about and the choice of seed mixtures becomes important. The seed merchants (along with the advice from extension agents such as IGER), are the sources of information about these issues, and farmers in the sample give evidence of the increased use that is made of this source of advice.

Seed companies were seen to have been slow in improving their knowledge of organic seed mixes, and farmers in the sample had, therefore, to find specialist organic supplier or to develop their own knowledge⁸¹. In many cases farmers had initially to depend on their own resources in learning about seed mixes that would be suitable to their own specific soil and drainage conditions (e.g. A3, A5, B2, B3, B6, B7, C8 in Appendix 7.5). Whilst many farmers recognised the importance of developing good grass leys, B7⁸² approached the choice of grass mixes with something close to a scientific attitude, seeding comparable areas of her farm with supplies from up to five different companies in an effort to educate herself and to understand the rationale and justification for the choice of mixture. She admitted that she had a general suspicion and lack of trust in agri-suppliers, an attitude that was shared by a number of other farmers (see B1, B2, C6 and C8 in Appendix 7.5).

⁸¹ C2 was the only farmer in the sample who had converted acreage on his farm to grow organic potatoes. He was happy to rely on the advice from his potato seed supplier and also received advice from the packers on the type and variety of his potatoes and management of the potato fields.

⁸² B7's displays the same independence of mind when it comes to gathering information about organic farming in general (see Box 7.).

As their own knowledge improved, and their demands on the seed merchants increased, farmers have looked for specialists advice and many of the farmers, particularly from Groups B and C, refer to the support forthcoming from the same named individual in recognition of his credibility and expertise, and whose advice was based on practical experience in managing his own organic farm (see B2, B3, B4, B6, C3, C5, and C6 Appendix 7.5). Others managed to accumulate knowledge in more haphazard ways and could not volunteer such information on a specific relationship with a particular company representative. In addition not all farmers had re-seeded or re-vamped their grass lays, reflecting differing requirements and differing priorities on different farms, and the differing emphasis farmers placed on elements of the organic system.

Private Consultants

A few of farmers used the services of agricultural consultants for advice and guidance on their farming systems, with most using consultants for specific one-off decisions related to their farming systems. In addition to consultation on practical farming decision, consultants were also used for business and financial advice, and on grant applications, such as the Tir Gofal or the Farm Business Development Plan (FBDP) that is run by Farming Connect (the latter being available free as part of the FC service). Consultants are also used by associations of farmers, such as the Grazing Groups, and producer groups such as Group A that are discussed further below and again in Chapter 8. However, private consultants did not feature prominently as sources of advice on organic agriculture among individual farmers in the sample.

The farmers that had been using consultants appeared unimpressed by the general agricultural consultant's knowledge of organic farming, and found in some cases a lack of sympathy with the system (e.g. A2, A3, and C6 in Appendix 7.5). Farmers referred to the consultant who had visited them during the OFS free consultation visit, and named by farmers from each group as being very good, suggesting, as with the reputation of seed merchants (see above), that at the time of these conversions, expertise and advice on organic farming was not widespread. A similar lack of knowledge on the part of financial consultants was also apparent to farmers, and this ignorance about organic systems, and what they entailed, could affect the financial advice that was offered. Later converters (e.g. B4) found dedicated organic

consultancies available but as B2 and A5 comment, the cost of the service offered by consultant can be prohibitive.

Veterinarians

Most of the farmers in the sample did not have access to vets who had specialist knowledge about organic farming systems. Vet practices did sometime contain an individual who had more sympathy or knowledge about organic methods, but farmers did not seem to consider the deficiency to be an obstacle to their organic farming practices. As described in Section 7.2.1 above in relation to learning by the OCB rulebook, vets were enrolled into the organic knowledge network as farmers required specific treatments to their livestock which were in accordance with the organic rules.

Vets became involved in the negotiation of practice between farmers and OCB, and their use by the farmer changed as the focus of livestock health moved to management rather than prevention. The organic system also introduced the farmer to the use of homeopathic practices (although these are not prescribed by organic regulations), and to vets or other individuals who may have expertise in this area (e.g. A3, B7, C4, and C6 in Appendix 7.5). The boundaries of some of the farmers' knowledge networks were, therefore, extended to include such practices and in some cases to the resurrection of folk remedies.

Farming Unions

Farmers in the sample report at best a lukewarm attitude toward organic agriculture among the unions. Only three of the farmers, namely A1, A6 and C6 indicated any active involvement in a farmers' union. Whilst A1 was an union representative, both A6's and C6's involvement were minimal and their attitude seemed to reflect the general attitude of the farmers in the sample about the farming unions: being at most unenthusiastic whilst some farmers express a relatively hostile attitude. Other farmers have kinder words to say about the general service that the unions have to offer. They agree that their expectations of support for organic farming are not high and A1's observation confirms the view that organic farming is not regarded with much enthusiasm by the non-organic membership of the unions. Table 7.2 provides a collection of the farmers' views about the unions.

Table 7.2 Farmer Observations on Farming Unions

Farmer	Observation
A1	'(I am) a (union) representative of [<i>name of area</i>] and there is a small group of people who represent each county that meet up. There is also an [<i>name of union</i>] committee - national organic committee, but mine is a working group for Wales. They meet once every six months.The local [<i>name of union</i>] meet once every two months and we are the only organic farmers who go to these meetings and quite often there is twenty to thirty people there and if you mention the word organic you can hear a pin drop. They are not keen on organic farming generally.They (Farming Union) have a policy on it but you don't see them selling organics very strongly in the 'Farmers Weekly' or in their policies, because as with all unions they go along with the main requirements of their members.'
A3	'(With the) [<i>name of union</i>], not a lot with them - not really useful for the conversion period, (and) don't have any particularly helpful policy.Certain amount (of advice) on grants, subsidies ...'
A6	'(I) attend meetings with [<i>name of union</i>], but not too much- meetings can tend to drag on- discussing grants etc... (but) am the chairman of the local branch and we meet only once a year.. the county branch meets every month- but (I) don't attend'
B2	'(member of) CLA, but not one of the unions. Don't really like the way that the unions work- they are only out to sell insurance'
B3	'(I'm) not a member - there are reasons for that...(unexplained)'
B6	'I was a member of both (unions) a few years ago- one after the other...But now I don't think that they help as much and they may - (they) discuss things a lot but I am not a member with either now.'
B7	'(The) [<i>name of union</i>] - not much good at all - for organic- don't show much interest or support. They are useful for arable aid etc. I do switches every year- switching from one field to the next and that affects the payments and they check it over for me every year and spend an hour doing that every year. If I want help fair dos they will, but as an union in itself they have nothing specifically for organic farmers that I know of anyway'
B8	'[<i>name of union</i>], but I don't do much with them- insurance and help with the IACS forms'
C2	'I am a member of the [<i>name of union</i>] but I am not involved with it in any way'
C5	'[<i>name of union</i>] is mine- it depends with them what you want to know- they will find out if you ask. There is not much that comes through that supports organics in particular'
C6	'I am not a rep (union). I go to the odd meeting, and depends what is on e.g. Mid Term Review. My neighbour is the chairman so I try to go to support him'

7.2.5 Information from the Market

Meetings to attract farmers to convert to organic farming were organised by processors in both meat and dairy sectors in the period during which the farmers in the sample were considering conversion. These meetings gave information about the organic market, initial advice and information on the kinds of farm that would be suitable for conversion, and information on the conversion process. This information

was similar to that received from other sources but was made more compelling by the direct link to the market. For many, if not all of the farmers in this group the basis for serious consideration of organic farming was commercial information and the prospects for the organic market, and as noted above, processors appeared to be assuring farmers of a buoyant future market.

Organic milk processors, in particular had organised a number of events to attract farmers to convert in the mid 1990's, around the time that many of the farmers in this sample had been considering conversion, and subsequently for farmers during and after their conversion period (see for example Appendix 7.1: A3, B3, B5, C3, C6, C8). These meetings had gradually become less common as the supply of organic milk exceeded demand around the turn of the century and farmers had become more concerned with prices and with the difficulty of getting an organic milk contract. However, some processors continued organising meetings, with more experienced 'mentor' farmers and invited experts leading discussion. These meetings were organised by dairy processors for their affiliated producers and so were not open to all organic farmers, but most dairy farmers were able to have access to some form of mentoring system from the milk processor that they supplied. The usefulness of these groups is discussed further in Section 7.4.3 below in consideration of informal learning among farmers.

Farmers, however, became somewhat disillusioned by the development of the market as, particularly in the dairy sector, the promised high premium prices were not maintained. The discrepancy between promise and reality disappointed farmers, but they were aware of the general difficulty in the industry and any kind of premium and support were sufficient, at least in the short term, to maintain their interest in organic farming (e.g. B3 in Appendix 6.5). Even so, as B5 remarked, farmers became aware that they did not have the knowledge to adequately assess the forecasts for growth in organic demand, felt that they did not have an independent source of advice on this matter and that they had been caught out by over-inflated forecasts.

'The hype didn't help the situation. So many people thought that there was enough of a market for them. The problem was that people accepted advice too easily. They should have brought in some independent market researchers

to find out what volume was really required. At the end of the day the market isn't there.'

(B5)

The processors were not the only ones blamed for the developing over-supply of organic milk⁸³, and the government, and to some extent the Organic Certification Bodies, were identified as having misled expectations by setting a 10% target for the organic sector's share of the overall industry. Government targets, as expressed through the Organic Action Plans (see Section 5.3) were taken as strong support for the sector and the conversion and continuing support payments further encouraged farmers.

The suggestion from C8 (for example) was that projections for the future organic market appeared based on simplistic projections and wishful thinking, without sufficient consideration devoted to matching the growth in supply to that in demand.

'When they came out with this ten percent any organic farmer⁸⁴ would have laughed - at three percent (now) they are overproducing milk, it's a target that they would probably never achieve..... What is the point of having ten percent of the farming of Wales organic and going bust?'

(C8)

As the market failed to match projected growth farmers were disappointed and cynical in response. Government, processors and certifying bodies were each implicated in apparently misleading the producers. The following farmer observations represent the further observations and criticism made on the mismatch between promise and reality.

'When we went into conversion we could see this huge snowball coming behind us - of other farmers, that perhaps it was organisations like the SA or the OF&G perhaps should have said 'hold on - you can only grow at the same rate as the market' and they didn't. Probably the SA and the rest are no different - they are money-making machines and creating jobs.'

(C8)

⁸³ Meat producers did not appear to be as concerned that the market would be oversupplied. A possible cause for the lack of apparent concern may be due to the legacy of the Foot and Mouth disease and its effects on supply and demand for meat. The fieldwork for this study had been conducted a year or so after the disease event.

⁸⁴ 10% was the government target for the proportion of farmers to be organic by 2005, but was also roughly equated to the share of agricultural output to become organic.

‘...but no one was prepared to give any certainty – what was the price going to be in two years time? The figures that were being thrown at us from all directions – saying that there was room for a ten percent demand of milk to be organic milk, and something like one percent was organic at that time. Those figures have stayed with us because someone was telling untruths somewhere, and they were (then) saying that they were fifty percent oversubscribed.’

(B3)

‘I am very disappointed at the way that organic has turned out because we were led- there were promises that this was what you were going to get for your milk over the next five years. The boys that have been in ten years they got it but we haven’t seen a penny of it.’

(C5)

‘A lot of people have criticised them (milk processors) since the price dropped and what they promised that if we go with them.....There you go – there is no good bothering –that is what has happened- its not their fault- it’s the government fault to get this going – even people who have never even thought, or farmed that sort of way (organic) have gone purely for the milk price and the grant. I think that to go up there and to shout at them (processors) is pointless and they never thought that this would go like this.....The government was doing all this research and saying that the market was growing by ten percent a year and it never happened’

(B7)

‘(A) year ago in May we sold the cows, and for six months after that we weren’t enthusiastic about farming. We didn’t want to give up on it but we felt we had been let down and we had gone down the path that we had been advised to and they say they want ten percent to be organic and they have no market for it’

(A3)

The farmers had been successfully attracted to convert, but the information with which they had been supplied was shown to be deficient. The new network links that

farmers had begun to form with providers of information about the market, i.e. buyers, organic certifiers, and government forecasters had been brought into question.

This deficit relates mostly to the dairy industry, and dairy has inherent inflexibilities because the production is, in industrial terms, a continuous flow as opposed to the discrete bulk production of the meat and livestock sectors. Farmers producing meat were in a different position and were able to take advantage of the rise of the supermarket producer clubs (see Chapter 5) which along with the farmer-led producer groups were able to offer farmers new and more direct channels to market, and with that, better and more direct market feedback (see also Chapter 5).

Farmers supplying finished livestock for slaughter, thus, had three major market channels viz. traditional livestock marts, supermarket producer clubs and the farmer-led producer groups (c.f. the more limited set of channels in the dairy sector). The livestock markets have always supplied the farmer with some form of feedback on their performance, but as noted in Chapter 5 as well as in relation to informal farmer learning (e.g. see farmer comments in Section 7.4.3.1) this can be limited and particularly so for organic farmers with the small number of livestock markets catering specifically for them.

The producer groups and supermarket clubs, however, are able to offer farmers structured opportunities for learning. The experience of farmers in a farmer-led producer group are considered in more detail in the form of a case study in Chapter 8, but essentially the two marketing channels offer similar forms of opportunities for learning. These are based on a more accurate understanding of what the market demands in terms of meat quality rather than the traditional criteria of the livestock markets. The farmers are exposed more directly to their role as food producers rather than as livestock farmers and, as the link to the final consumer is emphasised (particularly in the case of tied supermarket producer clubs) so is the need to understand the cost structures of the farm as a business enterprise.

Farmers in the sample were happy with the kind of information that they received, the accuracy, and the promptness of response, and had to learn to understand the grading

system as a guide to the value of their stock as opposed to the traditional livestock mart method of going by pens of equal sized animals.

‘(we) go to [*name of supermarket group*] discussion group and get visits and quick feedback – to learn what the judgment was’

(A2)

‘Now (we are) selling through the [*name of supermarket producer club*] scheme. It’s convenient - through [*name of local representative*] - and independent.....(The) [*name of supermarket chain*] is more convenient- can take them (stock) up to [*name of local town*] ourselves and so we don’t have the haulage costs (of going to more distant market)–it’s close- and we can pop up to see them for the kill -whatever’

(A5)

‘(get feedback) ..some farming issues, (and) one meeting a year with [*name of supermarket chain*] and they talk about how they found the market (state of the market), (the) strategy, (and their) plans. (They) tell us what sort of lambs they are looking for and where people have gone wrong. (it’s) interesting to go through.....(but) not as far as grassland management and financial side of things (feedback).....we get back confirmation and the grid- they will downgrade them if they (lambs) miss that- and they send back information on what you produced’

(A3)

The feedback that these farmers had received, although richer than the kind of feedback that they received from the traditional livestock marts, continued to be limited to their output, pointing out to the farmers what their product should look like. It is up to the farmers themselves to learn or apply the knowledge that will produce those results, and that included both practical farming knowledge and management of the farm as a business enterprise. The system was pushing the farmers to be more accurate in their own record keeping and in being more systematic with the management of their stock and, hence, with the management of their land.

‘Not enough records (ourselves)- even though we have individual tagging. To improve more (I will) have to record my thoughts for each individual lamb and

then improve on that – so it is just a guide at the moment (the feedback from the processor)...Improving in terms of breeding and picking at the right time (and) getting out of the habit of getting a group which look right. ...(we) try to weigh the lambs within a certain weight limit...as opposed to try to pick what would be an even group and not feeling them- they might be all the right weight, but too fat or lean- (if you) get even a light lamb and it's the right stage its got to go – if it grows a bit more it will get too fat'

(A3)

' (We) get much more feedback on the quality of the carcass from [*name of local town abattoir*]- print out from the grader, and we keep the number of the lamb and we make a list of each lamb and what the results are- how different lambs kill out differently and we look for reasons ourselves- and think about it – take their information and work on that – we get nothing like that with [*producer group- Group A*]- they don't record'

(A5)

The information received from market agents by the livestock farmers was indicative of what they should learn, but left the farmers to find the relevant information or to generate their own knowledge about improvements to make. Farmers were challenged with the need to become more active and aware learners.

The livestock producers were happier than the milk producers about the state of their market, but the dairy farmers appeared to be getting more direct support in learning about improved farming practices (through the 'mentor' farmer schemes) than the meat processors and buyers were providing to the livestock farmers. In each case, however, farmers were tied to specific processors (whether a particular supermarket chain or milk processor) who provided support for farmers directed toward meeting their own procurement needs. Whilst farmers were required to become more active and aware learners, farmers' learning was also being directed toward the goal of producing what specific market actors deemed as important, whether in terms of food quality or the management and costs structure of the farms.

Whilst these are not types of relationships that are specific to the organic market, organic farmers have to deal with extra constraints because the size and scope of the

market is more limited than is the conventional market. Livestock farmers were still learning about producing higher quality products and buyers were often prepared to pay organic premium prices for only parts of the carcass (see for example B1 Section 7.2.1). For dairy farmers the glut in organic milk supply had made finding organic milk contracts more difficult, and they had to be able to manage an organic system without receiving premium prices for their product. Hence as general market relationships between the farmer and the buyers were changing organic farmers were learning about operating as suppliers of niche products in comparison to their previous experience as conventional farmers.

7.3 Informal Interaction: Peer Influence, Local Exemplars and Discussion Groups

7.3.1 Learning on the Farm and from Local Farmers

Many comments that indicate or imply learning processes have been made by farmers in the sample in relation to social and work related interactions elsewhere in this chapter and also in Chapters 6 and 8. The comments included in Tables 7.3, 7.4, 7.5 and 7.6 below offers a selection of direct observations made by farmers about the way that they learnt from their family peers and other local farmers.

The embeddedness of the farmers in a farming life and in a locality is discussed in Chapter 6 (Section 6.2), and the intergenerational relationships created in this context help to form the farmers' identity and their understanding of agriculture. Intergenerational learning is the basis on which farmers in the study build their agricultural knowledge, whether derived from members of the family or from other local farmers. Learning as they grew up on the farm was identified by a number of farmers as an important element in their education (e.g. A5, A7, B1, B2, B6, B7, C4, C5, and C8 in Table 7.3). From it they took up attitudes and habits that they later applied to their own decision-making; for example, farmers claimed that a major element in their decision to convert to organic farming was the belief that their conventional farming methods (following their parents) had already been near-organic (see Chapter 6, Section 6.3.2), noting that those methods had not involved the levels of artificial fertiliser input and animal antibiotic use as they might have.

Of the twenty three farmers in this study, just seven were young enough to have parents who were still active and able to take some part in making decisions on the farm. In some cases these are relatively major roles e.g. A3's father still runs a small adjoining farm; B3's father runs an adjoining farm and does most of the livestock feeding on both; B4's father is the overall manager of the farm businesses and is mostly in control of one enterprise; and B5's father now runs the dairy herd since the farm's cheese business takes up more of B5's and his mother's time. Eight farmers had children who were old enough to be taking part in farm work, and were either beginning to take over management (A2, A5, C4), taking part on a daily basis (B1, C8) or working on the farm intermittently while also holding an off-farm job (A6, B7, C1). The remainder of the farmers were childless or had children who were too young to participate (see Appendix 6.1).

Whilst the degree of involvement from the parents of interviewed farmers varied, the older farmers in particular note their parents' influence, and the importance of learning on the farm. Parents were generally seen as the first reference for local knowledge by the interviewees, either through direct continuing consultation or through habits and attitudes that had been passed on. Since nearly all the farmers had been born and brought up on a farm, a large part of what they know about farming derives from their experiences as they were growing up, and as B6 remarks, their own children are following a similar upbringing

‘...but they (children) enjoy themselves out on the farm too- my son is being brought up as I was – out on the farm’

(B6)

Similarly, B1's father (see Table 7.3) had kept a log book that detailed the output of each field on his farm in terms of the number of bales of hay produced, and to which B1 continued to make reference in making his own farming decisions. B1 had continued to gauge output in terms of silage cuts from each field which, whilst not itself being directly comparable with the measure of numbers of hay-bales, enabled him to deepen his own knowledge of the farm. His own sons were now going through a similar process of learning about the farm and its capabilities.

A7, C4, C5 and C8 in particular note the relationship of the farming systems used by their predecessors on the farm, and how it helped to make the farm suitable for

conversion. The other farmers refer to the general influence of their parents, with B2, as a returnee farmer (see Chapter 6) admitting to having to heavily rely on his father and local herdsman as he started his life as a full time farmer.

Table 7.3 Learning on the farm and from local peers

Farmer	Observation
A5	'Picked up off dad (farming knowledge); experience; look around you see what people do and you make up your own mind. Go on one or two farm walks and see what other people are doing and if they are doing better then you have to do better'
A7	'I was brought up in <i>[name of town]</i> - not on a farm. This was my grandparents' farm, and then my aunt and uncle. All my holidays were farming.....My uncle was a very traditional stockholder. So for years he would use slag and lime and that was it. And so when people started using artificial fertilisers he didn't. So from my point of view that was wonderful.....For me it was a mixture of because it had always been a traditional farm and he was a very good husbandry man'
B1	'My dad used to write down in a book how many bales of hay he got out of each field, then I thought, lets keep it up and we will record how many trailer loads of silage come out of it – well it has gone down every year because the contractor has got such a big trailer that he puts a whole acre in one trailer- five loads in one field, where I would have myself taken twenty five – his trailer is so much bigger and he is chopping so fine- no point in measuring it.....Why my father did it- I don't know- no long term instructions..... ...people do learn from the family, and the boys were always farming – (it's a) practical approach (to learning how to farm)..... But it is interesting with the boys – they will know the farm as intimately as <i>[name of B1]</i> '
B2	'...so I came back and took over instead of the herdsman who wanted to retire- so in at the deep end.Yes- (had been) helping out at weekends and so on, but I had never done a lot of milking, so I made a lot of mistakes at the beginning. I just talked to the reps and to every one at the beginning – including the old herdsman- so that I would learn. I got into it then.....I didn't understand about their feet and so on and why they were lame and so they went too weak and we had to put them down and so you learnt then from such mistakes. My father was there to help.'
B6	'It's in the blood- my grandfather and father both farmed here. I have been brought up with it. I don't know anything else- I wouldn't do anything else'
B7	'I've learnt the most through two chaps here. My father has passed away a few years ago but these two chaps up the road – one in his eighties and the one just across the road here, he died this year as well – he was ninety something, and I learnt much more off them than what we ever learnt off anybody coming here because they have just been putting what their experiences are like.....Their experience was similar to the organic system.....Yes, they have done it and this chap up the road is eighty four he had been growing (potatoes) out at Mathry – near St David's- sixty year ago....'
C4	'Basically left school now so had the experience probably of being told by my father how to care for stock, and that generally is organic farming. And that's care of stock and that's our principle- what organic meansI have always been lectured by my father because I never knew my grandfather, that you always look after your animals and that principle was drummed into me.....Yes. Picking up and clocking it and remembering and when somebody who really meant what they were saying – 'well I made a mistake there, don't you do that'- you remember that and you don't make that mistake. Because something that was a mistake in the middle sixties is probably still a mistake now like. So basically you were leaving school you realise how green you was and as helping farmers and seeing how they... we were all farming the same way..... The best thing that can come out of Farming Connect is not so much business plans but if they can get together free and enough farmers who can get together and pick a few brains and they can stay there long enough for their children to learn from them as well.....'
C5	'I was at <i>[name of local agricultural college]</i> College, and I learnt quite a lot there but I learnt a lot more from my father for this farm. He has farmed this farm all my life. He was my best educator for this place, and he has been my best educator in organics because that was the way he was brought up. It wasn't called organics in those days. He loves this

	system as well. He is not greatly involved now but it's going back to his youth and he can see how it's been brought on by the seed breeding and stock and so on. He can see the difference in the farm since converting to organics – he can see the farm changing again to what it used to be before we started using fertiliser.'
C8	'But we always farmed low cost production as did our father before us, and we still carry on in that way now, so we are probably better suited to organic farming anyway.....Hard earned (farming knowledge) – when I left school it was hard work...I went to day release for five years and found it was a good starting place with the simple subjects such as grassland and machinery and you worked your way up to farm accounts and management- it was all good and I enjoyed it and probably lot of what I learnt was carried forward into farming except.. when I was early twenties my father had this policy 'if I can't afford it I'm not going to have it'. He was a hard working farmer.....Aberystwyth University had a low production league table at one time and he was always at the top and he was a good farmer and when lot of other boys were arguing with their fathers – 'we should be doing this or that'. I was thinking well I can't really fault what he is doing- he is doing alright making money'

Farmers in the sample, however, were also aware that the form of farming that the previous generation knew could constitute an obstacle to change and to organic conversion in particular; creating at the very least scepticism about organic agriculture and a belief that it represented a return to a less efficient form of farming (see further in Section 7.3.2). For example B1, in consideration of farmers who do not consider conversion depicted their attitude as:

'...the older ones who say that 'I've had enough of farming like it was in the 50s, why change?'

(B1)

Farmers refer to the kind of training that their parents had received and the strength of the 'conventional' farming system within which their fathers (mainly - as opposed to both parents) had learnt their farming to explain the scepticism (e.g. A3, A5, B2, and B4 in Table 7.4), and farmer C7 refers to his own reluctance to consider conversion because of the impression that it was a farming throwback (Table 7.4). Other farmers also recognised the influence that agri-businesses had on farming practice and the ways that a generation of farmers had been brought up to think about their farming practices. Conversion to organic farming in some of these cases indicated a desire for independence from such commercial influences, and a move to revalue their own skills and knowledge (see also the discussion in Section 7.2).

Conversion to organic farming produced anxiety about whether the farmer was making the right decision which was partly derived from the influence of previous

generations and the strength of the habits of farming to which the farmers were accustomed. C4 illustrates this stress most vividly by imagining the reaction of his father and grandfather to the risk that he was taking in converting the farm. In considering his decision to convert in 1994 he imagined his father:

‘You want to go back to ninety four - ninety five where there was tremendous pressure on you of not getting it wrong and making the total mess of potsch. My father would be flying off to heaven said ‘You’ve got it wrong lad’ and you didn’t want that. So you didn’t make that mistake.’

(C4)

C4, along with many in the sample, had also expressed a belief that their conventional system had been near-organic in nature, with some farmers claiming that it had been organic in all but name (see Table 7.3). Their anxiety in conversion, therefore, reflected the fact that they were losing the ‘safety valves’ that conventional farming offered, of being able, for example, to resort to a dressing of nitrogen fertiliser if grass growth appeared slow, or to batch dose their herd to remove the risk of infection. Conversion to organic farming constituted a crossing of a risk boundary that was related to more than substantive farming knowledge, involving a step into an unknown, in addition to breaking with the local conservative knowledge networks that had been well understood hitherto (see further below).

The farming education that the farmers received through the conduit of their families produced ambiguous influences. It contained elements which could be drawn on to positively support the decision to convert to organic farming, and elements which were part of a socio-techno-economic trajectory from which it was difficult for the farmer to consider departing in the process of conversion to organic farming. In making the decision to convert farmers made use of those elements which were supportive of the organic system but had to confront those that opposed such a change. Changing the system meant changing the informal knowledge network which had been translated to them via their families; a knowledge network which is made up of substantive farming knowledges and of the beliefs and consensus supporting contemporary conventional farming.

Such a process may be imagined as that of dis-embedding from and re-embedding in new relationships of knowledge. It occurs both at the informal, family and farming community level as much as in the farmers' relationship with formal and institutional contact networks. The process is materialised within formal domains in the changed networks of formal personal and institutional contacts such as those that are discussed in Section 7.2 above. The materialisation of the re-embedding process in informal networks is not as readily observable, but is illustrated in the work that farmers do to overcome scepticism, tradition and anxiety about their decision to convert to organic farming. Re-embedding may also imply changes in family relationships, but such an enabling process was not further explored as part of this study. Re-embedding within the wider informal social networks of the farmers is discussed in Section 7.3.4.1 below.

7.3.2 The Influence of Conventional Farmers

Farmers made some reference to the habits and routines of other farming families in the locality and their influence on their farming education as noted above where B7 refers explicitly to a continuing dialogue with other local (albeit retired) farmers (Table 7.3). She laid great store by the information that she had managed to glean from some of the older farmers in the neighbourhood, whose techniques and attitudes to farming seemed to her to be in tune with modern organic farming requirements.

Converting farmers, however, had also to deal with negative reaction and scepticism from their conventionally farming neighbours (see farmers observations in Table 7.4). Whilst the level of interest from other local farmers varied from farmer to farmer and although few farmers reported outright hostility to the conversion of their farm to organic, there were examples of opposition which, as organic farming became more established, could take on a competitive character. A1, as a farmer's union representative, was aware of a widespread lack of sympathy with organic farming among the membership of his local union; A3's father is described as sceptical if not opposed; B1's neighbours saw his conversion as a 'strange thing to do'; C6 was told that it was a 'mad' thing to do; and C7 had himself thought at one time that it would be 'going backwards'. Such reactions are rationalised by some of the farmers (e.g. A5 and B4) with reference to the kind of education and encouragement that farmers have had to apply industrial farming methods (see also Section 7.2.2).

B1 reported that there were 'snide remarks' about the price premium that organic produce attracted, whilst other farmers had been aware of the usual interest that neighbours took by 'looking over the hedge' and their interest in the success of the system (A3, A7, B3). This interest is in some cases translated into an influence on the way that conventional farmers operate as A3 notes and as those organic farmers who become members of Grazing Groups (see Chapter 8), which are dominated by conventional farmers, find during their meetings. But A4 finds conventional farmers who show interest in organic methods are still trapped on a production 'treadmill' and unable to make the conversion.

Table 7.4 Interaction with conventional farming peers

Farmer	Observation
A1	'(I am) a (union) representative of [name of area] and there is a small group of people who represent each county that meet up. There is also an [name of union] committee – national organic committee, but mine is a working group for Wales. They meet once every six months.....The local [name of union] meet once every two months and we are the only organic farmers who go to these meetings and quite often there is twenty to thirty people there and if you mention the word organic you can hear a pin drop. They are not keen on organic farming generally.'
A3	'He (father) was a bit sceptical as far as whether we should be doing it (converting). But he was quite prepared – not concerned about the ground becoming organic.' '(I) get a mixture of responses (from local farmers). Some people think you are stupid – not in a nasty way but (they) think that it's a ridiculous thing to do –(but also) a lot of interest.....(and) put in some red clovers a few years ago and the grass that grow there is better than many of the neighbours in terms of the quality, consistency and crops off it.....Yes, more and more (conventional farmers) are interested in things like that (improved pasture), especially the ones that have good stock and do a lot of these things and a lot more than I do- very interested in how the stock perform as opposed to people who are just plodding along not really that fussed'
A4	'The extraordinary thing was that the one neighbour who I thought might have been rather anti in fact converted almost simultaneously. He also has one of the largest farms in this parish. He is a young farmer.....Not totally negative (reaction) because I am an outsider. I moved in from London 19-20 years ago and so I was always considered to be a bit peculiar. So it wasn't surprising that I was going (organic). I have talked to some of the younger farmers, and they are slightly tempted, but they are still on the treadmill.' 'This neighbour is one (who has converted) and it seemed that there were more organic but they were going on the sly... They weren't very public about it and especially going to [producer group] meetings I remember that you saw people there you never thought would be going organic....Very secretive. It was almost as if they were frightened to come out. I don't think that it has changed much.'
A5	'Some people think that you are simple for going organic- it's the way they have been educated in farming'
A6	'Not many people know (that he's converted) since the landlord doesn't want people to know-(keep a) low profile- don't want people to visit. (He) was a little uncomfortable about the land becoming organic, but he won't be worried that we keep the land (to rent)'
A7	'They just look and they can see that it doesn't look a complete mess and it's not a sea of nettles and thistles as everyone tells us that it will be. And then we started growing potatoes and everyone said they wouldn't grow but we had people along the top there who were coming to look at the potatoes... .. Potatoes are a local crop, not organic ones, but

	actually quite few people grow potatoes and presumably someone had told them that our potatoes were not going to grow because we had not put any fertiliser on them and so they came to look'
B1	'When we started organic farming our neighbours thought it was a strange thing to do. One saw it as a retrograde step. Then after that they accepted that was what we were doing. Then we managed to get a lot of snide remarks about why we were getting 28-29 ppl. A lot of 'its alright for you' – people didn't like it – (it was) thought to be very cranky and divisive.....Now they say that 'its alright for you have only a hundred sheep' – well they don't have to have five hundred sheep – they can go down to a hundred if they want to...It was divisive – but its getting better now'
B3	'People like to look over each other's hedges to see what's going on – a bit of it does go on. I remember talking to some people – who don't milk anymore, but was milking and (asking) 'how are you going to deal with a cow getting mastitis, and how are you going to deal with that sort of thing?...Nobody said to us that we were stupid or advised us against it, and if they had I wouldn't have taken any notice because its our decision and we would never turn to any other farmer and say that I did not understand why he hadn't converted as well. Its no one else's business'
B4	'I think it's a general mentality (conversion), and you can understand why because I think back in the sixties and seventies when chaps like dad were in college they were pushed into industrial type farming with lectureships sponsored by ICI and halls of residence sponsored by Monsanto and all this sort of stuff. Their college training has been to use this spray and that spray and this fertiliser and so when you have been trained to do that it is very hard to change and think about it in a different way. I think that is the problem with some conventional fifty or sixty year olds who work that is the way they have always done it.' 'There is a general – I think it's the old generation –'looking over the hedge'- 'so and so's got a green field' and 'I grow a better field than you' is still out there. Nobody ever says anything but I think that it's still out there.'
C1	'I think there's interest (locally in the conversion), but in this little patch, there were several of us converting at the same time and most of our neighbours are organic now anyway. So obviously they were thinking about the same process. So it was not like we've got any neighbour on our boundary that's not thought about the process. So we weren't sticking out like a sore thumb in that respect..... I didn't actually discuss it a lot with these other farmers in the area who were converting at the same time. In fact I wasn't even aware that they were converting until we went to the same meetings or something like that.'
C6	'I was probably the first big farmer to go organic – the new wave organic- one of the biggest and a lot of people thought I was mad. Farmers have come round to thinking that organic is alright because they can see that it can be done..... People say to me in the pub- 'why are you going organic?' – 'you are doing well as you are' – 'you wont grow any grass'- 'you wont be able to keep any cows unless...' I've actually got a hundred cows more than what I had- in fact more than a hundred- and my stocking rates are the same now as it was then. People just couldn't see it and I suppose organic has in the mainstream has grown a lot in five years.'
C7	'Well you probably did think that it was old fashioned and it was the way that your father did it years ago. And things had moved on and I think you thought it was going backwards in a way.' (Wife to Husband) 'I think that all the farmers- <i>[names of neighbours]</i> , - they have 1700 acres. They are next door, and they are dead against organic. I think that they think that it is backward. (Although) they have changed in the last couple of years.'(Wife) 'They have changed quite a bit but they wont admit it' (Husband) 'A couple of years ago <i>[name of farmer]</i> came, a big conventional farmer when he heard that we were going organic and said 'You be careful and watch out' (Wife)

Any explicit or potential criticism did not appear to make farmers reconsider their decision, with converters displaying, as B3 intimates, an independent attitude in refusing to feel the need to justify their actions to their neighbours, and able as A3,

A7, and B1 demonstrate that the organic system was capable of performing as well as that of their conventional neighbours.

The potential and actual instances of opposition to the decision to convert are mirrored by a number of instances where farmers kept their conversion quiet and avoided making it public. Farmers, both those who were part of this study sample and others known to the sample's farmers exhibited this kind of coy behaviour (see A4, A6, C1). Even neighbours who had independently decided to convert to organic farming had done so without discussing the idea with their neighbours and found, to their surprise, those same neighbours turning up in organic conversion meetings. In C1's case this behaviour occurs with farmers (including C1 himself) in an area where a local concentration of organic farmers has formed (which is examined further in Chapter 8), and occurs in the context of farmers' apparently innate curiosity about activities on other farms. It also occurs alongside the confident assertion of independence and disregard for local criticism made by farmers such as B3.

Farmers in conversion, in dealing with scepticism and possibly with their own lack of confidence in the decision to convert, were made aware of ways that their local networks were obliged to change. Sceptical neighbours make the converting farmer aware of their differentiation and force them to look for alternative and/or additional peer relationships whilst the behaviour of the 'secret' converters appears as an admission of a lack of confidence in such deviancy. Although the farmers' links with their conventional peers and other knowledge networks were not broken, given their continuing social ties and particularly the ease with which farmers could convert back to conventional farming, the decision and the process of conversion set the farmers apart from others in the networks within which they had hitherto been fully embedded.

The process of distinction takes on a stronger character in the case of conversion to organic farming than it would for some other changes in farming systems (e.g. changing the pattern of calving) because it is a change of system to a clearly, and legally defined alternative that is realised as a competing mode of production. However, as farmers rooted in the local community convert to organic farming, attracted partly by the nearness of their existing methods to those of organic farming,

and are able to successfully establish their systems, any local peer-hostility seems to become muted and replaced by a curiosity and in some cases an interest in the 'new' techniques. For example, C3 is one of a number of farmers in groups B and C who attend Grazing Group discussion meetings (see Section 7.3.4.2 below). These meetings bring organic and conventional farmers together and the practices of each influence the other. C3 notes a change in attitudes about practices that are barred in organic farming but were once commonly accepted by conventional farmers, citing the practice of inducing cows to give birth early in order to manage the herd cycle of milk production.

'Yesterday's (Grazing Group name) discussion about inducing cows would be a classic example as a management tool – that sort of thing I am not overly keen on..... There is no reason to induce those cows; they weren't not going to calve. Otherwise I was quite interested in the fact that three to four years ago that conversation would have been quite different in that (then) the general consensus was that 'yes induce' – yesterday it was 'yes its an option' but needless to say not many people would have actually gone and done it -which is a change in attitude'

(C3)

He claimed that the presence of organic farmers like himself in a discussion group with conventional farmers had persuaded those farmers to accept that organic farming was a credible system and from which it was possible to learn.

Although conventional farmers are aware of the support that organic farmers received, organic farmers remain a small proportion of the overall farming population, and any competitive element is diffuse. Even so, whilst farmers were able to interact on a social, and to some degree, professional level full blown conversion to organic constitutes a challenge to conventional farming methods, which is capable of shifting the networks and reference points of all farmers.

7.3.3 Learning from Organic Exemplars

Farmers in this group made use of local contacts to learn about organic farming and to gauge the suitability of their farm for conversion. A number of farmers reported that the most reassuring advice and information that they received came from their peers,

whether from individuals who were personally known to them or known through reputation (see Tables 7.5 and 7.6). The influence of experienced local organic farmers was important to the majority of the farmers in the sample: most farmers having taken advice from these local exemplars. These contacts were important in demonstrating that organic farms could be successful, as a direct local comparison (with similar local conditions) to the farmer's own farm, and as an opportunity to discuss with the exemplar farmer the feasibility of conversion to organic. The discussion with local farmers was the most significant support for their conviction that they were doing the right thing.

A number of farmers noted that they were impressed by the capabilities of organic farms, whether local or more distant, principally after making visits and seeing for themselves the standards, level and quality of output that could be achieved (e.g. B6). However, whilst reference to experienced organic farmers was generally regarded as a way of validating and confirming the decision to convert, the influence of exemplars was not always positive. C4, for example, relates that at the time that he converted, which was earlier (being in 1994) than the majority of the farmers in the sample, he knew of only one farmer who was farming organically, and his opinion of that farmer was not high (see C4 in Table 7.5). His opinion had since moderated as he concedes that the farmer in question has improved, but he was still sensitive to the idea that organic farming might imply a 'hippy' like attitude to farming. Similarly C1 was not impressed by the farming approach of a local organic exemplar who had been farming organically for a number of years. He had been impressed by the fact that the farmer in question had managed to maintain his system over such a long period and had been able to take advantage of premium prices over much of that time, but C1 was not attracted by the 'farming style' which he displayed. And B5's parents, even though they had been considering conversion to organic farming for a number had been discouraged by the apparently unrealistic attitudes of existing organic farmers and were suspicious that they could offer a suitable model for small family farmers in west Wales.

A2, A5, and B1 also had negative responses to some of the organic exemplars that they found, often during Open Days and Farm Walks, with A2 and A5 disagreeing with specific farming methods, and B1 critical of the lax attitude to standards that he

saw displayed (see Section 7.2.1). B7 was also discouraged somewhat by visits to other organic farms, particularly those run as research farms, which boasted facilities and conditions that were not available to small family farmers. A4, among others, noted that he had become more discriminating in the organic farms that he now attended as he realised how different each one could be and how they were often not relevant to his farming context. However, there remains a respect by many of the farmers in the sample for the skill and farming knowledge of the more experienced and established organic exemplars.

Table 7.5: The influence of Local Exemplars

Farmer	Observation
A1	'We talked about a bit (with local farmers) - but that was what convinced us that it would fit in and we could handle it.'
A2	'..I don't lie awake at night worrying whether it is going to work or not, I just go for it and in the end I rang up [<i>name of local experienced organic farmer</i>] to see who he has gone with (organic certification body). He is along the road here and been in organic for years and years, and he had been in the Soil Association and he couldn't get along with them so he is with the OF&G because they are more flexible and understanding so I will go with them and I went straight in and joined and signed up before my first full day advisory visit'
A3	'(the level of sophistication of the OMSCO meetings was a) mixture – a number in the same position as ourselves, going through or just finished their conversion period and it was more going to see someone's farm who had already established and to pick the brains and try to find out information. The idea was to be quite open about things and then you would learn from other people's mistakes and we found it quite helpful.'
A6	' ..When converting – taking advice? – (from) a number (of farmers) in the area who have converted for example [<i>name of local experienced organic farmer</i>], and we are with [<i>name of local producer group – Group A</i>],.....(We) spoke to a number of farmers in the area who have converted e.g. [<i>named individual and director of producer group</i>],....knew other people who had converted-and they spoke about the prices they were getting and it would suit the land'
A7	'Well I think that with typical farmers if there are such things, I always say go and see some other farms because I have to sort of remember that I tend to read about things, and they always say farmers go and look at things. So the first thing is to just go and look and talk and that's undoubtedly what's happened around here. We have three people converting now not miles away from us – and they have come and looked. And when they get braver they come and ask.'
B3	'..but the best advice is (to do) like what we did – to go around and to see how things are working in different places, and to speak to different people, and then you just have to pitch in and see how it goes.....The best advisers – people who are farming organically – hands on the job every day, and they have the background, and speak on the same level as you do yourself'
B5	'.....my parents had been talking about going organic for a number of years. My father had been going to SA meeting for quite a while..... So my father went off to these meetings and I think that he got the impression that a lot of the people in the organic movement were all a bit hippy –like. They had big ideas but he wasn't sure that they had a grasp of reality. But after a while he thought that maybe that those ideas actually made more sense after all. The people that my father had met were not the type to want to increase production and to get more out of the fields.'
B6	'We went to two farms- [<i>reference to the farms</i>], and seeing systems as they developed. We had a lot of information from them and that helped in giving the confidence in going into the system..... Having been to one or two farm walks with [<i>name of experienced organic farmer</i>] in [<i>name of area</i>] and seeing how well the grass grew – had a big shock about that'

C1	<p>‘...and we’ve got a near neighbour who had been farming organically for about five years before I had really thought about it, and he seemed to be doing ok.....-Watching more than talking really. He is not the sort of farmer that I want to model my farming system on. He is very laid back and not... his management could have been better.....One other influence was that there was quite a big or decent sized dairy farmer who had converted. He had gone through the process twelve months ahead of myself and I think that the fact that he had gone and offered me a lot of support really. I didn’t think that I was sticking my neck totally out. I suppose that gives you a kind of moral support I suppose.....I was talking a lot to him about how he was going about the process and he was only one year ahead and he was doing what I was still thinking about I suppose. There were a number of ideas in my head coming together I think rather than a single factor and that was part of the jigsaw helping me to make up my mind’</p>
C4	<p>‘The other farmer in <i>[name of area]</i> that was organic was milk then. I don’t know how many beef there was but I don’t think there was many.....Only one (other organic farmer) was four mile away, and he was rated as not being very good. But he has improved too like. And he now is far from regarded as a hippy farmer that drives around on his tractor with a straw in his mouth. He might do that but he was treated then after a while as no fool. But he came into the area and what background he had I don’t know.....Well nowhere (to get information and advice) because generally there was nobody (no farmers) at it other than - only that one (farmer). And generally he was regarded as an average farmer, and I am probably being kind.’</p> <p>‘In 95 you were treated a bit hippyish to go down that road of organic.’</p>
C5	<p>‘But that was when our neighbour had nagged us for years saying that we should go organic. We was talking to him one day and he showed me the returns he was getting and I thought that we are fools – because we are farming practically the same as him and we are not getting any benefit out of it. That was our main reason to go organic and besides from the rotation of the land our system hasn’t changed a great deal.’</p>
C7	<p>‘<i>[name of experienced organic farmer]</i> is a friend of ours and we were always back and fore- he helps us and we help him and so on. One day we were walking the fields and the cattle were out in the spring and you could see that he had as much grass as we had and (he) is very keen on organic and I had been trying to talk him (husband) into it and suddenly with (neighbour’s) fields looking good he (husband) thought that its not so bad.’</p>
C8	<p>‘...So we went into it quite happily, and lucky in the sense that we had <i>[name of experienced organic farmer]</i> at <i>[name of neighbouring farm]</i> had been organic for twenty five years and so we had seen how well they were doing and they seem to be getting by and doing alright and so we went down that road.....It took the element of fear away in making the initial decision- sign that form and lets go into that conversion because if <i>[name of organic farmer]</i> can do it we can do it.....(and) we’ve got a 1000 acre estate down the road there that borders us and the neighbour at <i>[name of other farm]</i> – we are surrounded by organic farmers....As neighbouring farmers we meet and talk about various aspects of the job. There is nothing better’</p>

The well-regarded exemplars offers a demonstration to the farmers of the kind of farming in which they could become involved on conversion to organic farming. Their existence is important in materialising at the level of substantive practice what the change to organic entails, and offers the farmers a concrete vision of their own futures as organic farmers. Those farmers who were not impressive to the converting farmer in farming or business terms failed to provide such a complete vision, but offer a partial indication of the possibilities based on certain acceptable aspects (longevity, quality and/or quantity of output etc).

The existence of different types of exemplar farmer contribute to the process of discrimination which saw farmers forming categories of organic farmer as described in Chapter 6 (Section 6.4). Those categories rest on the attitudes, behaviour and expectations of the farmers which were formed during their conventional farming days. As such they are aspects of the farmers' knowledge networks that are not changed by the conversion to organic farming. Such continuing networks allow the converting farmer to maintain their identities, and to draw on historical sources of support and their own stores of expertise. For some farmers they inhibit a movement toward a more separate identity as an organic farmer, allowing a compromise position and the possibility of re-conversion to conventional farming. Hence, the 'opportunistic' farmers of Table 6.6 may easily return to conventional farming, whilst the 'long-term commercial' converter will develop a different form of organic farming to that of the philosophically committed. These organic farmer categories are further examined in Chapter 8 in relation to the associations of farmers that are discussed in the case studies, and in relation to the potential for describing these associations as practice-led communities of organic farmers.

7.3.4 Farmer Association and Discussion Groups

7.3.4.1 Informal Association

Informal farmer learning about organic farming has been referred to in a number of instances above where farmers have stated that they learn most effectively through interaction with their peers. Such interaction at the individual level takes place through links based on social relationships, and through links established during participation at various forms of organised meetings. Section 5.4 in Chapter 5 describes some of the formal extension or commercial associations that are or have been available to organic farmers (including the defunct Cambrian Organics Group), and the interaction that farmers included in this study have had with these organisations have been discussed previously in the present chapter. Informal interaction also takes place around these formal structures and this is examined further in Section 7.3.4.2 below.

The most informal peer learning may occur wherever farmers congregate during their normal social lives. Unsurprisingly farmers refer to the local pub as a normal meeting place where social and farming matters may be discussed. This is not the case for all farmers, with B3, for example, preferring to spend free time with the local amateur dramatic society where he meets many of his farming neighbours and with whom he may also talk about farming, while B6 puts time and effort into a breeder's association, which he regards as a rewarding way to socialise with other farmers (see Table 7.6 below). Other farmers make a more definite distinction between work and social life, and see older attitudes to farming, where farmers are prepared to devote the majority of their time to farming, as dying out. A3, B2 and C8 emphasise what they see as 'normal' social time as a time to get away from the concerns of farming (in Section 6.2.5 in Chapter 6), and the attitudes encouraged by the Grazing Groups include planning working life to include days off and to take holidays.

As noted previously, Open Days and Farm Walks are popular events at which all farmers, conventional and organic may meet, and agricultural show, breeders associations, Grassland Groups, and for the younger farmers, the Young Farmers Clubs continue to offer opportunities for farmers to socialise. On conversion to organic farming, farmers in the study note that they have had more opportunity to meet and have more focussed discussions with other farmers through mainly farmer-led organised groups than when they were farming conventionally, with some commenting on a generally more positive attitude that they found within these groups compared to their erstwhile conventional colleagues (e.g. B1, B7, C5, C8 in Table 7.6). C5 notes an improved attendance at organic farmer meetings in comparison with conventional and also suggests that farmers (possibly more so in conventional farming) use farmer meetings as a way of getting off the farm to meet their peers and neighbours rather than specifically to learn new practices, echoing B1's note about the isolation felt by many farmers.

Farming activity allows farmers to combine work and social interaction, but farmers note that opportunities for this kind of socialising had been limited (e.g. B1, B7), and had been becoming more limited. The decline in the importance of traditional

livestock markets is a prime example of the shrinking of farmers' social universe⁸⁵. They had once been centrally important in farmers' lives, and useful as a means of

Table 7.6 Observations about opportunities for learning through social interaction

Farmer	Observation
B1	B1(husband): 'We found that since we converted that we meet lots of people – farming is a very isolated occupation - and we have met a lot of people through organic farming that we wouldn't have met otherwise.....'
B3	'We are members of a drama company with ninety percent from a farming background, and that is when we discuss (farming) mainly. We meet once a week – talk about farming with the farming crew.'
B4	'No I would say that is the local pub to be honest (for socialising). I don't go to the mart much.'
B5	'The best way is the informal way- to get someone's judgement on something. I think that the [name of Farming Connect Discussion group] is quite social.I don't see farmers in many other places- mainly through meetings like the [name of Farming Connect Discussion group]. There are a number of organic farmers round here – [names of other local organic farmers] and they go to the meetings. There are a number of organic farmers within eight miles.'
B6	'...and have been a member of the YFC -from leaving school- that was where you would be expanding your personality- public speaking and stock judging and that was where I started judging sheep- persuaded to do so – not that I wanted to do it. After doing it I felt that I had learnt a lot... helped you to grow up more quickly' 'We have been so over the years (breeders)- my father has bred and shown cows and been a judge overseas. It is another society (Shorthorn) that brings people together, especially with the Shorthorn, since we don't have a big nucleus, and it is important to have information about cows so we can breed bulls which are very scarce to breed from- so we get to know about cows through the society, which are good enough to breed bulls from different farms'
B7	'....in all fairness we have had more meetings through the organic system and people willing to help than we ever had conventionally'
C5	'The organic side of things itsis quite a few (farmers attending meetings). We all want to improve and in meetings that we go to are always well attended. Conventional farming – it used to vary really. Sometimes the farmer wants a day out.'
C7	'.....(we) do keep good neighbourly relations (but) no social life for some of these (young) farmers.....(the) pub is the place to meet people'
C8	'As neighbouring (organic) farmers we meet and talk about various aspects of the job.....There is nothing better. One thing that I noticed when we went into conversion- when we were farming conventionally and we went to the local market with calves for sale – because of the state of conventional farming there was bloody doom and gloom. Half of the farmers were going home looking for the piece of rope. Farmers were at a terribly low ebb, and when we signed up for conversion and we went to meetings with other organic farmers, there was a total change....The boys who were already organic were very happy with the situation because they had been having a good milk price for a while, and there was an optimism with everybody who were in conversion as if 'O yeah, bloody hell, what a difference' and I think it was a pleasure to go to a meeting with organic farmers than stand and talk to a bunch of conventional farmers- it was a totally different aspect and I think probably it has been tempered a little bit by this problem certainly in the milk part of over supply- we haven't achieved the increase in the price we thought we were going to make, but there tends to be an overall feeling that this is the way to farm'

comparing performance among farmers, for gaining information about the market, and about the farming world in general. They were, in essence, the prime social

⁸⁵ Note that the fieldwork was carried out soon after the restrictions following the Foot and Mouth Disease in 2001.

learning forum for the farmer. The marts continue to fulfil this function to some extent, as A4 agrees, but are seen to have lost some of their significance both from a commercial and social viewpoint.

‘The livestock market I suppose (circulates information locally), and it’s what you are getting for your stock is basically what will prompt people to change their ways or to think about what they are doing.’

(A4)

The situation for organic farmers is more limited than for the conventional farmer since there are many fewer organic livestock markets available, and presents a further example of the shift in knowledge networks with which the converting farmer has to contend. Those organic markets that had been held had (in A1’s experience) been of a poor standard, reducing the usefulness of the mart as a source of social learning for the organic farmer (see also discussion in Chapter 8, Section 8.31).

‘There is an organic market in [*name of local town*]- for store lambs and store cattle, but from what I hear about it – some of the stock there – they are not really people who are in big farming..... It gives organic farming a bad impression because the quality is not as high as it should be...’

(A1)

Conventional markets could still be relevant to organic dairy farmers as a place where unwanted stock, calves and the older cows, may be sold off, and to farmers working with store livestock. But direct sales to meat processors (for both cattle and sheep) and the diminishing contribution of agriculture to the local economy, evidenced by the physical relocation of marts out of their traditional town centre locations, have reduced the livestock market’s importance and have constrained its function as a place of social interaction and informal learning.

However, not all farmers find this process significant. While A1 seems ambivalent about the future of markets, B1 and C7, lament the relocation of their local markets and the decline in their importance. A number of the farmers note that markets continue to have some useful function as meeting places (A4, A5, C7, and C8) but others disagree.

‘(It was a) huge social loss when Carmarthen market has been moved from the town centre. We used to take the calves to Carmarthen; she [*wife*] would go

shopping and I would go to the market and we would meet up at a café for lunch. Now I go on my own I dump the calves and I come home.'

(B1)

'(We) like markets – for the social side...(but) marts are out of town and getting smaller. (you) get information - about prices, who is buying/ selling at markets, and (I) go even if I'm not selling'

(C7)

C4, referring to his own taciturn character, points out that farmers have a range of attitudes toward socialising and the value of such contact for learning. His use of markets was limited; he didn't use them as opportunities for socialising, and was in any case very discriminating about whom he thought worth engaging in discussion about farming matters.

'Some farmers want that social contact and some don't. Farmers are very independent persons. I find meetings quite hard. Its not good going to a mart and having that social when a lot of it is a load of rubbish, but if its good genuine contact then that's fine. It's such a dodgy one. So many farmers are so independent and so many farmers want that. Some farmers will spend ten minutes there, and some will spend all day cause that's their day. Such a wide window of people. The younger farmer will want more contact, whereas the older farmer is more independent, and been brought up different.'

(C4)

'Yes you weigh him up (farmers you might talk to in markets).....You have to be careful that you be too arrogant. But it depends what you want. I am the kind who doesn't spend much time in a mart but I would in Trawscoed (IGER research station). You wouldn't want to be all day long in (a market)'

(C4)

A3 agrees with C4 on the effect of age differences and on the lower chances for social contact between farmers, but did not see markets as places in which to make social contact. For him, direct delivery to the abattoir was preferable because it made selling livestock much easier to manage.

‘(The) problems I have with farming is that the average age is over fifty five so I am in the minority- not that many people close by in my age group and fewer dairy farmers.....I don’t go to the market to socialise- I drop the animals off and come from there’

(A3)

The shifts in the structure of market channels impacted differently on different farmers, and in the wake of these shifts the form and content of the farmers’ knowledge networks shifted. As noted in Chapter 5, the delivery of stock direct to abattoirs for deadweight sale has become more important particularly for organic farmers, and even A5, who had never used an abattoir, is aware of the value of the information that is available from the meat processors. He claims, however, that what is available from traditional markets is as useful, although focussed on different aspects of the farm’s product.

‘Never sold to abattoirs- always to mart in [*name of local town*], so never got that feedback (from abattoir)- but at the same time you see other peoples’ stock and you can see things in different ways- get a heck of a lot of feedback that way...Both ways has good points....When you send them dead you see more how they are picked out and the quality of them.....Another thing is that you haven’t got to pick out even sizes as you do when you take a pen to [*name of local town*] market – doesn’t matter with the abattoir’

(A5)

A1 claims that the balance has shifted decisively in favour of deadweight sale to processors, but notes that knowledge about grading processes and improving the quality of stock to meet grading criteria is still poor among farmers (see Section 5.7) and also that different processors may apply different grading criteria.

‘..... farmers bang on all the time, and the unions bang on all the time about markets. More and more people are using dead-weight. But they are always talking about markets- how to change them and getting subsidies and grants for markets. Yet a huge proportion of stock goes dead-weight now because it is much easier for farmers but nobody is dealing with that. They are all interested in the problems of markets but not in that (grading process).’

(A1)

The shift to deadweight sale and the decline of the marts has reduced the opportunities for farmers to learn in an informal and social way about the market for their produce. At the same time the market has become more prescriptive and quality issues have become more important.

The farmers must now find more formal ways of learning about what the market will accept. The feedback available to farmers from meat processors via direct sales through abattoirs provides some of this information. However, such formal channels are more limited ways of learning about the market since the farmer is dealing only with one buyer and is tied to particular processor's and their grading criteria, with consequent loss of market power for the farmer.

The next section looks at the associations that arise from farmer-led structured events and associations which allow the farmers to re-create informal connections that may have been lost as they moved away from conventional farming and eroded with the decline of social venues such as the markets. These events and associations differ from those considered in Section 7.2 above in being farmer-led and offer farmers opportunities to open and continue direct dialogue with their new-found peers. They help farmers to identify and get to know other organic farmers, and to establish a basis for discussion through informal interaction.

7.3.4.2 Organised Farmer-led Association

In addition to the various formal groups and organisations that farmers attend and belong to that are discussed in Section 7.2 above, there was a range of farmer-led associations and discussion groups to which they were affiliated. Few of these other groups focus on organic farmers, but the farmers' accounts of their involvement in these organisations add to the description of the knowledge networks in which they participate. They also further illustrate the ambivalent effects of social learning processes, where farmers discover differences in identity and expectations between themselves and their peers, leading as already noted to differentiation and categorisation of farmers.

Those farmer-led groups identified by the sample farmers are shown in Table 7.7. The groups included in Chapter 8, i.e. the producer group for Group A farmers and the discussion group for Group B farmers are not discussed in this section but are included in Table 7.7 for completeness.

Table 7.7 Farmer-led groups attended

Farmer	Groups attended/ Informal association
A1	Farmer's Union, producer group
A2	Producer group, Beef Farmers group
A3	Producer group, Grassland Society, Dairy processor mentor group
A4	Producer group, Beef Farmers Group, Cambrian Organic Group
A5	Producer group
A6	Producer group, Grassland Society, Farmers' Union
A7	Producer group
B1	Discussion group, Processor mentor group
B2	Discussion group, Grazing group, CLA
B3	Discussion group
B4	Discussion group, Grazing group
B5	Discussion group, Cambrian Organic Group off shoot
B6	Discussion group, Grazing Group, Cattle Breeder Association,
B7	Discussion group, Cambrian Organic Group, Processor mentor group
B8	Discussion group, Grassland Society, Processor mentor group
C1	Grazing group
C2	None
C3	Grazing group, Processor mentor group
C4	Processor mentor group
C5	Cambrian Organic Group off-shoot
C6	Grazing group, Grassland Society, Processor mentor group
C7	Cambrian Organic Group off-shoot
C8	Processor mentor group

Former Cambrian Organic Groups

Some farmers had been involved with the Cambrian Organics Group (COG, see Section 5.4), and farmers in Groups B and C in particular had continued to have some relationship with the local groups that survived the demise of COG. As discussed in Chapter 5, the Farming Connect discussion groups (of which Group B is one) were established with a view to continue many of the aims and practices of the Cambrian Organics initiative, and other former Cambrian Organics Groups continue as local independent discussion groups.

The groups worked in a similar way to many of the other discussion groups that the farmers mention, with specialists addressing meetings of farmers. C5 described attending these group meetings, and contrasts them favourably with similar events when he was a conventional farmer.

‘The organic side of things it’s.... is quite a few (farmers attending meetings). We all want to improve and in meetings that we go to are always well attended. Conventional farming – it used to vary really.There is meetings going on – (in) Aberystwyth, a discussion group in [name of local town] – (I) go there and sit with other farmers and specialists come in – on organics’

(C5)

B7 had also been a member of a former COG, continuing membership from the original COG after the change to the funding and support for organic farmer groups and the development of Farming Connect. She found it useful because of the contacts the group allowed her to make with other organic farmers, using the meetings to advertise livestock for sale as much as for the kind of things that she learnt in the meetings.

‘We used to be a member of Cambrian Organic Group before that finished and the [name of discussion group –Group B] group is there instead.....We use (both) groups- the [name of discussion group –Group B] and the [name of local ex-COG group] one- started off down in the college.....Yes (different aim) – the one at [name of venue] is mainly beef which is quite handy for me because when we have had calves and I have just stood up at the end of the meeting and said we’ve got fifteen ready – so it saves advertising and so on....I’ve done it with the [name of discussion group – Group B] group as well(although) the [name of local ex-COG group] lot are tight-mean lot... (the) [discussion group farmers-Group B] farmers are big.’

(B7)

She acknowledges that the former COG and the Farming Connect discussion group (see Chapter 8 Group B) have different aims and different membership, with different sorts of farmers, and suggest that she prefers the latter, although she also states that she finds opportunity to learn in both groups.

‘The [Farming Connect discussion group- Group B] one every time- because they have such a variety... (for example) we went down [name of local organic farm] three weeks ago. For me the thing (topic) on grass- that is good for me – and with the other group (former COG) there is nothing like that. If you go out with them and look at the grass and you ask (the answer is) ‘Oh I

don't know – it came from *[name of seed company]*- they haven't got the interest. They are more into other things e.g. homeopathy (the former-COG).....I wouldn't give up any of them (discussion groups). If you just learn one thing then its more than if you stayed at home'

(B7)

B5 and B8 also attend the former COG occasionally and their opinions tend to be similar to B7, with B8 in particular seeing the former-COG farmers as more like those farmers that had converted to organic farming early on and less interested in a commercial attitude than in the philosophy of organic farming.

'I am a member of the *[name of local former-COG]* with *[name of local organic farmer]*, but I hardly go to that. We get by with what I learn from these things (literature, discussion group-Group B). I am not a member of Grassland groups or Grazing groups.'

(B5)

'There is one at *[name of local town]* but the *[name of discussion group – Group B]* group is a lot better. The *[name of farmers]* boys are there and there are a couple of milk farms there. The *[name of local town]* one is smaller with a couple of beef farmers, and a couple of smallholders.It (the latter) is much more deeply into organic- it's organic first rather than seeing things on business terms.'

(B8)

The former COG groups are criticised on similar grounds by B3, A2 and A4, who see them as being less practically oriented, and suited to small producers and smallholders (A2). A4 goes as far as to suggest that in the days in which he was involved these groups were not sufficiently serious about the practical implications of commercial organic farming. This latter worry was what held B5's parents from committing to organic farming earlier, with the image of the pioneer organic farmers too alien for the small family farmers of west Wales to readily accept (see Section 7.2.2).

'*[name of local organic exemplar]* is doing it (discussion group)- Cambrian Organics There's one now down in *[name of local town]* and *[name of local organic exemplar]* is in that as well. And I was speaking to someone who had

been to that and was asking if it would be beneficial to be part of that group. He felt that it was a talking shop and it would mean travelling down to *[name of local town]*- so we kept out of that one'

(B3)

'(I was) not in Cambrian Organics (COG) –that's for small producers...'

(A2)

'For a couple of years when there were little groups and we went to meetings (of COG) when we all sat down and spoke about what we were going to do and pie in the sky.'

(A4)

Whilst commitment to these groups varies, the farmers in the sample give an impression of some detachment from these former-COG groups. They may be of some value as additional sources of knowledge and an opportunity to maintain contact with other organic farmers but farmers in the sample seem to see them as being focussed on different aspects of organic farming to those that they themselves see as important. In this case the differentiation is based on an understanding of what organic farming should entail for full-time commercial farmers, with the sampled farmers seeing the former-COG farmers as being 'too organic'. Ironically, a similar accusation is levelled at the Group B discussion group by members who are even more interested in the commercial development of their farms and who see the Grazing Groups as being more useful associations of farmers to attend.

Farmer Unions and Grazing groups

A number of farmers from the study sample are members of farmer-led groups that include both conventional and organic farmers. The farmers' unions are obvious examples but as has been noted in Section 7.2.4.4 above their interest in organic agriculture at the time of this study was small and the farmers' viewed the unions unenthusiastically. Much more dynamic are the local Grazing Groups but these are also some of the most exclusive groups and have a policy of allowing only a small and coherent membership (see Box 7.4).

Box 7.4: The Grazing Groups

Grazing Groups are farmer discussion groups that may be composed of both conventional and organic farmers. They have been set up with an approach to grassland management that is modelled on a system developed initially in New Zealand and is open to both conventional and organic farmers. The system and the groups that have been formed to follow this approach are distinct from the longer established Grassland Society groups.

A Grazing Group is self-organised and a subscription fee covers the employment of a consultant facilitator to run day events at member farms. Membership of the group is by invitation to those farmers that are known to sympathise with the general attitude of the group. Membership numbers are kept to a maximum of around twenty farmers to try to ensure that there will not be too great a range in the members' characteristics in terms of their farming experience, attitudes and ambitions. The emphasis in the activities of each Grazing group is decided upon by the members e.g. C1 and C3 attend a group which puts emphasis on the development of farming skills and is focussed on general farm improvement. This contrasts with another local grazing group (attended by C6), which while also interested in improving farm management, is more focussed on using the farm as a business vehicle to develop diversified business activity. Farmer C6's Grazing Group was formed from members that left another Grazing Group, deciding to start new group because differences in the ambitions of the original group members had become apparent.

The main activity of the group consists of visits to the members' farms, where farm walks are conducted. Meetings of the group are held every month or so throughout the year, are organised as in-depth discussions of the host farmer's current activity and future plans, and are guided by the group's facilitator¹. The facilitator's role is to keep the farmers focussed on the main topic for discussion during the day, and the aim is to encourage dialogue between the farmers, with less experienced or knowledgeable farmers able to share the experience of others. The facilitator may make suggestions on particular aspects of the topic but requires the farmers to contribute most of the substantive comments.

The Grazing Groups are of particular interest with reference to the extended discussion in Chapter 8 of farmer-led associations. Three farmers who are placed in Group C (C1, C3 and C6) are members of Grazing Groups in preference to joining an organic farmers' group. The groups provide comprehensive discussions of all aspects of the farmer's farming practices, business objectives and working life. They attempt to integrate these elements into an approach where these elements are mutually supportive. The organic farmers from Group C who are members of these Grazing

Groups indicate that the groups' approach to farming fit in well with their own and find the commitment and attitude to farming of the groups' members correspond closely to their own. These farmers have maintained and developed their knowledge-networks with conventional peers, and appear to resist the opportunity of developing similar contact with organic farmers.

The Grassland Societies

The Grassland Society⁸⁶ groups, as distinct from the Grazing Groups, are mentioned by farmers in the sample as being generalist in nature and tending to be traditional in their outlook on farming. They, therefore, often appear to be regarded as opportunities for socialising without any great expectation of them as fora for learning, although A3's experience disputes this conclusion.

'I found the Grassland Society useful because the majority of people in that are interested in progression anyway- the reason for being in the society - most with beef and sheep (as opposed to dairy) - but the ideas coming from them were quite helpful. We meet once a month for six months during the winter. They (meetings) are about grassland management- have speakers coming in ... a lot irrelevant for organic farmers- sprays etc, vets with drugs....'

(A3)

'(I am a) member of the Grassland Society [*name of local society*] and meet once a month in the winter. Usually talk about anything but farming- about diversification etc- starting other businesses...'

(A6)

'I go to a grassland group in [*name of local village*] occasionally- the Grassland Society. They are ok, and I am giving them a talk about starting the bottling thing (own milk bottling operation). Not that many people go- I was there a couple of months back and there were about fifteen there....(talk about) farming in general and we meet about once a month.'

(B8)

⁸⁶ There are 20 local Grassland Societies in Wales, which are affiliated to the British Grassland Society, based at the Agriculture Department of the University of Reading.

C3 and C6, who regarded themselves very much as commercial farmers, and were impatient of more traditional attitudes to farming, were more critical of the Grassland Societies.

'I am not a member (Grassland Society)- I don't know- I don't have much time for them They have the wrong attitude- so negative- moaning.'

(C3)

'..(member of) the local Grassland Society group. That is low key really – quite boring really. It is the oldest Grassland Society in the UK. I suppose things like *[name of Grazing Group]* have taken the shine off that because they used to be the only societies around. The *[names of Grazing Groups]* taken the keener people out of those societies perhaps'

(C6)

Processor Sponsored Farmer-led groups

As mentioned previously processors have also been active in involving farmers in discussion groups and these include both meat and milk processors. The meat processors operate as supermarket producer clubs which are led by the demands of the supermarket chain rather than being farmer-led, and these are discussed in more detail in Section 7.2.5 above. The milk processors on the other hand, whilst their own quality criteria inform and guide their interaction with the farmers, operate farmer-led 'mentor' groups. These are operated by both organic and conventional milk processors, with the latter including organic farmers as members who have had difficulty in obtaining organic milk contracts. These particular groups are necessarily limited in their usefulness for organic farmers in terms of farming advice and learning interaction, and as suggested further below may not fit well with the business model of conventional milk processors as the organic milk market became oversupplied.

The mentor groups are sponsored by the processors but members take a leading role, and these meetings are well regarded by the farmers. As B7, C8, in particular notes, these meetings act as social learning events where farmers learn from their peers and these meetings contribute to building up a community of organic dairy farmers.

‘They also have mentor groups (OMSCO milk processor). They have a couple of mentors – the idea is that if you have anything you want to discuss you can ring up a mentor and they have two to three meetings’

(C3)

‘...and we have meetings with OMSCO as well. We had a few last year – none this year. We meet in someone’s house and we discuss what – about production, weeds, anything’

(B7)

‘They (milk processor) organise a meeting on a farm amongst OMSCO members and run through certain topics. I have been to one of those.’

(C1)

‘The mentor meetings organised by OMSCO are still held now- maybe two to three times a year.....we have been at it five years (and) I can still learn something and maybe I can pass on to somebody who is coming up behind’

(C8)

A problem with groups organised through the processor, however, is that they are by definition limited in being open only to farmers who supply that particular processor. B1 sees this as divisive and leads to some amount of breakdown in contact between local organic farmers.

‘.....it divided into OMSCO and Calon Wen (both organic dairy buyers).....That was a huge rift- people like *[name of local farmer]* – we’ve lost that (connection). He joined another camp, and we have four meetings a year and we don’t meet him in those four meetings- he goes to different meetings- with OMSCO and we are with First Milk’

(B1)

The split in organic producers occurred as new buyers entered the organic milk processing market. This event had created a considerable rupture among organic dairy farmers at the time reminiscent of the division that followed the de-regulation of the conventional milk processing industry with the demise of the Milk Marketing Board. In the organic sector too many buyers had appeared encouraging too many farmers to convert at a time when the market had not expanded to keep pace with the supply. Farmers had subsequently been caught in a difficult position as buyers and processors realised that the market was not expanding at the rate that had been

expected, and that they had surplus supplies of organic milk. Many of the later converting farmers had, therefore, failed to get an organic milk supply contract, and felt neglected by the companies that they did supply, with diminishing mentoring and advisory support.

‘...and also there are three milk companies (now). We are with [*name of milk buyer*] and our feeling is that they don’t have any interest in marketing the milk that we produce: where you have [*names of two dedicated organic milk buying co-ops*] who are organic only. [*Name of their milk buyer*] hardly speak to us, and know that we won’t go anywhere else (to different buyer) because they know that no one else would want to take on any extra producers’

(B3)

‘They (milk buyer/processor) did start to do that (run discussion meetings), and two years ago there was a West Wales organic group, but it finished after about two meetings. It seemed that they just thought that they were flogging a dead horse. I went to a meeting in [*name of local town*], and there were about 35-40 there and it looked quite good. [*Name of company representative*] was there, but it hasn’t developed. I think that they would like to get rid of the organic producers and of the small farmer full stop.’

(B8)

The distribution of organic milk farmers across a range of different buyers and processors made life more difficult for the farmers not only in terms of exercising a greater degree of control on the organic milk market, but also in terms of developing an unified community of organic dairy farmers which might offer opportunities for farmers to learn from their peers. A further problem in that respect is that as the number of organic producers increased different types of farmers became involved in the industry. C8 noticed the change over a period of years as the sector expanded.

‘I don’t know if we called ourselves anything (dairy processor group)– the meetings were called and they were well attended, and there were some people who had been at it for a while and were apprehensive and they could see all these new faces coming in and all this milk’

(C8)

‘Those meetings were good (early organic dairy farmer meetings) and I think that the situation has moved on from then- this would be about five years ago- that to a certain extent there is an image of the ageing hippy, and there was an element of that because we would go in there and we would talk and perhaps they had twenty or thirty cows at most and they would say how many cows have you got and you would say eighty. ‘Eighty! You’ve got eighty cows’ – in shock horror. And by three years ago when we were finishing conversion and new farmers were joining us and ‘how many cows you’ve got’ – five hundred! The big boys had realised that maybe there was money to be made at 29.5ppl, and they came charging in and you don’t need many of them to alter the look of the milk supply.....Things have changed and probably it would be harder now to get farmers to work together. The bigger farmers who are more dynamic- knew the direction that they wanted to go in and the kind of milk price they wanted.’

(C8)

The farmers attending these groups saw a difference in the type of farmers that were now becoming organic and such change was making it more difficult for these groups to maintain a coherent identity. The larger the farmer the more likely it seemed that these farmers were interested in organic farming for commercial rather than for philosophical commitment to the ideals of sustainable farming.

Discriminating between the groups

As Table 7.6 suggests the numbers of specific farmer-led groups mentioned by farmers as being associations which may be useful learning fora, was not large, particularly those that are related to organic farming, and farmers vary in the number of organisations in which they participate and in their level of participation. But even the opportunities for interaction that are available can sometimes be seen as excessive by some farmers as the number of these farmer-led events, together with invitations to open days and farm visits organised by other more formal organisations (not farmer-led), are taken into account. B4 has noted his suspicion of the proliferation of events (see Section 7.2), and B6, who is a member of a cattle breeders association, of a grazing group and the local Farming Connect discussion group reckoned that he would need to put aside a day a week to cope with the events that were organised by farmer-led groups and those organised by other organisations. He moderated his

attendance at these events on the basis of his assessment of the direct relevance to his farm of the topic to be discussed at any particular meeting. Such increased discrimination, as has been noted earlier, was general among the farmers in the sample as they became more experienced organic farmers and farmers narrowed the number of farmer-led associations that they attended to what they considered to be the most important.

The associations attended may also, therefore, be seen to reflect the attitudes of particular types of farmer, with the more commercially minded farmers likely to attend groups such as the Grazing Groups, while the more philosophically committed (and smaller farmer) tend to attend groups such as the former-Cambrian Organic Groups. This is not a strict corollary since some farmers are prepared to attend whatever there is available, and decide on attendance on the basis of available time and convenience rather than a complete identity of purpose or of interest. But some of the farmers recognise that they do not fit in with particular groups because of the general aims and farming objectives of the membership of the groups concerned. In addition to some of the framers' comments quoted above, including for example A2 on COG as suitable mainly for small producers; C3 on Grassland Societies as 'moaners'; B2 and B8 on the 'over-organic' nature of some groups; Table 7.8 below illustrates more farmer opinions of the relative value of different groups, contributing to the self categorisation and differentiation in which the organic farmers in the sample indulge.

Table 7.8: Farmer observations on involvement in farmer-led groups

Farmer	Observations
B1	'No they (Grassland Societies) are full of people who are interested in machinery and numbers – we are not so interested'
B2	'I tend to get a lot out of the Grazing Groups and I go to all their meetings if I can, and a trips to Ireland. I get a lot more out of them (than from the Farming Connect discussion group).'
B4	'we are a member of a Grazing [name] group- a New Zealand type of grazing group, which isn't as relevant to us as the [name of Farming Connect Discussion group] group.'
B6	'Yes we think that we need to put by a day a week to attend things like that (all the meetings)... I have missed the last two [name of Grazing Group] meetings ...You can't get to every one but I try my best because I think that they are important to the business in the future'
B7	'I've been tempted, but I can't compete with their (Grazing Groups) measuring – when they are slapping two to three hundred weight (of fertilizer) on'
C1	'No I never started (with organic groups), but there is – I do this green group one (Grazing group) and I get quite a lot from that, and I haven't joined any others. I am probably a bit – I don't go to every meeting that's going. I used to go to nearly everything that was going. If I was younger I would probably go to a few more.'
C2	'No (don't go to discussion groups). I used to go to them but I've given them up entirely.....(because of) time as much as anything.....There's the Cambrian Organic group- I don't know if there's a local group. I probably should go to them but I don't.'
C3	'Things like the [name of grazing group] is quite important – important to see (and for) discussing costs etc'
C5	'(the) Grass Discussion group (Grazing Groups)- didn't agree with the New Zealand system of spring calving- not suitable for this farm'

7.4 Summary

This chapter has explored the experiences of a sample of farmers as they learnt about organic agriculture during the period in which they made the decision to convert, underwent the process of conversion and subsequently as they became more proficient organic farmers. The chapter considers both formal and informal learning processes and surveys the relationships that farmers sustain with a range of other actors.

The learning processes that the farmers experience may appear as an unproblematic substitution of one set of practices with another, particularly given the assertion by many farmers of the nearness of their conventional farming practices to those under the organic system. However, the change in farming practices entails shifts in the networks in which the farmer participates, changes in the quality of relationships, and a re-evaluation of actor expertise, credibility and identity.

The farmers' learning is guided by legally significant organic regulations as conveyed by the Organic Certification Bodies (OCB) and made available through their

rulebooks, and through their advisory and standard-policing services. The farmers, together with various organic advisers had identified their suitability for conversion, and in learning about the requirements of the organic system had validated and defined their own farming expertise. The role and expertise of the OCBs, however, are not strictly defined and farmers discover their ability to negotiate the practice boundaries within which they are constrained.

Varying interpretations and the application of derogations allow different conceptions of organic practice to be developed and contribute to a process of differentiation between organic farmers that adds to the differentiation of attitudes and behaviours that already applied to this sample of farmers and explored in Chapter 6. Other learning processes, such as self-directed learning from codified material, formal organic courses and the extension activities of government and commercial agencies contribute to the differentiation of farmers as they become more proficient and confident in their knowledge about organic farming. These processes indicate the degree of learning awareness and proactivity that the farmer exhibit, which in turn reflects on the motivation of the farmer in converting to organic farming. Those farmers who have been categorised as 'philosophically' committed perceive the conversion to organic farming as more than a simple application of new practices, and understand it to entail a wholesale shift in farming mentality. Being categorised as 'commercially' motivated does not preclude farmers from developing a similar understanding of what organic farming can entail, and this understanding is used by the more commercially motivated farmers to differentiate themselves from the 'philosophical' organic farmers (or the 'very' organic as they are referred to by some of the farmers). Less proactive learners, who appear to be content to work to the letter of the organic regulations, are categorised as 'opportunistic' converters and appear as the least committed converters to the organic system.

The differentiation of farmers into categories is reflected in the way that farmers associate, and the kind of formal or farmer-led associations in which they participate. The chapter discusses a number of fora in which farmers may associate, as well as the informal associations that are made possible alongside organised events and meetings. Farmers privilege learning through informal interaction with their peers, and this process is an essential element of any event or activity that is formally organised.

The balance between the formal and the informal has been shifted for many of the farmers through the diminishing importance of livestock markets, and farmers have found that they are required to adapt to new methods of interaction with market actors. This shift represents a change in the knowledge networks of the farmer, where farmers have to make new links with market actors (such as direct sales to abattoirs) entailing a new set of skills and practices (e.g. grading animals) in order to gain most benefit from the new market arrangements. The knowledge network in this discussion is a combination of linkages with other actors together with the substantive knowledges that the farmer must possess, and the knowledge network of the converting farmer is shown to have changed substantially from their previous networks.

New knowledge networks for the farmers entail a shift in the networks and reference points of the actors with whom the farmers interact. The converting farmer acts as an agent of change, requiring new practices and new knowledges from their network partners. The farmer is enrolled into the organic system through the conversion process and by acquiring new systems knowledge and mentality. The farmer in turn acts as an enrolling agent for other actors such as seed merchants, feed suppliers, veterinarians and agricultural consultants.

Enrolment in the organic knowledge network is not unchallenged or always straightforward. In contrast to the perceived apparent simplicity of a switch from near-organic ways of farming to the organic system, conversion is challenged by a conservative socio-techno-economic trajectory within which farmers have been embedded as conventional farmers. Both farmers and their network partners are constrained within this trajectory by sceptical peers, the treadmill of familiar practices, identity constructs, and risk boundaries constructed by agricultural knowledge systems that have remained unchallenged in the experience of these farmers. Enrolment is dependent on the successful performance of roles by all network actors, and failures in the knowledge network, e.g. the deficits in knowledge about organic agriculture on the part of actors such as consultants and suppliers, or the over-promotion of the system ahead of market expansion, put complete enrolment in doubt.

The chapter depicts these changes in terms of a process of dis-embedding from extant knowledge networks, and a process of re-embedding in new and reformed relationships. However, the process of dis-embedding is partial in as much as farmers remain within the industry, within their locality and participating in practices that are close to those in which they had been engaged before conversion. Potential constraining influences are ambivalent and capable of compromising a 'complete' conversion to organic farming. An example of this ambivalence is the belief in the nearness of conventional practices to organic, allowing conversion to be contemplated with confidence but obscuring the more subtle demands of the organic system and leading to the requests for derogations, the application of 'lax' standards and negotiations around the interpretation of organic rules.

Ambiguity can also be observed as the farmer becomes re-embedded in the creation of new knowledge networks or in reformed knowledge networks. As 'nearness to organic' had been a strong encouragement to convert so too (for example) had the existence of organic exemplars and organic proponents. However, exemplars and proponents do not come as neutral performers of an organic ideal. They convey particular versions of organic agriculture and represent particular attitudes to farming activity. Organic farming exemplars may also, therefore, be discouraging where they fail to establish their credibility as farmers in the eyes of potential converters embedded as the sample farmers were in local farming traditions and expectations.

The farmers in the sample respond to these differing visions of organic agriculture in differentiated ways that reinforce their extant heterogeneous identities and set up the kind of farmer categories discussed throughout the chapter. Additionally, rather than completely replacing their conventional knowledge networks farmers adjust and reform networks as a dynamic compromise between the substantive demands of the organic farming system, the organic food system and the demands of the farm as a commercial enterprise. Re-embedding, therefore, is a process of discovering new knowledge networks that are compatible with, and grow from familiar network elements.

Chapter 8

Studies of Farmer Association

8.1 Introduction

This chapter presents studies of the interaction of farmers within groups whose members are associated with each other by their conversion to organic farming. The chapter applies some of the perspectives on community and practice discussed in Chapter 3 and investigates how these groups operate as practice-led communities. The chapter fits in to the overall structure of the study by presenting associations of farmers as a third area of description and analysis following discussion of the institutional context in Chapter 5 and the experience of individual farmers in their conversion to organic farming in Chapters 6 and 7.

The institutional context of organic agriculture in Wales contributes to and shapes the kind of activities that are organised by the groups examined in this study, and this influence is made apparent in this chapter. Chapters 6 and 7 introduced farmer interaction with peers and other actors, and discussed the shifts in the farmers' knowledge networks in converting to organic farming. The discussion in those chapters traces the search for new practices and routines, new sources of knowledge and new networks from the individual's perspective. Learning from and with other farmers is a major element in these activities, and the empirical work in the two previous chapters follows individual farmers through to their participation in organised groups and learning events. In this chapter the emphasis is on learning through interaction between farmers within a group context.

The chapter is divided into two parts. The first part is a discussion of the organisation and identity of the three groups identified for the study, namely Groups A, B and C. The second part examines the events organised by Groups A and B and uses the discussions that follow from these activities to highlight changes to routines and practice that the farmers may make. In the case of Group C, discussion in the second part of the chapter is about the lack of such group-based interaction between local

organic farmers, and the implications of that on the concept of an organic farming community.

The groups presented in the case studies have already been defined in Chapter 4, but will be described in more detail in this chapter. The focus is on the structure of the groups, the degree and quality of the farmers' participation, and the social learning that is promoted by group activities. The empirical work in this chapter is generated from field notes taken during observation of group events, and from interviews conducted with farmers. Whilst not being a complete ethnographic record, the data from field notes are a representation of discussions and activities within their physical and social context. As in previous chapters evidence is also derived from direct and indirect observations by farmers and the more extensive contributions are included in attached appendices. Given the semi-structured nature of the interviews conducted with farmers and the open-ended nature of the Group events (and associated field notes), observations that have been used in previous chapters may also be relevant in this chapter and there may be some unavoidable repetition of data. Hence, appendices attached to other chapters are also referred to in this chapter.

8.2 Group Structures

8.2.1 Group A

The farmers in this case study are affiliated to a large and widely dispersed organic meat producer-marketing group. The group operates as a collaborative marketing enterprise that sells the produce of individual farmers through mail order, direct farm shop sales, and through contracted deliveries of meat via designated abattoirs to supermarket chains and other clients. It has maintained a lean organisational structure employing people in just two and a half full-time posts to co-ordinate and to promote the venture, and is run by a board of directors drawn from the farmer membership.

The group had been originally set up as an attempt to mediate between individual organic farmers and supermarket chains, and to protect farmers to some degree from being forced into what was perceived as disadvantageous relationships with those

chains. It was not seen by its founders as simply a marketing channel but also as an attempt at generating some degree of common identity among organic farmers.

'It was actually more altruistic than that (protecting a market). It was actually to say to the organic sector, 'the livestock sector within this region needs protecting', because, it is common knowledge, but the effect of the supermarkets has not always been beneficial to the farmers and it's been achieved by divide and rule, effectively. And if we can act as a buffer, with farmers coming together and acting as one, then the feeling was that we have a better opportunity to - in a kind of to way slightly redress the balance. That's why we did it'

(Producer group founder member)

The producer group was established at the end of the 1980s with a few farmers in one locality working together to produce and market organic meat. It grew over the next five or six years until twenty to thirty farmers were involved. The group then underwent a rapid increase in membership over the following few years to reach a total of around two hundred to two hundred and fifty farms by 2002. The latest and most rapid increase in interest coincided with the impact of the Foot and Mouth epidemic, and although this was in itself a serious event for all farmers it can be viewed as an additional positive factor in the groups' development as more livestock farmers' were persuaded by the epidemic to convert to organic farming.

However, the growth in interest in organic production and in an alternative market channel brought problems, and the increase in interest threatened to make the group unwieldy. The rapid increase in group membership included farmers from a much wider area than was originally expected applying to join and wishing to market their produce through the producer group. A7 represents a farmer who is a group member and she noticed that the increase in numbers had an immediate impact on the producer group's relationship with its membership.

'It was after Foot and Mouth (that) the numbers of livestock we were marketing rocketed. Everyone had obviously had a really difficult year and it was getting quite difficult to hold the group together, because suddenly there were two hundred and fifty people and not fifty..... But the downside of it (the expansion) was we landed up with two hundred and fifty people, quite a

lot of whom didn't know each other. The original group all knew each other so they stuck together, so they could see how valuable it was, and really they created the local meat market. And suddenly there were all these new people, who just thought 'great, this body will sell our lamb', but they got quite whinging if things didn't work'

(A7)

A7 notes that the coherence of the original group had been lost in the expansion, and the growth had made the group more difficult to manage and difficult for new farmers to understand how it operated. Hence, during the year 2000, the group was reorganised and divided into eight geographical areas with local co-ordinators and organising groups.

Group A is one of these locally co-ordinated groups, and is made up of thirty five to forty farmers. However, whilst it is a more local grouping the geographical spread of the member farms still covers a relatively large area, where there may be distances of up to forty miles between the most distantly separated farms. The farms are all family owned and worked, with holdings ranging from forty to three hundred hectares, being mainly hill farms with some land located on the valley floor. The main organic enterprises are sheep farming, with flock size ranging from 150 to over 1200 ewes, along with suckler cows and store cattle. The farms were converted to organic production at around the same time, most having completed whole farm conversion in a single process by the end of 2002. A summary of farm and farmer features is given in Appendix 6.1.

Local groups such as Group A are supported by volunteer local co-ordinators and the development of the local group in terms of identity and member commitment is seen as one of the co-ordinator's main role. It is carried out by organising local meetings and promoting the value of collaborative working. A7 is one of these local co-ordinators and she felt that developing a more coherent group identity could add value to the activities of the group.

'To me – my version of it, the main thing was to help people feel that we are all members of the producer group, and that the producer group only works if it has producers that are loyal to the group. I mean one or two of them run off, which they have done, when someone offers them some more money (for

livestock), and then they come back -that doesn't work. The whole group runs on people feeling that it's a valuable group, and we're members of a group and that, therefore, we respect whatever we are trying to do'

(A7)

Sub-dividing the group into regions was a response to the co-ordination problems following expansion. The original group structure had been suitable for smaller numbers and had been designed to reflect a desire for organisational simplicity. This organisational simplicity has been mirrored by the loose criteria for membership making it easy to join and, therefore, facilitating the rapid expansion in membership.

The original membership had decided that the group should not be constituted formally as a co-operative organisation, but should maintain a looser collaborative approach. Such an approach reduced costs, and allowed the group to operate with greater flexibility and 'fleetness of foot' in responding to changes in the marketplace.

'We had a choice about five years ago (~1997/8) as to what route to take for the producer group. We could either, and in fact at the time my personal preference was to go for a co-op, but in fact the core of the members at that time said 'no, we want a simpler structure'- much like we've ended up with. And, if you like, I suppose we are a third way, to coin a phrase. We have the motivation and the aims, which could be a co-op, but we are just structured in a different way, and we did it primarily because we had to make up a lot of ground very quickly. We realised in the mid '90s that the supermarkets were going to come in, and we attempted to offer farmers an alternative to going directly to the supermarket and, therefore, we had to be fleet of foot and moving as quickly as we could and I think a committee type co-op set up would have held us back.'

(Producer group founder member)

The group was, therefore, structured without the constraints of a formal farmer's co-operative and the demands on the membership are, therefore, equally less stringent. Membership of the group has a fluid character as it may allow farmers to be associated with the group but who may also, in practice, participate very little or not at all in group activities or even necessarily to use the group's marketing services.

Farmers pay a subscription to the central producer group, and additionally pay a 2% commission on animals that are sold through the producer group. The farmers agree to forecast the number of livestock that they will be likely to sell through the producer group and are expected to keep to a close approximation of that estimate. The subscription payments indicate the nominal membership numbers, but since the producer group may not inhibit the farmers' ability to sell additional stock through some other marketing channel⁸⁷ the commitment and participation of the membership to the group may fluctuate.

A looser structure has allowed members to opt in and out of the main marketing function of the group, making it easy for the membership numbers to multiply (regardless of the actual commitment of the members) but with a consequent danger of reduced commitment. In the context of this thesis such a potentially looser sense of commitment is important in considering the value of the producer group to the farmer as a source of information and as a method of sharing knowledge with their peers. Group solidarity is necessary for marketing reasons, but regular interaction and a build up of social familiarity is also seen as important for learning.

8.2.2 Group B

Group B has been established as part of the Farming Connect network of farmer discussion groups. The establishment and structure of the Farming Connect network is discussed in Chapter 5, and a local group facilitator provides the formal link between the local group and the network's central organisation. The role of Farming Connect is important in providing a structure through which a local group may organise events and provide speakers for meetings and a discussion forum for farmers.

Membership of the group is composed of farmers whose main enterprises are focussed on milk production. The farmers had been brought together by the efforts of a local Farming Connect facilitator who identifies potential group members through

⁸⁷ Farmers give an estimate at the beginning of the year of how many animals they think that they can provide the group. Farmers make an agreement to sell some 90% of the estimated figure through the main producer group. So farmers are free to sell as much or as little as they want through the group and can choose to sell the remainder through any other outlet.

personal knowledge or local reputation. The work of a local group facilitator is described in Chapter 5 (Section 5.4.6) with typical activities in Box 5.3.

The facilitator for Group B was born and brought up on a farm in the same locality as the group members, and whilst not still resident on a farm continues to maintain a small herd of cattle as a hobby. Her family are local farmers, which helps to keep her close to industry practice and, being a native of the area, she is also bilingual in Welsh and English. The ability to speak Welsh strongly contributes to the embeddedness of this facilitator (see Jones, 1993), and can be an important factor in persuading some of the more conservative local farmers to engage in discussion groups with individuals that may not already be part of their social networks (see also for example B5 in discussions about identity and categorisation of farmers in Chapter 7).

The nominal geographical spread of the group members is a circle of about 25 miles in diameter, although there are local concentrations of member farms that are contiguous. All the farms are family owned and worked, with holdings ranging from forty to six hundred hectares on low-lying land in west Wales receiving high rainfall totals, making them ideal as grass-based livestock farms. Farmers are engaged in mixed farming based on dairy, with herd size ranging from 30 to 300 cows. Whilst a couple of the farms have been certified as organic for five years, most have been fully converted for periods of around one or two years, and all were converted to organic agriculture in a single process. A summary of farm and farmer features is given in Appendix 6.1.

There is no subscription or fee associated with membership and the group meets for discussions and presentations arranged by the facilitator, usually at a local pub, for farm walks on members' farms, or for open days on Farming Connect demonstration farms and development centres. Farming Connect facilitators run both conventional and organic groups and Group B's facilitator had initially formed this group around farmers who had been involved with the erstwhile Cambrian Organic Group. Its membership had since changed with only one or two of the original members still involved with the group.

The commitment of the membership to the group depends intimately on what the group may offer as a learning forum. In contrast to Group A it does not have the attraction of being a marketing channel, and so must depend on its ability to maintain farmers' interests by its knowledge-networking activities and the match that this has to the farmers' own interests and learning needs (although some farmers e.g. B7 take advantage of the group to market livestock). Whilst the main focus of group discussion is the practical techniques of organic farming, subject matters of interest to the discussion group include production, market and regulatory issues.

8.2.3 Group C

As described in Chapter 4 Group C is not a formally constituted group and its members do not meet together as a group. The reason for defining the group and including them in the study was to explore the possibility that a spontaneous informal community of organic farmers might have been formed by virtue of the fact that these farmers lived in a relatively small area of the country, and may benefit from some effect of their 'clustering'. From the perspective of organised groups, however, they could be regarded as a 'non-group' in comparison with the other case study groups.

The farmers in the group were identified through personal references and through a 'snowballing' process of introductions from farmer to farmer, and this process reinforced the possibility that an informal group might be found. Some of the farmers are associated with each other because their farms are located near to each other (most are within a radius of ten miles) and often contiguous, and many are associated with each other through personal relationships. They are mainly engaged in dairy farming with some horticulture, beef and arable enterprises. Farm holdings range from 70Ha to 180Ha with dairy herds from around 60 to 300 cows. The area is low lying, receives high rainfall and, being close to the sea, and has a generally mild climate. A summary of farm characteristics is given in Appendix 6.1.

Farmers from Group C have attended both organic and conventional Open Days and Farm Walks as are described in Chapter 7 (Section 7.2.3). Some farmers have also attended mentor discussion groups with dairy processors and some have attended occasional meetings of an organic discussion group (see Chapter 7). Attendance at

these meetings and events, however, are open to all farmers and do not require membership of a particular group in contrast to the events and activities organised by Group A and B. As such they represent the kind of peer learning experience that those organic farmers who do not belong to a dedicated organic farmers discussion or producer group may have. Chapter 7 has discussed this kind of social learning, where farmers learn from their peers without the kind of group identity boundaries that may be formed by regular and frequent attendance at discussion and producer group meetings. Because Group C is a 'non-group' in structural terms it is not possible to present a Group C learning event in Part 2 of this chapter as is done for the other groups, however, the group may be discussed further in terms of its character as a community of organic farmers and the farmers' behaviour in relation to other groups and events.

8.3 Learning Events, Communities and Practice

Events involving farmers from Groups A and B are described below and represent concrete examples of social learning activity among the farmers in the case study. The organisation of the meetings and the subject areas covered are described, and the relationship of the farmers to each other and to the group is illustrated by the discussions that take place. The subject areas covered during the events include some problems that are familiar to the farmers but that are approached from different starting points and with reference to practices that represent some part of the new knowledge networks that the farmers adopt on conversion to organic farming.

The groups are examined with reference to the concepts of communities and practice, as discussed in Chapter 3, with references to the main features of the Community of Practice (COP) framework, to examine the extent to which 'communities of organic farmer' may be said to develop, and which may develop communal knowledge about organic farming. They are not examined in terms of establishing the credentials of these groups as COPs per se. This is particularly relevant in the case of Group C, where the lack of a formal structure and a very loose association of farmers make the concept of a COP inappropriate. Instead of a group learning event, the study of Group C in this section is based on a review of the attitudes and motivations of the

farmers that have been included in this group and the way that these may contribute to the non-appearance of a more active or coherent community of practice for organic farmers in the area.

8.3.1 Group A

Three to four meetings are aimed at per annum and these are arranged mainly as farm walks on members' farms, with an opportunity for discussion during and after the walk. Occasionally meetings are held indoors although these are thought by the local co-ordinator to be less attractive to the majority of farmers. The main, or central, producer group has also organised meetings on subjects that might be expected to attract larger numbers of farmers but those have been held less frequently.

Group meetings in general have variable degrees of attraction for farmers, with Group A's co-ordinator commenting on a split between those members who were interested in attending frequent and regular meetings and those who might see the value of attending a maximum of about two meetings in a year. There are a number of reasons quoted by the co-ordinator for the variable popularity of meetings. Some are organisational in nature including the reluctance of farmers to attend meetings that are not very local to them (even the 'local' grouping of the producer group covers a large area), reluctance to attend indoor meetings compared to farm walks (which can pose problems in winter), and difficulty in engendering an attitude of ownership amongst members for group activities. Other reasons quoted by the co-ordinator include variability in farmers' readiness to engage in this form of learning either, she suggests, because of a perceived lack of need or what she sees as an independent attitude and an aversion to co-operative behaviour on behalf of the farmers.

When they do occur, farm walks act both as group meetings to discuss production related topics, and as a method for disseminating information between the central marketing team of the producer group and the farmer. Both roles are closely related, since market information may indicate new production skills that the farmer may need to learn in addition to relaying information that affect production decisions and strategies. Changes in organic and other relevant regulations are also discussed, and

these meetings provide the opportunity for farmers to relate knowledge from various domains of activity.

The nominal discussion topic for a particular meeting is chosen on the basis of perceived relevance to the group, with an invitation to members to put forward their own topics of interest. Topics chosen to date have related primarily to the demands of the market and illustrate reasons for producer discipline in the face of the purchasing power of retailers and other market actors. Whilst discussion group meetings may also include practical guidance and advice on organic production techniques, this knowledge is linked closely with marketing implications. An example of such a meeting is described below. It is presented as a description of the type of activity with which the farmers in this group may be engaged and how these events perform as occasions for learning and knowledge sharing. The account relates the main topics that were addressed by the participants, illustrating the information and knowledge resources, beliefs and assumptions that farmers commonly employ. The day exemplifies the participation of farmers in knowledge building, where knowledges from different domains are combined to create a contingent understanding of organic agriculture.

The Farm Walk

The event was held on a member farm at the end of October 2002, starting at midday, and split into three parts. It began with a walk of the farm, followed by a demonstration and practice session on grading animals for carcass conformation, and finally a general discussion of business issues and the relationship between the individual farmer and the producer group.

The main focus for the farm walk is silage production on a hill farm, and the farm walk consisted of walking up to fields that were close to the main farm buildings and which are representative of areas of the farm that are most significant in terms of farming decision-making. The majority of the farm's land is part-improved upland where sheep and some cattle are grazed and which, under the organic system, requires less intensive management. The fields that were inspected on the walk provided the majority of the fodder that was produced on the farm, and so discussion that was

related to this specific farm concentrated on grass and clover growth and the control of weeds on those fields.

The system of fodder production and silage making on these fields was discussed, with the farmers' son providing most of the description. His father, who runs a separate business that is also sited on the farm, contributed information but remained in the background in recognition of the fact that his son is the day to day manager of the farm. The other farmers volunteered comments, contributing ideas and potential solutions to problems that were observed on the fields and relating their own experiences. The producer group's field officer was also present and able to make contributions.

The main topics of interest concerned dealing with Dock plants, which are often quoted as a signature problem for organic systems, and the physical treatment of fields. Dock is regarded as a weed by most farmers and conventionally is killed by a herbicide. Otherwise Dock is generally regarded as difficult to control being a very tough and persistent plant that most livestock do not graze. Farmers note the appearance of a field in terms of cleanliness, where a field free of weeds is deemed as 'clean'. However, the opinion was voiced that Dock is a problem only if the farmer perceives it as such. With the proper treatment, i.e. cutting up into small enough bits and mixing well with other fodder, it was argued that the dock does not constitute a weed, and can be usefully fed to animals.

Alternative physical treatments of the turf and sward rather than ploughing were discussed and evaluations of the use of the harrow and tines were compared. This discussion confirmed the understanding among the group that using these techniques avoids turning up deep-lying and dormant weed seeds, and also preserves the presence of essential microbes in the productive layer of the soil. Slitting had also been used, where disks are run across the ground to slit the surface allowing air and rain to penetrate and so addressing most of the objectives of ploughing without incurring its drawbacks.

Other field management techniques centred on establishing the optimum rotation patterns, and re-seeding old swards to improve quality. The greatest worry expressed

by the farmers, as in all organic systems, is to produce enough fodder on a farm to maintain sufficient feed levels for the livestock. Hence, stocking rates and grazing patterns become important considerations. This discussion fed back into that on the control of weeds, which along with scrub were mechanically cut back and could be kept low by intermittent but intense grazing pressure. Stocking rates is further coupled with a consideration of herd health, but this was not a topic that was pursued given that the focus on this day was silage production on a hill farm. However, comment was made on the how reduction in stocking rates improved the farmer's control of infections or parasites.

The pattern of discussion was often circular, moving from one aspect of field management to another and frequently returning to previously discussed topics. This pattern reinforced an understanding of how each individual activity had to be integrated with others to achieve the best result. Management practices taken in such interconnected ways could also be shown to address a number of different goals, from fodder production to the prevention of disease and infestation.

Addressing the Market, Grading Livestock and Choice of Lambing Times

The second part of the day was a grading exercise on lambs and on beef cattle and a discussion of the current state of the livestock and dead-weight market. The group returned to the farmyard and to a barn where sheep pens had been set up. The group's field officer led the exercise and indicated what were seen as the most important points to consider when deciding whether an animal was at its optimum condition for sale (see Box 8.1). The exercise continued with practice sessions on lambs and an opportunity for comparing estimated grades between farmers.

During the discussion that followed the grading exercise it was noted that lambs had been held back from sale for a variety of reasons over the previous year following disruption to markets because of the Foot and Mouth epidemic, and because of the effect of the twenty day rule⁸⁸ and other livestock restrictions. These constraints had

⁸⁸ The 20 day rule obliged farmers to hold livestock on the farm for at least 20 days and not to sell them on in less time. This restriction was intended to aid in tracing livestock movements, which had been found to be very difficult in the early days of dealing with the Foot and Mouth outbreak, and hence to exercise greater control at such times.

contributed to a current oversupply of lambs, which partly accounted for the difficulty experienced by farmers in moving lambs on. The producer group itself had found difficulty in selling member's produce during this period, and this blockage had encouraged some farmers to sell more through other outlets. Farmers were nervous of admitting this practice (doing so privately but not to the whole group) even though the group had no contractual power to hold farmers loyal.

The field officer acknowledged the dilemma and the producer group's awareness of the farmer's problems. However, he urged members to try to maintain some discipline in terms of maintaining market price. He also noted that lambs which had been held back often achieved better prices. Those lambs could attain their optimal condition for being kept on the farm a couple of weeks longer, and going to market with more growth, rather than being sold at the time and age that the farmers had been used to selling regardless of condition.

The grading exercise was thought to be worthwhile, and the farmers, most of whom had not attempted to grade their own animals before, generally felt that they benefited from the session. The exercise encouraged discussion of other factors surrounding the preparation and sale of animals, and these included the choice of cross breeds; the timing of lambing; general current market conditions in both conventional and organic meat; the availability of fodder (and organic feed) and the subsequent effect on costs; and the twenty day rule. The state and conduct of organic marketing was also a topic of intense interest with a general dissatisfaction in the way that organic food was being promoted.

Discussion Session and Knowledge Exchange

Not all farmers were able to stay for the final part of the day because of other commitments. Discussion continued in the same barn that had been used for the lamb grading exercise as refreshments were supplied by the hosts. The final part of the day, which was by then late enough to be dark, resumed more formally, with those farmers who were left being seated on straw bales in, by then, a cold barn.

The discussion ranged over a number of areas, some of which were dealt with some confidence, whereas opinions expressed on other topics seemed less authoritative.

Information about some topics was sketchy and some matters of fact could not be verified directly, with much taken on trust, or at least accepted for the purposes of the

Box 8.1: *Grading Livestock*

Knowing how to grade an animal aids the farmer to make decisions on the readiness of stock for sale to the abattoir. It is a skill that has become more important as direct sales to wholesale buyers gradually eclipse markets and auctions as the primary method of selling livestock. Farmers selling through livestock auctions (the traditional farmers' marts) would normally choose lambs that matched each other as closely as possible in size and shape. The lambs are displayed for the potential buyers in pens that hold a small number, and sold as a lot. Since the most important criteria is size, there may be some variation in their readiness for consumption in terms of maturity, fat levels and ratio of fat to muscle (the conformation of the animal). These aspects, which relate more closely to the final value of the lamb as a food item, were not of primary importance to the farmer selling through the traditional auction system. The farmers' skill related to the desired appearance and while this has a bearing on the conformation and quality of the meat (MLC, 2002), those objectives were more remote than presenting a matched lot.

With the growing importance of direct sales to abattoirs, a shift which has removed a step in the knowledge chain (Fearne, 1998) between producer and consumer, the farmer is exposed more directly to the drivers of the market. Maximising income depends on understanding how to choose the best lambs at the optimum time (both for commercial and food quality considerations), which includes understanding how the buyer assess the quality of the live lamb, and how the grading exercise compares to the butchers assessment of the carcass after slaughter. The grading exercise is of course relevant to both conventional and organic farmers and is one that conventional farmers are now exposed to more frequently. The organic farmers of Group A are obliged to improve their standards in line with the conventional competition, and in recognition that just being organic is no longer accepted by the market as an indicator of quality.

immediate discussion. The information discussed was exchanged between members of the group who also provided interpretative remarks, the lead being taken by both the group co-ordinator and the field officer. Contributions from the farmer members consisted mainly of questions about the state of the market, a rehearsal of general grievances, and worries about future developments. There was no formal reference to a designated expert and few references made to verifiable 'expert' sources.

The performance of the group in selling lamb to meat processors was the main area of concern, and other topics were discussed with direct reference to this core issue. The particular conditions affecting the supply side that had applied during the year had been discussed earlier during the grading exercise (see above) and were referred to again. It led on to a summary of market news given by the field officer, and a report of the central producer group's activities. He also reported that one of the big

processors⁸⁹ through which the group sells, had not recently been as active in the market as in the past. Hence, the producer group had been unable to take as many lambs from members as had been planned. The situation had improved over the preceding three weeks, but problems on the demand side had been exacerbated by the usual surge in supply that occurred during August and September each year. According to the field officer the group's marketing strategy had difficulty coping with these surges and farmers were being asked to help alleviate the problem by adjusting their planned lambing times to spread the lamb supply more evenly over the year, and to change the times when animals were sent to the abattoir.

Market conditions, therefore, translated directly into a discussion of the husbandry and farming practice of the farmer, and discussion centred on the practicalities of how the surge in lamb supply could be reduced without changing current stock, and/or by switching to different breeds with different lambing characteristics. Alternatively, the supply surge could be dealt with by modifying the way farmers decided that lambs were ready for the abattoir. The grading exercise had been held in order to help the farmer judge more accurately at which stage of growth the lambs had reached, and hence to decide on the optimum time for sale. Deciding on readiness for sale following a grading exercise could mean that the lambs are held on the farms for longer, which would help to alleviate the 'traditional' supply surge. In addition, holding lambs back on the farm as they matured and attained the required conformation could often improve meat quality and hence carcass value. The drawback and disincentive for this change in practice is that lambs kept longer on farms need more fodder, which is a more severe constraint on organic compared to conventional farmers who can more readily import feed.

The general market situation for both lamb and beef cattle sales, however, was found to be encouraging for the group. They had managed to achieve 92.5% of their total sales target despite difficult market conditions. To support this objective those lambs that were still too small were shipped to the local traditional auction market rather than directly to the processor, and here again the field officer commented on those

⁸⁹ The processor has established itself as a major processor of livestock and meat products in Wales and plays an important role in the links between producer and retailer, acting as a gatekeeper for quality and quantity for large retail chains.

members who sold stock directly rather than through the group. The comment suggested some irritation although it was again qualified with a recognition of the independence of each member.

Market conditions for cattle were reported as being better than for lamb. Sales were on target, and the field officer reported that it was believed that a major supermarket multiple are moving more of their beef buying to the main processor to whom the producer group's cattle are sold. Feedback from the processor had indicated that cattle produced by members of the producer group achieved good conformation grades, following on from accurate live grading and a generally good standard of production⁹⁰. On the back of this encouraging situation the group was looking to improve prices on the beef trade.

In contrast to increasing confidence in dead-weight sales comments on organic auctions, run on traditional mart lines, were less approving. The consensus of views from those farmers who had attended such an auction was that they have been run very poorly to date: accepting poor stock and, therefore, achieving poor stock prices and sales. However, members felt that markets are useful as ways of gauging relative performance between farmers, helping to construct personal networks by better knowledge of other farmers' capabilities and standards. Two auctions per annum are thought to be ideal— to be held in the spring and the autumn. In contrast to the farmers view the producer group's field officer was ambivalent on the value of markets. In his opinion they constitute an alternative way for farmers to sell their stock and, hence introduce an extra element of unpredictability and weakness to the process of establishing good prices from meat processors. Others views were quoted and attributed to 'people in the organic movement' and which were also negative with regard to organic markets. Accepting poor stock reflected poorly on the sector, and a poor reputation was a disincentive for farmers to attend and to engage in co-operative behaviour. The market would, therefore, be set into a negative loop of poor quality and poor attendance. Such weaknesses become well known in the farming community and are a disincentive for farmers to convert to organic agriculture, while poor standards would also eventually be communicated to processors and consumers.

⁹⁰ This is in contrast to the reported experience of A5 who complains of the lack of feedback from the producer group. However, A5 was not present in the event described.

It was argued that farmers should be aware that the general public may attend auctions and may see the quality of the animals sold, and that this has some effect on the general perception of the organic sector even if members of the public are not expert judges of the standard of livestock.

Livestock Information and Feedback

Feedback from the consumer was a theme that had underlain the day focussed as it was on the grading exercise. The dangers of creating a poor general perception of the standards of organic farming through substandard livestock auctions was appreciated by the meeting and discussion returned to a more technical system for providing feedback from the market in the form of stock tagging.

The tagging of lambs (metal tags attached to the ear) allows them to be traced through the meat processing system, and allows the farmer to compare the methods employed to rear the animal with the final grading that the meat achieves. The tags can formalise a feedback system and farmers had expected that this may also provide a further opportunity to improve disease control and give further feedback on general aspects of stock health: information that could be included in the 'animal passport' system.

The tagging system, however, appeared not to be functioning in the way that the farmers had expected, and led many of the farmers to express their dissatisfaction. The use being made of sheep tagging was variously described by farmers as a sham and a lost opportunity. The processor had claimed (as reported by the field officer) that tags cannot remain attached to particular lamb carcasses and, hence, much of the potential for information feedback is lost. The processors had reasoned that it is too difficult to read the tags at the speed at which the carcass is processed, hence, making them redundant for information gathering purposes. This raised further questions from the farmers about bio-security and transparency in the system. Farmers argued that a factory in which it is difficult to read the tags is either undermanned, or that the throughput of carcasses is set at too high a level. In either case the workforce is put under higher pressure resulting in insufficient time for the correct bio-security measures to be observed. Farmers felt vulnerable to the possible consequences of such deficiencies and noted that their vulnerability had not been reduced by their conversion to organic farming. The field officer could only, at this point, assure

members that questions of traceability and information feedback continued to be important issues in their discussions with processors.

Certification and Regulation

A topic closely allied to traceability is Farm Assurance (FA) and the adoption of FA schemes has become a major topic for farmers. Group A farmers accepted reluctantly that FA will soon be a required certification and that every multiple retailer will eventually want farmers to be certified, with attendant costs and regulatory implications. Some of the farmers' frustration focussed around the question of why organic certification was not sufficient, and why it was necessary for an organic certified farm to also become Farm Assured. The suspicion was voiced that this was a case of empire building by inspection bodies, and an over-provisioning of regulation by government and retailers. It was felt that the FA label was becoming regarded more seriously in the industry and that relevant organisations were prepared to protect the label, with the implication that organic certification was, therefore, placed in a weaker position. It was claimed that the multiple retailers are already prepared to shift produce certified as organic to the red tractor (FA) logo if produce displaying only the organic label is not selling fast enough, questioning the competitive status of the organic label.

Multiple Retailers and Perceived Market Power Asymmetry

The discussion linked the tagging system, the actions of the processor and the actions of the regulators with a broad consideration of the role of supermarkets, their ability to control market prices, and their demands on other actors in the supply chain. The position of farmers was felt to be relatively weak in this context and, in an attempt to achieve better prices through co-operative action, the group was aiming to act in concert with other organic producer groups to encourage higher prices. It was depicted in the meeting as exemplifying the ability of producers to work together to exert some upward price pressure on processors and retailers. However, the reluctance to pay higher prices was attributed to the freedom of the retailers to look abroad for meat supply, thereby weakening the co-operative power of British producers. A particular named major supermarket chain was accused of continuing to

look for overseas suppliers despite a public rhetoric of support for British suppliers and the local producer. The farmers clearly had little confidence in such assurances and farmers reasoned further that since the supermarket's interest in overseas supply had begun before the advent of the Foot and Mouth epidemic, and that the 2001 outbreak had extended this strategy, the supermarkets had attained an even stronger grip on the supply chain.

The response of many of Group A's farmers to this discussion was that farmers should try to use public pressure to 'shame and expose' the retailer chains for their lack of support. The argument was couched in terms suggesting the farmers felt that there is a moral aspect which should characterise the dealings of supermarket chains with farmers. The field officer felt obliged to point out that the producer group as a body could not be party to political action, and implied that the group was limited in what it could do outside normal commercial constraints. Whilst extolling the virtues of co-operation and warning against direct individual sales by farmers, the producer group could only acknowledge its relative lack of power in the conventional food supply chain.

Advantages of Collaboration

In support of the benefits of collaboration, however, two of the members reported on meetings and event that they had attended. One was a farmer who had attended a meeting run by the Soil Association to discuss organic producer groups and held in the north of England. His impression of the meeting was that Group A's producer group organisation was well regarded, providing valuable conditions and opportunities for members through its collaborative set up and the public profile that it had managed to achieve. Individual farmers he had spoken to had felt that alone, in comparison, they were even more vulnerable to market forces than producer group members. He had argued that Group A members should be more consciously aware of the group's value and seek to protect and enhance the benefits of the association, taking responsibility onto themselves as individual members to make the concept succeed.

In similar vein another member, Group A's local co-ordinator A7, had attended an IFOAM conference in Canada held during the previous few months. She described how the IFOAM conference covers a wide range of issues relevant to organic agriculture and trade, and was attended by people who worked under many different conditions and had a wide range of experiences to relate. She felt that the experience of the producer group compared favourably with most examples from around the world and was worth continued backing and promotion.

The group ended the meeting with a discussion of further activity, and the date of the next gathering. Choosing a suitable date immediately became a problem, as farmers looked forward to lambing times and the demands of the spring. Topics for future meetings were suggested including examining a benchmarking exercise of production costs: extending an exercise that is currently under way with the central producer group involving forty to fifty farms in liaison with Organic Centre Wales. Other topics suggested by members were more discussion on the management of Dock, livestock record keeping, clean grazing and worm management, livestock diets, the creation of, formulation and bulk buying of feed, and ways of matching organic buyers and sellers (including for breeding and other purposes). In respect of this last item the producer group is producing a website for both external, or public, access and one that is purely for internal communications with members.

8.3.2 Group B

A discussion meeting or other activity is held by Group B regularly, aiming for some six occasions per annum, and including trips to other areas of the country and to other countries (Ireland and Germany have been recent destinations) for which some funding is forthcoming from the Farming Connect network. The group had also received support from Farming Connect for its activities following the participation of five of its members in a production-costs benchmarking exercise (discussed below). A description of a group meeting follows.

The meeting was held in February 2003 and ten farmers, which constitute nearly all the group's membership, were able to attend and devote to it a large part of their

working day. Speakers had been invited from the local Agricultural College, from the Organic Centre Wales, and from IGER, with costs paid for by Farming Connect. The meeting was held at a pub, and lasted from a mid morning start until late afternoon. Farmers in the group introduced themselves, explained what their main enterprises were, and the degree of their organic farming experience. Most are dairy farmers, but many were also engaged in some beef, sheep, and cereal production.

The account of the event does not attempt to strictly report the ordering of topics or their relative importance, or to make a direct comparison with Group A's discussion event. However, the subject areas and the comments made during discussion exhibit similar themes to those of Group A, and could be grouped under similar headings viz.

- Managing sales
- Tracking production and information feedback
- Asymmetries of market power
- Certification and regulation
- Advantages of collaboration
- Future activities

Farmers in both groups discussed each topic with references to the wider implications of knowledge from each domain, and attempted to integrate these knowledges into their decision-making processes. Most discussion was held in a conversational and informal style following the relatively formal presentations made by the invited speakers.

Many of the issues covered in the discussion are not exclusive to organic farmers, however, the particular problems and the possible solutions explored in the discussions derive largely from the inhibitions imposed by organic farming on the use of pesticides, bought-in feed supplements, antibiotic dosing and other animal treatments. The extent to which the organic farmer has to be more self-reliant and to be aware of local conditions is expressed through some of these discussions.

Managing Sales, Costs of Production and Benchmarking

The day began with a presentation on the cost of production in the dairy industry that included a discussion of a costs benchmark exercise that was being carried out by

Organic Centre Wales (OCW) and in which some of the local farmers were participating. The manager of Farming Connects' Dairy Development programme made the initial presentation, and the benchmarking results from a pilot of Group B farmers were used as exemplars. This presentation raised sufficient interest to generate discussion that continued through the day and was incorporated in other presentations.

At the end of the event there was some discussion about the way that the group was run and the kind of activities that were being undertaken. Most thought that focussing on issues arising from the benchmarking exercise had been worthwhile and the exercise could be usefully repeated even without the use of any new data. The structure of the benchmarking exercise had focused minds on costs and profits, but discussion on these issues necessarily also focussed attention on underpinning production practices and areas of organic farming knowledge.

Such a focus on production issues is not the universal choice of all groups that are involved in the benchmarking project, according to the report from the Dairy Development Programme. Other groups had preferred to look at more business-related issues in preference to farming topics, and concentrated on finance and labour issues, and on business relationships between farming partners. Choosing which areas to cover was up to each particular group of farmers and dependent on their own interests and priorities.

The exercise discussed at this event served as part of an extensive survey of the costs of production on dairy, beef, and sheep farms. Whilst the methodology was not discussed in detail a survey of costs of production was expected to be easier to conduct with dairy farmers than with meat farmers since income is calculated according to a flow rather than a batch production basis. It was argued that dairy farmers are familiar with thinking in terms of costs related to income calculated in terms of pence per litre of milk, whereas beef and sheep farmers were thought to be less used to thinking about how much it might cost to produce the final food product i.e. a kilo of meat. Meat producers are more comfortable dealing with costs in terms

of the value of the whole animal rather than in terms of its products⁹¹. Whether or not this reflected a closer connection between dairy farmers and the final product and its consumer than there may be for many livestock farmers, whose interest in their production ends with the animal and not with the final food product, was an issue discussed but left unresolved.

Five farmers from this group had submitted figures for the benchmarking exercise, and these figures were averaged and compared to figures from two research farms. The benchmarking results were used as hooks on which to hang discussion related to the farming technique under scrutiny e.g. the use of Vets. Whilst discussion initially focussed on single factors, it was expanded to include other issues that may help to explain differences in farmers' performances. The discussion frequently illustrated how farmers inter-related various farming activities, with costs, market prices and other influences such as consumer tastes and policy trends referred to in explicit terms.

Market Asymmetries, Milk Price and Contracts

The most basic benchmarking factor that was easily compared was the milk price achieved by farmers. The groups' average price was 20.07ppl compared to 24.70ppl achieved at an IGER research farm (Ty Gwyn). The discrepancy in prices was explained with reference to a combination of factors such as the identity of the milk buyer, the kind of milk supply contract in force and the date at which the contract had commenced. A spot market also means that milk prices can extend over a large range. In spite of such effects, however, each farmer could compare their own figures to a notional benchmark average and to the reference figures produced by Ty Gwyn, from which an indication of their own performance might be made.

⁹¹ During inaugural meetings of local groups for Group A farmers had been asked whether they knew how much it cost them to produce a kilo of lamb or a kilo of beef... 'and in all eight meetings in which there were a couple of hundred farmers, they don't know.....and you ask the question and a little titter would go round and they would say, 'Oh yeah, we should know but we don't' – it is extraordinary. For a number of farmers the accounts are something that you give to an accountant, you give a pile of papers – you give (them) to the accountant and you get something back and so long as there's money in the bank that's all they worry about.' (Interview: Producer Group Founder Member)

The structure of the milk market and the state of the organic market troubled many of the farmers. A couple of Group B's dairy farmers had not been able to obtain an organic milk contract because the market had become oversupplied during the period that they were converting their farms. They, therefore, had to sell their milk to a conventional processor and thereby fail to achieve any kind of price premium to offset higher production costs generated by organic farming. Other farmers had obtained organic milk contracts for only some of their production, with the remainder being taken on the same terms as conventional milk.

Some of the farmers who held organic contracts with the general milk processors were also afraid that because of the costs of collecting organic milk from widely dispersed farms their milk processor may rationalise their collection operations and perhaps reduce the numbers of farmers that supply organic milk to them. This was in particular reference to one large processor, who seemed to be reducing contacts with local farmers by withdrawing from organising farm visits, discussion and production meetings for organic farmers in this area (see similar comments from B8 in Chapter 7).

The farmers happiest with their contracts seemed to be those farmers who sold to dedicated organic milk co-operatives. However, even here the relatively onerous demands of some contracts, including higher standards in production quality and particular milk composition profiles, could pose problems for the farmer, to the extent that one farmer could say (perhaps tongue in cheek) that he was better off without an organic milk supply contract.

Tracking Production Costs and Information Feedback

Veterinary costs can be regular and substantial costs on the farmer and the discussion here was on how to minimise and perhaps avoid these costs altogether. Homeopathic approaches were mentioned, but were of marginal interest. More important to farmers were the husbandry techniques that could be employed to reduce incidence of illness and general animal health. Most farmers agreed that the way to reduce vet bills was by improved husbandry, taking better care of the cattle and keeping them in good condition throughout the year. A farmer with seven years of organic farming

experience said that she had never used homeopathic remedies, and that the basis of her success in keeping animals healthy was the choice of breed to meet the conditions of the farming unit. She noted that breed characteristics make some cattle better suited to particular combinations of local farming conditions and the demands of the enterprise than do others. Reducing stresses such as lowering milk demand or avoiding breeding objectives to achieve ever-higher yields, in providing sufficient space and achieving lower stocking rates were cited as good basic methods for improving good animal health. These techniques were generally understood and agreed upon by the farmers at the meeting and reflect the advice given through published sources and organic farm advisers (Lampkin, Measures and Padel, 2002; Culleton et. al, 2002)

Strategies to minimise costs included reorganising calving time. Organising large numbers of cows to calve in relatively short time periods⁹² involve periods of concentrated work that have implications for the farmers' general working patterns. A number of different calving patterns and management schemes have been developed and were mentioned. They have not been devised in order to reduce veterinary costs but rather for production management and market-related issues, however, their adoption also allows for a more focussed demand on veterinarian service. Implementing a changed working regime on any particular farm requires the capacity to reorganise work and to take into account the effect of local conditions and other production variables. The farmer (whether organic or conventional) must be capable of working through these implications to fully benefit from the change.

Calving outdoors was also discussed as a cost saving option. A particular farmer believed that by adopting this approach he had strengthened the cattle and had thereby reduced health problems. One farmer developed this theme by declaring that he had returned to the traditional system of turning the cattle out for most of the daylight hours in winter rather than keeping them in sheds. He was able to say that incidence of disease such as mastitis had been reduced since he had adopted this practice. Another farmer said that he had adopted a trial and error approach to dealing with livestock illnesses once antibiotics had been given up. In his opinion not using

⁹² Decisions on calving time regimes involve a range of different variables and are predicated on a number of different objectives.

antibiotics had removed their masking effects and allowed him to notice illnesses and potential illnesses earlier and to try to trace their cause within the specific context of his farm. The farmer had proceeded by changing some of the animals' living conditions to get an idea of what may be the root causes of illness, and to try to address those directly rather than use the blanket coverage approach of the batch dosing with antibiotics. This farmer was enthusiastic about this altered approach to animal husbandry saying that he would now never go back to using antibiotics except in extreme cases.

The discussion dwelt on a single case, following one farmer's admission of his general inexperience and his description of the difficulties that he had encountered during calving time. This farmer is much older than the rest of the farmers in the group, having recently retired to an estate farm and become engaged in practical farming relatively late in life. In response farmers asked specific diagnostic questions on his farming practices. Some suggestions for changes made, but it was also emphasised that he was not necessarily doing anything badly. Bad luck was accepted as a possible partial explanation for experiencing a series of calving problems.

The openness and lack of embarrassment on the farmer's part was noted in private discussions later, and mutual trust between farmers was a recurring theme in individual interviews with farmers that become members of discussion groups, somewhat undermining anecdotal notions of the Welsh farmer as universally taciturn and uncooperative. However, this stereotype was given some support later in the groups' discussions (see below).

More than one farmer commented on the necessity for experience, not just of farming, but of knowing individual animals, their behaviour, and response to conditioning and treatment. This was a level of husbandry that farmers were aware they had to practice more rigorously since conversion, and included some practices that were easier to neglect under a conventional system. For example, it was noted that dairy animals often behaved in different ways to beef suckler cows, and hence that the farmer needed to be aware, through learning and experience, of these variables. One affective factor relevant to the behaviour of the cow in labour was its size. A fat cow usually had more problems in calving, appearing listless and not contributing much

effort to the birth process, hence, these cows often had stillbirths. A complication is that it was, at times, not easy to realise that the cow was in difficulty. It could be unclear with some fat cows that she is pregnant, and identifying pregnancy is more difficult the fatter the cow!

The concern with fat cows led to consideration of the best feeding regime on organic farms. One farmer noted what he regarded as a contradiction in organic agriculture: that supplying enough fodder from the resources of an organic farm is often difficult, but it can also be difficult to control the amount of feed grazing animals consume. He referred to the situation where his cows became bloated through feeding on rich grass. The improved quality of the grass was itself claimed to be a consequence of organic management techniques, so the contradictions continued. The suggestions made to him by other farmers ranged from increasing his stocking rate, so that the amount that a cow could eat would be restricted by competition from other cows, to restricting the cows to grazing strips of the fields rather than be left to roam freely.

Cattle Feed

Concentrate feeding was a major area of interest since it added to costs. The approach recommended was to feed depending on the condition (of the cow) rather than on the yield. This led to a wide ranging discussion with a number of different combinations of input, yield, effect on fertility and time of the year for calving and milking. For one farmer (B7: see Chapter 7) the location of the farm in the centre of a village was a relevant factor in this decision process. Cows became noisy if concentrate feed is withdrawn and the forage is not sufficient to satisfy them. The timing of withdrawal of the feed was also debated, with options ranging from immediate ending after calving, to staged withdraw, to continued feeding⁹³. 'Condition scoring' is another technique that aids in management, and is a technique which is used to assess the livestock. It was not one that was known by all the participant and all were interested in the news that the Welsh Black Organic Club is running a scoring seminar soon.

⁹³ Many feeding regimes have been devised e.g. New Zealand low-input/ low output; Irish system

Discussion of feed regimes led to a discussion of the ending of the derogation on using non-organic feed. The derogation concerns an EU directive that is to come into force in 2005. Doubt was expressed that this will in fact happen since there is a shortage of organic feed available and that the ending of the derogation will put an additional strain on the organic farmer. It was noted that many consumers of organic food might find it difficult to understand why there is not a complete ban on the use of non-organic feed already. However, it was emphasised that all farmers should make their protests known to their certification bodies, who would then feed these views back to the relevant EU policymakers.

Animal Accommodation and Health

The housing of the cows induced some discussion. Cubicles with various floor surfaces are used by many. The choice of the type of floor surface had often not been made for any particular reason but it was noted that some had advantages over others. Loose base material and bedding including sawdust, waste paper pellets and so on were discussed, with reference to trials being conducted on these materials at a local agricultural college. The interest in these materials and in the housing systems was allied to a discussion on their acceptance within the organic system, a consideration that had not occurred to the farmers before the meeting. Whether it may be used in an organic system is a moot point and has to be checked with the Organic Certification Bodies (OCBs). Another point of interest is whether the waste will then compost or could be used directly on the land.

Cleaning out animal accommodation regularly was emphasised as important by farmers in order to remove what are termed as 'bugs'. Cleaning was connected to the existence of 'bugs' whose presence was normally seen as being detrimental to the health of the livestock. There was no suggestion that there was a detailed understanding of what was meant by 'bugs' or how various remedies could be effective. In the absence of conventional techniques, such as the batch application of antibiotics (each generation of calves routinely dosed regardless of actual current need) farmers were interested in a number of alternative treatments. Homeopathy had been tried by many, but folk treatments and beliefs were also remembered and applied. For example, hanging holly in the cowshed was a technique that was meant

to protect calves from 'bugs' and which had gained credence through use and custom. Possible reasons for the apparent effect of this practice included the supposition that holly might contain a beneficial constituent which the calf would ingest on eating; that the holly may give off some beneficial vapour that counteracted any possible infection; and that it may provide an attraction for 'bugs' which is more than the attraction of the calf. Another folk treatment that was aimed at defeating 'bugs' was using the infusion that resulted from boiling the roots of the Dock leaf to clean afterbirth from the cow.

No one was able to claim certain knowledge of why calves housed in a cowshed where holly was hung seemed to be healthier, or how the Dock infusions protected cow or calf, but most were agreed that this did not invalidate the techniques. They were, incidentally, techniques that had been in customary use on a number of farms before conversion to organic farming (although some farmers had never heard of them) and had no direct connection with modern organic farming methods. Other beliefs mentioned included expecting a pregnant cow to calve when the tide comes in (many of the area's farms are located not far from the sea), and that feeding a pregnant cow at around ten in the evening tended to ensure that she would not calve until the following afternoon.

Contractors and Co-operation

Farmers in the group were becoming more used to employing labour and to use the services provided by various types of consultants and contractors. The costs of these services were factored into the benchmarking exercise and a straw poll among the group showed that many of the farmers used contractors, reducing the capital tied up in idle machinery, and removing the need to maintain skills, which may not be in demand for much of the year, on the farm. The benefits were contrasted with the drawbacks of the contracting system including the congestion of demand for the contractor due to the seasonality of much work. Not being able to secure a suitable contractor at the optimum time for a particular farm might lead to a reduction in the quality of the harvest as differences of just twenty four hours can make a big difference in crop quality.

Some farmers, therefore, had retained what they regarded as essential items such as a combine harvester (on the basis of its cheapness, and the problems of getting a contractor on time). Others had some informal arrangements with other farmers, but few could say that they could depend on their neighbours to share equipment and work during particularly busy times. This was noted as the most disappointing feature of farming- where neighbours do not collaborate, share information, machinery or skills. Reasons quoted include insurance problems of sharing labour and machinery and simple 'lack of time'. Interest was expressed at this point in Machinery Rings, but few of the farmers present could claim to know how they worked in detail, or to have participated in one, but similar drawbacks to the ones found with the use of contractors were feared.

Much of the group's early discussion had been centred on the problems of one farmer, and then on the responses of individual farmers to the benchmarking exercise. All the farmers present had made some comment and contribution, and as the session continued farmers had reflected on the usefulness of the discussion itself, and on the benefits of the discussion group in promoting co-operation. This theme continued with reflection on the reluctance of farmers commonly to talk to each other and to work together. The slow development of Machinery Rings in Wales was used as an exemplar of reluctance to co-operate on a practical level, with one farmer declaring that 'the farmer's worst enemy is his neighbour' suggesting deeper issues than simply lack of co-operation. This extreme view had been contradicted to some extent by the behaviour of farmers during this meeting, and by the membership of many Group B farmers in more than one farmer's group.

Industry Context

In a further discussion on the status of the dairy industry the meeting was given a report of developments in Europe following attendance by the representative from the Dairy Development Centre at a recent European Dairy Farmers Conference in Hanover, Germany. The conference had brought out comparisons between EU member countries and between Europe and the rest of the world, pointing out that the EU is now the biggest dairy product producer in the world followed by India.

While there are a number of complaints about uneven playing fields for national dairy industries within the EU, an industry standard is emerging in Europe. However, it was the discrepancies that were of most interest to farmers. Those quoted include that

- UK milk prices are the lowest in the EU but competition does not seem to play a part in correcting the market
- UK has the second lowest annual yield in EU
- UK has the lowest profit levels
- the yield lifetime of a cow in the UK is the fourth lowest in the EU
- there are questions about quality issues, with the Italians, who are leaders in yield terms being accused of not being so concerned about milk quality
- there is an apparent lack of flexibility in the dairy sector of some other EU countries, that tend to be run on a smaller scale, but appear to have greater government commitment than seen in the UK in terms for example with the use of subsidies

The farmers did not respond directly to this presentation but comments made at various points indicated that with an increase in knowledge about such international comparisons, and the opportunities to travel to see dairy industries in different countries, group members were confident of their ability to manage a professional industry. Frustration expressed by some of the farmers was focussed on the regulatory and market structures that farmers saw as constraining their freedom to act. The discussion on these structures and the international context, however, made little reference to an organic market or to specifically organic industry features.

Further contextual industry information was presented in a review of relevant research being carried out at Bristol University and at IGER. Bristol University is conducting a trial to deal with mastitis and were said to be reporting some initial good results. The group showed a lot of interest in this work and asked to be kept informed. The work at IGER was a survey of grass and clover species and varieties⁹⁴, and the views of farmers on species and varieties currently available were sought. Current procedures for evaluating plant varieties, and the characteristics that are required when making re-seeding choices, is also of interest. Hence, a survey of what is

⁹⁴ DEFRA funded project conducted by IGER, and NIAB (National Institute of Agricultural Biology.)

required on the respondents' farm is proposed with an invitation to the group members to participate.

Future Meetings

The topics that the group wanted to cover in future meetings were discussed and the next one was fixed for a month's time, but the group also intended to visit the Farming Connect sponsored Dairy Development Centre during its Open Week which was to be held in the meantime. The management of slurry, silage waste, and farmyard manure became the choice for the next meeting, and as a foretaste farmers discussed the reasons for wishing to choose this topic. Forthcoming changes in EU rules were referred to as a major incentive for knowing more about the management of slurry on farms. Currently much slurry is simply spread on the surface of fields but farmers are advised that direct injection into the ground was better since it improved nutrient delivery, while the technique was also a good way of aerating the soil. The EU is expected to force a change to injection methods in order to minimise run off pollution. Whilst the advantages of the technique were acknowledged, farmers were conscious of the costs of new machinery, and wished to know more about the benefits of using slurry in this way and about any alternative use.

8.3.3 Group C

Farmers that are included in Group C are well embedded in the locality, are in contact with each other and aware of each other's organic credentials. However, this had not created a local community of organic farmers that acts with any kind of coherence as a practice-led community. Group C has not produced its own discussion group and, furthermore, most of its 'members' do not attend discussion groups on a regular basis.

The discussion in Chapters 6 and 7 reflects on the kind of relationships organic farmers in the sample in general have with their peers, both conventional and organic. The farmers from Group C are different in that most of them are not regular members in any discussion group. Hence, some of their observations are re-visited here in light of the local conditions for these farmers. The three farmers C1, C3 and C6, are the exceptions and each of these has joined farmer groups in the form of local Grazing

Groups. The reasons that these farmers give for joining these Grazing Groups reflect their judgment of local organic peers and on their own attitudes and expectations of farming in general and on organic in particular.

The clearest comment that reflects on the absence of a practice-led community of organic farmers is that from C1 who was unaware of the intentions of some of his neighbours to convert to organic farming.

'I didn't actually discuss it a lot with these other farmers in the area who were converting at the same time. In fact I wasn't even aware that they were converting until we went to the same meetings or something like that. So something spontaneous was happening rather than big get together and deciding we'll all do that way. We must have all been going through the same thought processes without actually making contact between us.'

(C1)

He knew of other farmers who had already converted to organic farming, and had taken note of their performance and practices. He had used the experience of one farmer who had converted before him to help with his own conversion, but was wary of the practices of another organic farmer who had been organic for a much longer time. He recognised that he had more in common with the attitudes and aspirations of one of these two farmers than he had with the other.

'One other influence was that there was quite a big or decent sized dairy farmer who had converted. He had gone through the process twelve months ahead of myself and I think that the fact that he had gone and offered me a lot of support really.....I was talking a lot to him about how he was going about the process and he was only one year ahead and he was doing what I was still thinking about I suppose.'

(C1)

'..and we've got a near neighbour who had been farming organically for about five years before I had really thought about it, and he seemed to be doing ok- Watching more than talking really. He is not the sort of farmer that I want to model my farming system on. He is very laid back and not - his management could have been better'

(C1)

He had since his conversion period also compared his farming system with other local organic farmers and had come to the conclusion that there was not much common ground between them apart from in terms of the organic certification. He was also confident of his own practices and relative success, and used the comparison to strengthen the division between himself and the other farmers.

‘None of my neighbours who have converted recently- I don’t feel as I could learn anything off them I’m afraid to say. And they probably think that they could not learn anything off me. But I know that I’ve always got grass to put in front of the cows most of the year round and I look over the hedge and they haven’t got grass – its just bare.’

(C1)

C4 had also expressed his opinion that the only organic farmer that he was aware of when he had converted (he had converted much earlier than most of the other farmer in Group C) had not been a very good farmer, and hence was unlikely to be of much value as an advisor (see Table 7.5, Section 7.3.3).

C1, however, was not without his problems in running an organic system and had a particular difficulty in controlling bloat in his dairy herd. He ascribed the cause of bloat to the fact that his grazing system depended on using clover (as is common in organic systems) and that the richness of the fodder produced bloat in the livestock. He had in this instance compared his system and methods with the neighbour with whose management practices he had disagreed (see above) and had discussed the bloat problem with him.

‘(name)- my neighbour hasn’t had problems with bloat either, but his grazing system doesn’t create the problem either I suppose. It’s the way that you graze the cows does actually create a slight problem- well big problem - but it actually grows more grass than clover so we’ve got to live with it. It’s funny since we have had the problem he’s lost a few cows to bloat as well.’

(C1)

Even with this interaction he had not found a solution to the problem, and whilst he was hoping that a solution might be forthcoming from interested university researchers, he felt that ultimately he had to deal with it on his own.

'Yeah but I am learning more (about solving the bloat problem) by doing it and actually trying things out than in any other way. I don't think that there is any farmer that I can get on the farm and say that I've got this problem here and can you help me sort it out, because I just don't think that they've got the experience to do it.'

(C1)

He had decided that he would have to teach himself much of what he would have to learn, and that even though other farmers could be of use that he had to depend a lot on his own resources.

However, C1 was in regular touch with another local organic farmer, namely C3, who also attends the same Grazing Group as C1. The relationship between these two is closer than that either one has with any of the other organic farmers in the area.

'This guy is about 2-3 miles away he's doing a very similar system to the one we're doing and he's converted a year behind us and he's doing a similar calving pattern so he's coming up against the same problems that we have.... and we have a lot to do with him. And he's on the phone all the time'

(C1)

He points out that, as with the farmer from whom he had taken advice during his conversion period (see above), they have much in common in terms of their farming systems and their approaches to farming. The fact that both C1 and C3 are members of the same Grazing Group also indicates their close compatibility.

For his part C3 had definite views about which kind of farmer with whom he was prepared to interact.

'But I only tend to associate with people who are going placesthe group [*name of Grazing Group*] but that is not an organic group'

(C3)

He had not known other organic farmers at the time he converted to organic either, and declared that it had been 'a complete step in the dark'. However, he had found his affinity with C1 and used the Grazing Group as a forum where he could meet those farmers with whom he believed he was compatible.

Part of the compatibility with the Grazing Group lay in the fact that most of its members worked a spring calving system, which C3 believed was most suited to the way he wanted to run his organic system.

‘... and to be honest that is a far bigger mindset change and more technical problem to go to spring calving than it is to go to organic.’

(C3)

The change to spring calving had been, in his opinion, more of a challenge than the change to organic, and reinforced his greater interest in maintaining contact and building up interaction with farmers, whether organic or conventional, who used the same system, rather than look for compatibility among other organic farmers in the area (apart from C1).

There were some other examples of interaction among local organic peers. C2 had entered into a partnership with a local farmer who had been organic for a considerable period of time. This local farmer was regarded as an exemplar by many of the converters in Group C, but in differing ways reflecting their own attitudes to farming and the organic system. He was the farmer that C1 had thought had a poor approach to farming, and the same farmer that other farmers such as C5, C7 and C8 had been influenced by in their decision to convert to the organic system (see Table 7.4, Section 7.3.3). C2 regarded the partnership as important in that it was the way he had entered organic farming. He also felt that it was an unusual step to take to become so involved with another local farmer.

‘We work together on the potatoes and we share machinery. We rented land and we shared that as well.... Well that is quite a big thing co-operating with a neighbour like that. You are working together and we discuss a lot. That’s as much use as anything really.’

(C2)

This interaction had to an extent made the need for other collaborative association unnecessary, and C2 was in fact one of those farmer who had not been very active in any form of other communal activity, or in discussion groups (see Table 7.8, Section 7.3.4) although he was fully aware of the concentration of organic farmers in the area.

‘There is quite a big block of organic land around here. There’s six farms all adjoining who are all organic.’

(C2)

C2 is also one of the farmers discussed in Chapter 6 who had expressed disillusion in organic farming and in farming in general (see Section 6.2.4) and, therefore, apart from his close interaction with one neighbour, separates himself for the remainder of the organic farmers in the area.

The concentration of organic producers had been well known locally as well as by the milk processor.

‘*[name of milk processor]* used to be talking about us around the country - that there seemed to be this area here that seemed to be going totally organic’

(C8)

But this concentration and acknowledgement of it did not result in a more co-operative attitude among the local organic farmers. C6 acknowledges the tendency farmers have of working in an independent fashion. In response to discussing the way that organic dairy farmers in the area have failed to join together into the same group for selling milk, or to join the same supply chain he notes their general reluctance to co-operate.

‘I suppose the ones that want to co-operate do so and the ones that don’t - don’t. I think everyone has their own opinions and farmers very much stick to what they think is right rather than what would perhaps benefit the whole group..... the farmers have their own agendas and their own initiative and they very much stick to what they think - what would be better for them rather than what would be better for the whole industry.’

(C6)

C8 corroborates this opinion with his experience of changes in the characteristics of local organic farmers. He noted a differentiation among organic farmers during the time he had been farming organically as has been previously noted.

‘...the situation has moved on from then- this would be about five years ago- that to a certain extent there is (was) an image of the ageing hippy, and there was an element of that because we would go in there and we would talk and perhaps they had 20 or 30 cows at most and they would say how many cows have you got and you would say 80: ‘80! You’ve got 80 cows!’ – in shock

horror and by 3 years ago when we were finishing conversion and new farmers were joining us and 'how many cows you've got?': '500!' The big boys had realised that maybe there was money to be made at 29.5ppl, and they came charging in and you don't need many of them to alter the look of the milk supply....Things have changed and probably it would be harder now to get farmers to work together. The bigger farmers, who are more dynamic, knew the direction that they wanted to go in and the kind of milk price they wanted' (C8)

Both C8 and C6's comments suggest that the divisions among farmers in general are as likely to be present among organic farmers and that the profile of the organic sector had become much more similar to the conventional sector. A collection of organic farmers, such as that in Group C, therefore, is not likely to form itself into a coherent community purely on the basis of the clustering of farmers who are in the same sector.

8.4 Summary

This chapter has discussed the interaction of farmers who are associated with each other in different types of groupings, and explored the way that knowledge about organic farming may be generated and shared within these groups. The three groups are differentiated in terms of the main feature that, apart from their conversion to organic farming, associates their members and which may create some form of community. Hence Group A farmers are associated through market-led collaboration, Group B as an open ended discussion group, and Group C on the basis of a potential for a community of organic farmers based on their spatial proximity.

Group A

The main producer group attempts to co-ordinate the efforts of the membership and to maximise the ability of the farmers to meet the demands of the market. Information about the central marketing efforts of the producer group is conveyed to Group A's farmers and events, such as those described in Section 8.3.1 above, are aimed at educating farmers about the value of collaboration, and what such collaboration entails.

The most direct aspect of collaboration in Group A is the need to co-operate in the market place, avoiding supplying stock through competing market channels and thereby compromising whatever ability the producer group has to influence the market. The producer group 'management' is aware that farmers continue to sell their produce through other channels, and during the meeting considered above the message that such activity is working against the interests of the group is re-emphasised. The need for this sort of reminder suggests the loose commitment of many of the members and suggests that not all of the farmers have identified themselves with the group to the same degree.

The establishment of regional sub-groups, such as Group A, was intended to enhance the identity of the farmers with the group, and to build up a greater solidarity among members for mutual benefit. Working together to try to achieve better market prices and a stronger position vis-à-vis meat processors and buyers was one of the main aims of the producer group's original membership, and this aspect is encouraged by the field officer's pleas for more market discipline. The group is also encouraged to consider its own identity by the reports of two members who had attended meetings of other organic farmers where producer groups are seen as part of a general effort to provide alternative marketing chains for organic producers. These actions and arguments suggest a conscious attempt to encourage a group identity, to establish a group boundary, and to convince members of the benefits of association. The consequence of the argument is that conversion to organic farming has to entail changes in attitudes and behaviour that are additional to those related to production practices, and that using the group simply as a marketing channel does not realise the potential of such an association.

The group also aims to improve members' return from the market through modifying production practices and developing farmers' appreciation of the link between their production practices and market practices. Market influence is used as a direct motivation for making changes in practice, and these changes include improving the grading of livestock, modifying lambing times, considering different breeds, and varying the sale time by holding lambs on the farm for longer in order to change conformation characteristics. These practices both improve the individual farmers'

performance in supplying what the market is demanding and enhances the groups' ability to co-operatively manage its output. The membership is, therefore, asked to operate with a conscious regard to group goals and to consider their own activities as part of a larger enterprise. The process might be seen in terms of building common practices and understanding between group members, and strengthening its development as a practice-led community.

In attempting to modify the farmers' practices and approach to production and marketing, the producer group is also attempting to embed the farmer in different sets of linkages to actors and domains of knowledge throughout the range of activity in which the farmer is engaged. The farmer is challenged to maximise opportunities by improving the quality of livestock, matching market demand by avoiding or reducing surges in supply, and in utilising information from different sources in deciding on the changes that are required in production practices. These areas of interest imply a further set of inter-related decisions that will demand new knowledge and produce changes in routine. This is a similar process to the shifts in knowledge-networks that were discussed in Chapter 7. What differs in the example given in this chapter is that the farmer is encouraged to make these changes with a communal goal in mind and to do so in concert with a group of organic farmers. The new knowledge-network includes an understanding of the functions of the producer group as a collaborative enterprise and the individual farmer's relationship to those functions.

These attempts to develop a coherent sense of a community of organic farmers make assumptions about the attitudes of the members, and their identity and compatibility with other members of the group. However, as Chapter 7 has demonstrated there are different categories of organic farmers and the history of the producer group as it underwent expansion indicates the difficulty of co-ordinating the activities of farmers who may have differing goals, differing understanding of organic farming, and differing understanding of the aims of the producer group. Simply being a group of organic producers does not produce a community of organic farmers that can act in a communally coherent manner.

These efforts to build the value of the association are also challenged by the actions of other market actors. Expectations for the market are dependent on the actions of the

retail chains and the farmers perceive an asymmetry of power between themselves and the chains, which the producer group is not capable of influencing to any large extent. An immediate example of this kind of challenge to the group is the way that the information feedback from meat processors via a tagging system works, a system that farmers see as compromised, and which is an area of interaction where the farmers might have expected that the producer group had more influence. A more general example is that of farmers' concern about the contest between certification regimes, with Farm Assured being seen as a competitor to the organic certification. The discussion on these areas held by Group A helps to define the group, and establishes a common understanding of market influence but the apparent ineffectiveness of the producer group in these instances challenges the value of association and the attempt at creating alternative market channels. The question marks about the tagging system and the rise of the Farm Assurance scheme also places question marks about the value of conversion to organic farming, undermining two of the main reasons for conversion namely improved trust between producer and consumer and the added value of a secure and unique certification system.

Group B

Group B's remit is necessarily more restricted than that for Group A, and is primarily to enable farmers to improve their production knowledge. It does not have the added incentive of providing comment and advice on a direct market channel to attract farmers to group meetings. Individual farmers are invited to attend the group based on informal soundings of interest and their likely fit with the aims of the group and with the existing members, and so in this sense Group B is more selective than Group A. However, without the need to directly consider issues of collaboration, expectations of, and the requirements for participation are lower than for Group A. In Group B farmers do not look to the group for anything beyond its function as a forum for discussion, and for maintaining links with other local organic farmers.

The geographical area from which Group B's membership comes is more restricted than is the case for Group A (even in its localised form) and its smaller size enables social linkages between farmers to be fostered more easily. Some of the farmers in Group B knew each other on a social basis (see Appendix 7.6), and could build on group discussions outside the group meetings. But even so differences between

attitudes and aspirations appear in this group as much as in Group A, with B2 and B8 in particular noting how some organic groups (including Group B itself) appear to them as being too 'organic' and not interested enough in developing a business approach (see Appendix 7.6).

The impression of a lack of appreciation of the business aspects of organic farming is challenged by the content of the group event discussed above, which was based on a benchmarking exercise that compared costs of production and discussed the market context for organic dairy farming. Farmers are encouraged to consider the implications of the benchmarking exercise for their own enterprises, and the exercise acts to concentrate attention on overall business profitability. The exercise is part of a general survey that has been used with other discussion groups, but it is noted that during the meeting Group B chose to focus on the production and farming practice implications of the exercise and less on financial and cost based features, apparently corroborating B2 and B8's impressions that the group is less concerned with discussing organic farming in business terms than with its intrinsic farming characteristics.

The benchmarking exercise highlighted for the farmers the components of their production costs, exposed for discussion the practices in which the activities producing these costs were engaged, and the ways that these mesh together. The exercise differentiates farmers in the group in terms of their awareness of costs, but in addition to B2 and B8's criticisms farmers in the group differ in terms of their knowledge and experience in farming and the organic system. The discussion meeting demonstrates a level of trust and identity between farmers in the group through their ability to talk about difficulties and to compare production costs and practices. However, there is no pressure or expectation to change to a common set of practices beyond the basic level required by organic certification. The group provides a forum for these farmers to discuss their different understandings of the organic system, and their own differentiated practices, and through such dialogue allows a more common knowledge to emerge. The contrast with Group A is evident, with Group A's emphasis being on building group identity on the basis of the market orientation of the group. Group B, whilst its discussion is also oriented toward the

effect of production practice on market performance, builds its identity on the basis of the repertoires of practice that the farmers share.

The discussion in response to the costs of various animal husbandry practices is particularly vigorous and wide ranging. Farmers discuss current animal husbandry practices that have been encouraged by conversion to the organic system, and these include a re-thinking about the care of livestock, the reduction of stress, improving knowledge about individual animals, housing, and feed requirements. Exploration of new knowledge sources also include links to university and IGER research and discussion on the development of the dairy industry in a European context, and even of re-visiting old, or folk knowledge. It also includes consideration of new regulation and their possible effect on practice that is of particular interest to organic farmers, such as the use of slurry as a fertiliser. In these respects the group acts to bring together information and experience from outside sources extending the group's and the individual farmers' knowledge networks.

Group C

The existence of a local cluster of organic farmers appears not to be sufficient to create a community of organic farmers based on a common set of practices. Farmers in Group C note that they have differing approaches to organic farming that are different enough to undermine such a notion. Farmers may discuss specific problems with other local organic farmers on a one-to-one basis but more general community interaction has not materialised.

The differences between farmers are shown by the different farming systems employed, differing motivation for farming, and differing motivations for conversion to organic farming. There are also differing opinions among Group C farmers toward interaction with other farmers, where some farmers are keen to attend regular and frequent farmer-led discussion groups, whilst others are more taciturn and independent. The opinions of farmers C1, C3 and to some extent C6 seem to suggest that there is too much such differentiation among local farmers for a sustained and organised local association in the form of a discussion group, perhaps along the same lines as the Grazing Groups, to have been created. A practice-led community of

organic farmers requires that farmers share a more compatible set of attitudes and motivations, and that they believe that intrinsic benefits may be derived from associating on a regular and relatively formal basis with their local peers than the farmers in Group C seem to exhibit.

Chapter 9

Conclusion

9.1 Introduction

This final chapter provides a review and summary of the main features of the study. The first part will re-engage with the original research questions in the light of the theoretical framework and of the empirical analysis with comments intended to draw out mutually supportive features. Finally the limits and constraints on the research and its outcomes are considered along with a discussion on future research.

9.2 Review and Summary of the Study

The questions posed at the start of the research for this study were based on the observation in previous work (e.g. Morgan and Murdoch, 2000; Banks, 1998) that much of the research and analysis conducted on the growth of Organic Agriculture in Wales and elsewhere had tended to highlight the commercial and to underplay other barriers. Most notable among other barriers perceived were those that related to knowledge generation, knowledge sharing and learning processes. Together with the social context of farmers, these processes are considered to be as important as price signals in shaping economic behaviour, and in contributing to the development of organic agriculture.

The aim of the study is to comment on the development of organic agriculture in Wales by considering the ways by which knowledge is created and exchanged. The study focuses on social learning processes, both at the institutional and at the farmer's level, to demonstrate how knowledges, from different knowledge domains and derived from different experiential, historical and physical origins, are exchanged and combined to produce new knowledge about organic agriculture and what it entails.

The development of the organic sector was considered both in terms of the interaction of actors and of the different knowledges that they embody, generate and exchange. Three levels of interaction are included namely at the institutional, the individual farmer (with institutions and peers) and the farmer associated with their peers in farmer-led groups. Chapters 5-8 develop the discussion for each of these levels and the interaction between them. The primary viewpoint, however, has been that of the individual farmers and the generation of knowledge and the learning regimes by which knowledge about organic farming is created and shared among farmers. The different knowledges are also divided into three domains, namely regulatory and policy areas, market and production, but different types of knowledge are also considered to include tacit, codified and practice knowledge.

The literature review of Chapters 2 and 3 reflects on socio-economic theories of knowledge and on learning and, in particular, on a number of different frameworks of social learning. Following a discussion of the research design and the methods employed in the study in Chapter 4, the institutional context related to organic agriculture in Wales is explored in Chapter 5. The discussion in this chapter regards that context as containing social learning fora for developing and disseminating conceptions of organic agriculture, and examines the ways by which institutional structures and procedures contribute to the farmer's knowledge about organic farming.

The thesis then shifts its focus to the individual farmer and considers the formal and informal ways by which they gather and use knowledges about organic agriculture, and how farmers interact with their peers in gaining more knowledge about organic farming. The individual farmer is described in terms of their embeddedness in the local community and the industry, from which the farmer's general attitudes toward farming are derived. These social features are considered as influences that are of comparable importance to economic or commercial factors in decisions to convert to organic agriculture, both social and economic concerns being considered as intimately entwined.

The different ways that farmers learn about organic farming is discussed at different stages of the conversion process, including around the decision to convert, during the

formal conversion period itself, and subsequently as farmers become more proficient organic farmers. The physical and commercial characteristics of farms and the behavioural and social characteristics of the farmers are discussed as contributory elements to the process of learning, helping to orientate the farmer's frames of reference and to illustrate path dependence in the farmer's learning process.

Groups of farmers are considered as social learning fora, with both the activity of the groups and the farmer's participation in the group being explored. These groups may be seen as instruments of extension that interact with the formal system of knowledge dissemination. A survey of these groups, therefore, further relates the local, farmer-focussed investigation to the wider institutional context, and the study explores three particular examples of farmer-led groups in greater depth. Aspects of these groups are considered in terms of their structures and functions, farmer expectations of the group, and their attitudes toward organic agriculture. The group structure and function is seen to influence the manner by which information is exchanged, and the kind of information that the farmers may obtain through the group.

Three broad thematic areas arise from the research and from previous work and these are discussed in the following sections and cover knowledge and learning processes, structures and actors, and different understandings of organic agriculture represented by different categories of organic farmers. The discussion below attempts to relate these themes back to the research questions that were posed at the start of the study, and to arrive at some conclusions on how knowledge about organic agriculture has developed in Wales.

9.3 Knowledge and Learning Processes

Different aspects of the processes of learning in which the farmers are engaged have been described in the study. The initial period, when the decision to convert was being made, may be depicted as a period of enrolment as farmers are attracted to the organic system and adopt some of the assumptions and expectations of the system. Enrolment implies participation in new knowledge-networks, where resources and relationships are rearranged and farmers may be described as participating in an innovatory development.

Farmers are also seen to be synthesisers of knowledge from different domains and contribute local and practice-based knowledge that are products of their embedded nature. The conversion to organic farming entails change in the farmers' knowledge-networks and, hence, implies a process of dis-embedding from old knowledge-networks and a re-embedding in new or reformed networks. The shift in knowledge-networks has implications for the nature of the change, and to what extent conversion to organic agriculture constitutes a radical as opposed to an incremental change and to what extent farmers see organic agriculture as a different form of agricultural knowledge.

Enrolment

The farmer is enrolled into organic farming by the influence of a combination of the commercial and physical conditions of the farm, the development of institutions of organic agriculture, the development of policies to encourage sustainable agriculture, and the actions of a number of other actors, including market mediators such as milk processors. They decide on conversion in the belief that organic farming represents a suitable way of responding to contemporary conditions related to the characteristics of their farms, their attitudes and goals, their own understanding of what organic farming entails and their expectation of future developments based on their interaction with market and policy actors.

The relationships that farmers build and in which they participate are thought of in terms of knowledge-networks that combine both substantive knowledges and interaction with a diverse sets of actors. The conversion of the farmer to organic farming is depicted in terms of a process of dis-embedding from one set of knowledge-networks and the creation of new knowledge-networks. In the process of re-embedding in new knowledge-networks the farmers have themselves acted as enrolling agents. Their partners in new knowledge-networks must be capable of responding to their developing knowledge as organic farmers, and so veterinarians, seed merchants, farming supplies merchants, farming consultants and accountants, farming unions, auctioneers and livestock auction marts, milk processors, abattoirs, supermarket chains and other actors are obliged to learn about some aspects of organic farming and to engage with the concepts of sustainable farming that organic agriculture represents. Farming neighbours are enrolled as critics and/or as potential

new converters, and the organic farmer modifies or breaks those knowledge-networks that are no longer relevant.

Innovation

Organic farming may be viewed as an innovatory development in agriculture because resources and relationships are rearranged and new combinations are created. This may be seen at the level of the direct relationships in which the farmer is involved as well as in terms of institutional changes that have occurred as organic agriculture strengthened and became a more credible alternative to conventional agriculture. The study maps the farmers' relationship with other actors and how new knowledge-networks that have been created in conversion.

The development of organic agriculture is an innovation that involves more than production techniques. On the practice level it is a change in system that affects the whole farm and is multi-functional in its effects. Organic agriculture aims to make improvements in farming not so much through increased production but through 'better' production and is essentially an innovation in quality rather than in productive efficiency.

The change in system is made with the expectation of a reduced level of output from the farm. On the attitudinal level, therefore, the farmers' commitment is dependent on calculations of value that do not follow from the conventional agri-food market, but includes a combination of values that may, for example, justify premium prices, or provide state support payments for farmers who convert. The definitions of quality and added value are constructed on the basis of criteria that are different from the farmers' experience of the conventional agri-food system. Farmers must adopt production practices that contradict expectations of improved conventional performance and, at least in effect, accept alternative values.

Knowledge-networks

Conversion combines elements of traditional farming approaches with modern understanding of the physical environment, of social objectives and of economic relations. Hence, the growth and development of organic agriculture requires a broad alliance of interests, of which organic farmers, and the farming experience and

knowledge that they embody, constitute one element. Organic agriculture is a broader concept than the production of food according to particular conventions, involving domains of knowledge outside the production domain and, hence, the innovation involves other actors in addition to the farmer.

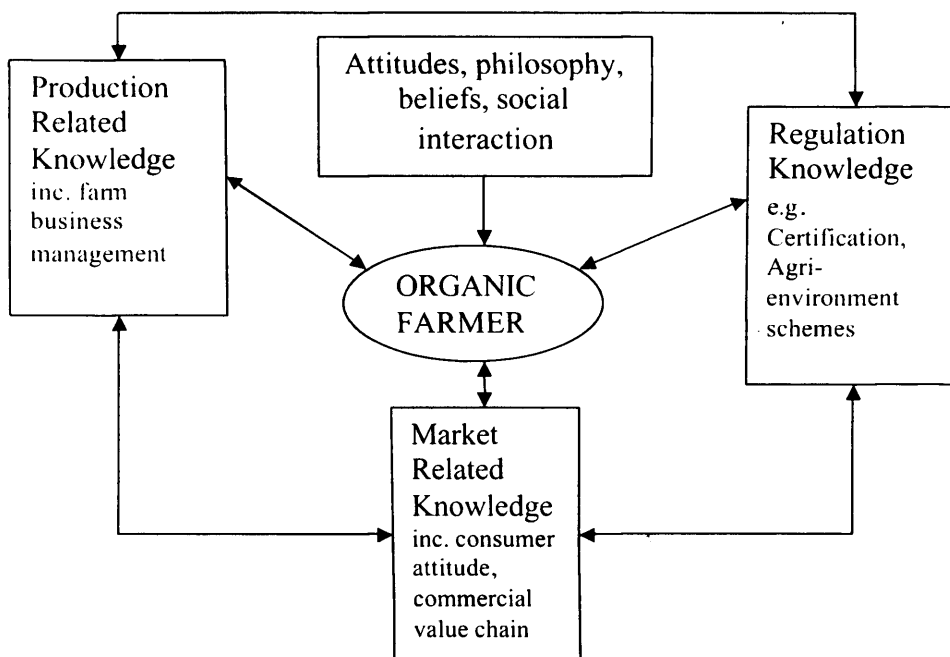
The study has, therefore, placed the production domain in a co-evolutionary relationship with those of the market and the wider agri-environmental and rural development domains. Organic farming is seen as a synthesis of knowledges which derive from a range of actors, with the organic farmer in a pivotal position, acting as the ‘materialiser’ (Michelsen et al, 2001) of the organic system. The farmer contributes practical knowledge about organic farming, which is to be combined with the contributions of other actors in defining and differentiating organic from conventional or industrial agriculture. The interaction of all the actors creates knowledge of what organic farming entails and its development recasts relationships in agri-food, environmental and rural development policy arenas.

Domains of Knowledge

The relevant actors have been divided into three domains of knowledge according to their predominant area of interest. The three knowledge domains are intimately linked, and the farmer’s knowledge of how to be an organic farmer is seen as a particular synthesis of elements from each of these domains. The personal attitude, motivations and beliefs of the farmer, as well as the farmers’ practice knowledge contribute to, and govern, the synthesising process.

Figure 9.1 modifies the depiction of the institutional setting suggested by Michelsen et al (2001) (Fig. 5.1) and adds those elements that shape the farmer’s existing knowledge and demand for new knowledge such as attitudes, beliefs and social relations that are specific to each individual farmer. The model illustrates the position of the farmer in relation to the areas of knowledge with which they must interact. Whilst the construction of the model does not indicate the relative weight of each domain in any objective sense, or the degree of importance given to each one by the farmer, it does indicate domains that together produce a matrix of influence acting on the farmer through both informal (horizontal) and more formal, (vertical) networks.

Fig 9.1: Synthesising Organic Agriculture



Farmer Embeddedness

The embeddedness of the farmer in local social, cultural, economic and physical structures is demonstrated for individual farmers in the empirical work of Chapters 6-8. The embeddedness of the farmer indicates the source of the tacit dimensions of their knowledge about farming. They have been born and brought up within the milieu that they inhabit and have gained through long term experience their knowledge of how their farms have worked within given local conditions. The knowledge is local in the sense that it arises from a complex of conditions that the farmers directly experience including adaptations to new knowledge and practice that have impinged on the local, but also containing remnants of an accumulation of knowledge passed through generations of farmers (Clark and Murdoch, 1997).

The approach to the empirical work assumes this framework and, therefore, explores the rooted nature of the farmer in this study. The empirical treatment of Chapters 6-8 concentrates on establishing the farmers within their local contexts. They are shown to be guided by their knowledge and experience of conventional farming, and almost all are farmers who have strong links to their localities, to their farms, and to the industry. The farmers in this study are all experienced as conventional farmers who converted within the last ten years or so preceding the start of the study. They

perform their roles as family farmers, and the fieldwork describes the multi-dimensional ways in which they are embedded in those roles.

Dis-embedding and Re-Embedding

The conversion process to organic farming requires that their relationships are changed in a number of areas, as farmers explore alternative routines, and build new knowledge-networks or reform older ones. This process is not clear-cut as both the older and the newer networks exert ambiguous influence on the farmers, providing both support and obstructions to the decision to convert.

The shift in knowledge-networks has been depicted in the study as a process of dis-embedding and subsequent re-embedding. This process is not a process of sharp breaks, but a gradual migration from one set of relationships to another, or of a gradual re-forming of existing knowledge-networks to accommodate changed conditions. Hence, the process is less like a radical innovatory change than one of incremental change, and so notions of 'forgetting' (Morgan and Murdoch, 2000) are inappropriate in this context. Many farmers have been attracted to organic agriculture because of its apparent nearness to their existing practices, and farmers are reassured in the decision to convert by the ease with which they may revert to conventional farming systems. These beliefs indicate that conversion does not require or encourage a severe rupture with past practice, or with past knowledge-networks.

Radical vs. incremental change

From some perspectives conversion to organic agriculture can be seen to be a radical process where there is an apparent wholesale shift of attitude and practice away from the conventional and industrial mode to a form of agriculture that entails a substantially altered view. However, the experience of farmers in the study supports the view of conversion as a gradual process. The decision to convert is made over a prolonged period of time as farmers consider the implications of conversion.

The conversion decision is based on farmers' existing knowledge of farming and of the implementation of the organic system to particular farming contexts. The implications of relinquishing existing practices are clear to farmers, for example in understanding the changes in stock management routines that follow the ending of

batch application of antibiotic treatment, or in the timing of spring grass supply on dairy farms. To be able to entertain such changes requires the farmer to be confident of their own capacities to manage the change, a confidence that emanates from their experience as conventional farmers and their capacities to learn new methods and routines. However, that same knowledge provides a potential return path for the farmer, allowing the farmer to hedge their attitudes to the conversion process, and delaying adoption of a full organic farming attitude and philosophy.

Farmers were in the main confident in their abilities to convert because they found similarities between organic practices and their existing methods and routines. Personal stability, embeddedness, personal and tacit knowledge were, therefore, strong supports for the decision to convert, while the pressure and instability of market and regulatory factors conspire to encourage the consideration and decision to convert. But the drag of embedded relations can also provide inhibitions for many of the farmers as they consider changing from a system that has the consensual support of a majority of the farmer's existing knowledge-networks. Embedded nature can, therefore, be an inhibitor to change as much as a source of confidence.

Local organic exemplars may also have ambiguous influences. They may provide positive role models or may discourage farmers who perceive a conflict between their own attitudes and style of farming and those of the exemplar. Farmers, therefore, begin to differentiate themselves, and to differentiate between different types of organic farming. The idea of a single form of organic agriculture breaks down, and different knowledge about organic agriculture is developed.

9.4 Structures and Actors

Relationships between actors are described at three levels in the study, namely the institutional, the individual farmer, and farmers in association. Chapter 5 describes the first level, i.e. the institutional context, within which interactions between institutional actors are played out as organic agriculture grows and to which organic-agriculture institutions contribute. Michelsen et al's (2001) framework has been adopted as a guide to understand institutional growth deriving from a process of

knowledge exchange that spirals from the origins of organic farming at the individual farmer level to gradual institutional strengthening and increasing credibility in relation to conventional-agriculture institutions, producing as part of this process shifts in agricultural policy and state support. Institutions of organic agriculture increasingly engage with those from other farming sectors and with non-farming institutions in a process where organic agriculture is defined and developed. Sustainable farming became a concept for institutional concern, and organic farming feedbacks its institutional success in terms perceived by the farmer as governmental and market support illustrated by, for example, the Organic Action Plans with their targets for conversion totals, conversion subsidies and premium prices.

The processes of institutional learning and the development of knowledge about organic agriculture are depicted by borrowing and adapting the SECI model (Nonaka and Takeuchi, 1995) although the model is used largely in an illustrative way rather than through a complete mapping out of the full learning spiral. But the focus of attention for this study is, as noted before, at the farmer level, with farmer-farmer interaction and with their interaction with formal organisations at the meso level of the institutional hierarchy. In Chapter 5 this is illustrated with reference to institutions that interface with farmers, including agricultural, extension and advisory organisations. Relationships at this level, the second level of the study, are explored more fully in Chapter 7 and may be divided into those that are created between the farmer and formal organisations (vertical networks) and those that are created between the farmer and his/her peers (horizontal networks). A continuation of the study of farmer-farmer interaction is made in the three examples in Chapter 8 where knowledge exchange within groups of farmers and the creation of a practice-led community is explored, constituting the third level of the description of organic farming development.

The empirical work highlights the social context of the farmer's practices and interaction with other farmers and other sources of knowledge, whilst the institutional analysis attempts to integrate the individual and the local with more structural views of the development of Organic Agriculture.

Vertical (Formal) Networks

As in relation to other areas of the study the empirical work and the survey of institutions in Chapter 5 are grounded in, and related to, the experience of the farmer, and are oriented to the farmer's point of view and their interaction with institutional agents. The institutions that are most prominent to the farmer have been those related to the state and to the production domain. Learning relationships with the market domain has not been explored to the same extent because they have not figured as clearly for the majority of farmers.

Contact with market actors have been at somewhat of an arm's-length and the development and support of agriculture, including organic farming (e.g. through the Action Plans) has been concentrated on the producer. Market links as conduits for knowledge and structured learning have only begun to be developed in a coherent and sustained manner in more recent periods. The establishment of the Food Directorate and the Organic Centre Wales have both brought a greater degree of coherence to the development of this area and increased interest from the retail chains have contributed to greater degree of urgency in developing knowledge-networks between farmers and market actors.

The technical information required to convert a farm to certification standards can now be accessed relatively easily, and farmers use the codified organic regulations of the Organic Certification Bodies as basic guides to their learning effort. Extension services that deal with specific technical issues are available from bodies such as IGER, Elm Farm Research, agricultural colleges, and from supermarket chains and food processors.

This kind of technical or codified knowledge exchange is seen by many of the farmers as best achieved through specific as opposed to general training and through peer interaction in close association with the involvement of formal expert sources. However, there is an ambivalent attitude to the use of expert sources, with some farmers suspicious of the relevance and applicability of the advice that may be provided, particularly when related to the financial and physical resources of their own farms. A lack of trust and confidence by some farmers in the role and effect of agricultural colleges is also apparent, and a belief that the formal agricultural

education sector is too heavily influenced by the agri-chemical industry and by the conventional industrial model of farming.

In these respects, organic farmers may not be very different to their conventional peers, particularly since the negative attitudes that farmers have toward agricultural colleges, and agri-supplies companies were formed before their conversion to organic farming. They clearly differ in that the converting farmers use these views as reasons for conversion, adopting an independent attitude to their own farming practices and investing confidence in their own expertise. This attitude is carried over to the operation of the organic system, where farmers have been active in negotiating the interpretation of organic regulations, and in some cases querying the necessity and level of organic standards. In these cases, farmers continue to display a faith in their own knowledge of farming, knowledge that has been built up in association with their local farming peers and their own experience.

The literature review commenced with a discussion of knowledge as an economic resource, and developed to consider how two of the main dimensions of knowledge that are identified in the literature, namely tacit and codified aspects of knowledge interact and how they may be relevant to the empirical context. These aspects of knowledge are considered as basic elements contributing to the understanding of organic agriculture. Tacit knowledge, as a personally held and context specific type of knowledge may be shared by means of interaction with others as social conditions allow. Among the most important features of these conditions is the establishment of shared interpretations, trust and openness. Socially conducive conditions may be created where individuals may recognise each other's knowledges and engage in social learning processes.

The SECI model, originally developed to describe knowledge generation and exchange within formal organisations, is used to represent the spiral process of knowledge exchange that link the learning of organic farmers with the development of institutional knowledge. The two levels interact, co-evolving as the practices of farming, certification and regulatory knowledges, and the concepts of sustainable farming are exchanged in a spiral of knowledge building. A model such as the SECI model suggests a description of the way that different sources of knowledge engage

by establishing a process of translation between tacit and codified aspects of knowledge, and knowledge expressed as practice, and which are communicated through social and institutional interaction.

Horizontal (Less Formal or Informal) Networks

Whilst the SECI model might be useful in describing the way that different forms of knowledge is communicated between different levels of the actor 'hierarchy' (as in Michelsen's model) the 'Socialisation' phase at the farmers level, where the exchange of tacit knowledge occurs is less clear. Working and social conditions in the industry do not encourage the close and regular interaction of farmers, and the characteristics and attitudes of farmers have tended to militate against voluntary and spontaneous collaborative exchange. Organic farmers in this study, however, have indicated that interaction with their peers is one of the most important ways by which they learn, and which has become particularly important and more rewarding as they converted.

Central to the SECI model is the definition of a space within which individuals may take part in social learning, and a framework that holds individuals in place and allow the development of appropriate relationships. The Ba (Nonaka and Konno, 1998) suggests a way conceptualising this space within organisations and together with the SECI process deals specifically with the technical mechanisms of translation and knowledge sharing. Similarly Wenger's Community of Practice scheme (Wenger, 1998) suggests a framework that comprises of three elements viz. where organic farmers who are participating in a Joint Enterprise may build their Mutual Engagement through a process of social learning based on a Shared Repertoire of practice. The study has explored the construction of such spaces or frameworks that occur in the development of organic agriculture, and examined the potential creation of practice-led communities of organic farmers, applying the concepts of community and practice that were discussed through these models.

Three groups of farmers, Group A, B and C, were examined for features pertinent to these models, and that would suggest that these associations of farmers develop practice-led communal knowledge and understanding of organic agriculture. Given the heterogeneous nature of the farming population, as indicated in the description of the farmers in Chapter 6, a framework applicable to organic farming should aim to

build on common interest and attitudes and provide the opportunity for developing enduring relationships.

Whilst farmers are clearly embedded in their communities and in their industry, they show a limited appetite to engage in deep or structured collaborative interaction that allows the opportunity for developing practice-led communal understanding of a 'joint enterprise' such as might be represented by organic farming. However, farmers do associate with each other in various farmer-led groups and the work in Chapter 7 and 8 had been aimed at exploring these. The three groups in Chapter 8 were used as examples that offered different structures that could be described in exploring the extent of practice-led communal understanding.

9.5 Categorising Organic Farmers

The farmers in the study have been divided into a number of categories and types of farmers. They were differentiated on the basis of a range of characteristics including aspects of embeddedness in the locality and the industry, to business attitudes, and attitudes toward the environmental, commercial and other attributes of organic farming. However, farmers have different combinations of characteristics, which make creating simple categories problematic, particularly since the sample is small. The categorisations in the study are not strictly defined and were made using combinations of apparent farmer-characteristics to produce 'broad-brush' categories. Whilst those farmers who may be described as 'philosophically committed' have a reasonably coherent combination, the characteristics of farmers who may be described as more commercially minded are more diverse.

The major distinction made of farmers in the literature has been between those that are described as 'philosophically committed' and those that have converted to organic farming for commercial considerations. The distinction is broadly supported in this study, and a further distinction is made between those who have converted for opportunistic commercial reasons and those who may be said to have a longer term outlook but who do not claim a philosophical motivation toward organic farming. The 'philosophically committed' farmer appears as the more stable of the two main

categories since their primary reasons for conversion to organic farming are less contingent on the influence of other actors or events. The latter category suggests that converting farmers have more to learn about what organic farming entails and, hence, are more mobile in relation to their categorisation. They convert for differing combinations of reasons but, given that many perceive the organic system as a more enjoyable way of farming, may be capable of becoming more philosophically committed as they become more proficient organic farmers, particularly in the case of the 'long-term' commercially motivated farmer (cf. the opportunistic converters).

The categorisation of farmers was produced on the basis of self presentations of characteristics and, hence, is open to differing interpretation. However, farmers reinforce differences between themselves and their peers by their actions as they learnt more about organic farming. Most of the farmers involved in the study groups were relatively recent converts to organic farming, and as their knowledges about the system became more sophisticated they tended to choose more carefully between sources of information and advice. They begin to focus on those events and meetings that offer the most relevance to their own farms, as opposed to a less discriminating approach that may have been adopted in the early stages of conversion. Farmers also choose differently between organisations such as Organic Certification Bodies (OCBs), and between the market channel and buyers through which they sell their farm output. In all these choices farmers favour particular knowledge-networks differentiating themselves according to their attitudes and motivations.

The categorisation of the farmers included in the study had been done on an individual basis, from one-to-one interview session (Chapter 6). The farmers had also been identified on the basis of their association in three 'groups' (Chapter 8) and these had the potential of illustrating how farmers might associate differently according to their attitudes and motivations. However, the study did not find a clear connection between the categorisations of the individual farmers and the characteristics and ways of association of each group. Each group contained a range of types of organic farmer, although none of the Group C farmers claimed to have converted to organic farming for philosophical reasons.

The three groups were also explored both in terms of their role in enhancing the knowledge-networks of the farmers and their potential for forming communities of organic farmers, drawing on literature about practice-led communities as reviewed in Chapter 3. A particular interest in this study was to explore to what extent a local communal understanding of organic agriculture would be generated through such practice-led association, and for the purposes of the fieldwork these groups were differentiated on the basis of the primary reason for their existence. Hence, Group A is a producer group offering an alternative market channel to the farmer, Group B is a state supported discussion group concentrating on improving farmers' organic production knowledge, and Group C is a collection of farmers associated by their geographical proximity and potential as a local community of organic farmers. The process of association for farmers in Groups A and B involves conscious choice, where membership has been sought by the individual farmer. Farmers choose to associate for specific reason, but the degree of their commitment to the group is a function of their perception of the benefits to be derived from the association.

One of the main functions of groups is their performance as fora of social learning. Groups A and B function in similar ways in the sense that they provide opportunities for farmers to meet and to engage in social learning activities. However, for Group A these activities can have a direct bearing on farmers' businesses in the sense that the topics discussed are directly related to the operation of the producer group and changes in practices that are implied by the group's learning activities are shaped to the group's strategic goals. In Group B's case the outcomes of the learning events are less intimately connected to the structure of the group and its activities.

Group A

In Group A, the association depends on the farmers realising the value of contributing to the group and its core objectives, and misunderstanding or disagreement with this requirement weakens the group. The coherence of the original producer group had been disrupted by the large and sudden increase in its membership as a surge of conversions to organic farming occurred in the late 1990s. Expansion in membership exacerbated problems in maintaining group solidarity and in collaborative working, but with a reorganisation into more locally based regions (which Group A exemplifies) some measure of a local identity has been regained. However, the group

membership continues to exhibit a range of attitudes and commitment to its objectives.

The group attempts to encourage its members to work within the discipline of group norms. These include maintaining discipline in the marketplace by not weakening its market position through selling produce via other market channels, and by attempting to change practices and routines so that the group can sell to the most profitable segments of the market. Disciplines based on market knowledge are coupled with organic production knowledge and the group acts to co-ordinate these knowledge-networks.

The producer group incorporating Group A becomes an active participant in the knowledge-network that it creates through the discussion group and through its farm walks and training events. Whilst the topics covered in discussion are nominally chosen by the membership, the goal of the producer group is to incorporate the process of learning about organic farming into a larger process of teaching the farmer how to participate meaningfully in a collaborative producer group. The producer group is a joint creation of the group's structure and the participation of its membership and is a result of a process of negotiation between members from which mutual engagement may follow, and is such that those members help to create the enterprise and are mutually accountable for it. Whilst this process of engagement may have worked reasonably successfully during the period that the producer group was being established and growing slowly, it became stressed as the group enlarged.

Such a process is described in Chapter 3 as the basis for the formation of a Community of Practice. The analysis suggests that the group attempts to involve the farmer in a process of Mutual Engagement that follows from the members' subscription to a Joint Enterprise. Without a certain level of commitment and participation the producer group is relegated to a simple sales consortium, whilst with such an engagement the membership of the group may be capable of accessing the third dimension of a Community of Practice namely the Shared Repertoires of the community, which encompass those activities that form the basis of the core practices of the community. However, a conclusion as to whether Group A as a whole has attained a level of mutual engagement that would qualify it as a Community of

Practice is not established. A core group of farmers may have reached this stage but the inclusion of farmer members who are not as committed to a joint enterprise weakens the group as a community.

Group B

Group B should be a looser association of farmers than Group A since the membership have minimal financial and no contractual obligation to the group. Group B's success depends on its continued ability to maintain its relevance as a learning forum as each individual develops their knowledge of organic farming and works towards, and achieve, differing personal objectives. Group B succeeds in maintaining relative homogeneity by restricting membership numbers. It also has been successful in securing the regular participation of its membership.

Group B does not create a joint enterprise in the same sense as may occur in Group A. It does, however, encourage farmers to become involved in a process of mutual engagement as the group learns about common repertoires. These repertoires of practice are not expected to be shared to the extent that would those of the producer group since the actions of individual members do not impinge as directly on the Group B and its activities. The process of mutual engagement and learning about common repertoires are similar for the two groups in the sense that farmers build up a shared understanding of organic farming practice through sharing knowledge about production techniques and routines.

Group members may be described as being engaged in a joint enterprise as they build their interpretation of what organic farming entails through their social learning activities. Regular meetings and a build up of personal links between farmers in the group contribute to the learning process. But the joint enterprises constructed for Group A and Group B has different scope and goals in each case. For both groups the aim is to build local expertise and understanding of organic agriculture, but for Group B that does not need to mesh with learning how to collaborate in building a commercial entity. Given these differences there is, therefore, a basis for suggesting that some form of Communities of Practice can be discerned for both Groups A and B. They are different to each other since each group have different goals and aspirations, and as such create different kinds of joint enterprises. But the

construction of a set of mutual understandings around a common core of repertoires and practice can be recognised in each case.

Group C

The levels of mutual engagement between the farmers in Group C are diffuse and fragmented and there is little sense in which a shared repertoire or a common identity based on common organic farming practice is constructed among the designated members of the group. Where a close and 'natural' community might have been expected, local communal interaction centred on practice, was not apparent. Association between individuals did occur and farmers could be said to have gained confidence from the local concentration of organic farmers, but this social structure did not translate into what may be observed to be a clear community of interest based on the practice of organic farming.

A community of sorts does exist as farmers in the locality are aware of a commonality in their practices. Although Group C lacks a formal space for discussion, farmers are well embedded in the locality and the fact that the group was constructed through the snowball method of personal recommendations demonstrates that farmers are in contact with each other and aware of their organic status. But the development of a Community of Practice in this locality is blocked by a failure to focus the community of organic farmers into a community of interest or of common purpose. Rather than a practice-led community (let alone a Community of Practice) Group C may be better described as representing a local element of the farmers' general organic knowledge-network. Organic farmers in the area do not appear to see any benefit in working together as a coherent group. Whilst there may be personal linkages between individuals in the area, there are also sufficient differences for farmers to maintain their independence or to seek interaction with other groups, such as the Grazing Groups. A collective local organic farmer identity that can assist in the development of learning about organic farming does not appear.

Three of the farmers in Group C have sought other avenues of association, using conventional farming groups in preference to the potential of the local organic farming population, indicating that rather than there being an aversion to association per se, some of the farmers in this area are more concerned to find others with similar

attitudes and motivation. That their preferred group is mainly a conventional farming group suggests that these farmers may not have made a wholesale break with the mentality of conventional farming, but have adapted their practices to both farming systems. The compromise may indicate that the more radical features and approaches of an organic system have not been adopted in these cases, but it may also suggest that a local blending between different farming production knowledges is being undertaken. In this regard it is worth noting that these farmers believe that their presence in the conventional discussion group (Grazing Groups) may have influenced their conventional peers to change some practices in favour of those acceptable to organic farming, indicating the local conditions of continuing dialogue between practitioners of different farming systems.

9.6 Summary of Conclusions and Policy Response

The preceding sections represent the main areas of discussion and development of a perspective on knowledge generation and learning processes in the organic agricultural sector in Wales. The following discussion restates some of the main points of conclusion and begins to engage with a policy response.

Concepts of Organic Agriculture

- The conversion experience for the farmer is an incremental and gradual process both in the lead up and subsequent to certification as an organic farmer. However, as a structural change in agriculture, organic farming represents a more radical innovation implying substantial discontinuity in practices. Extended experience of organic farming practice may also eventually produce a similar radical shift in the attitudes and philosophies of converting farmers.
- Farmers do not all share a single and well-defined concept of Organic Agriculture. The knowledge, perceptions and objectives of other actors contributes to this diversity in understanding. These actors include competing farming systems, state policy actors in agri-food, agri-environment and rural development domains, and food consumers mediated by actors in the food chain. The conceptual and practical environment within which Organic Agriculture is located is continually changing in a co-evolutionary process as actors learn about and adapt to the concept and its practical exposition.

- Organic Agriculture, as an option for farmers, is vulnerable to challenges from different directions as the agri-food and agri-environment contexts change. Reform of conventional farming practices to reduce environmental impact, and an increased emphasis on quality in conventional food production challenges the organic farming sector to define and differentiate itself clearly, and to maybe highlight its potential as a radical alternative to the current agri-food system.

Social Learning and Farmer's Associations

- Conversion to organic agriculture requires new sets of relationships in order to generate and gather new knowledge. These have been described in terms of knowledge-networks, and in this study they reflect the holistic nature of organic farm management, and the integration of production knowledge with regulatory and market concerns.
- The farmers' existing practices and routines can be an important source of confidence during and after conversion as farmers who are embedded in their local farming context draw on existing skills and knowledge or revive older knowledge about the farm and its management. Confidence in existing skill sets and knowledges is important when contemplating potentially far reaching changes in routines and work practices.
- Learning and knowledge generation among farmers is best done through associations of peer-group farmers with relatively well-matched interests, commitment, motivation and objectives. These conditions are best achieved with small groups of farmers who are located closely enough to maintain regular and frequent meeting.
- The apparent lack of capacity in Welsh agriculture to sustain co-operative activity seems to militate against the development of tightly organised associations of farmers. The suggestion from this research is that trust, credibility and personal affinities between participants are as important as a simple appeal to a commercial motivations and objectives in creating sustainable collaborative enterprises. Whilst the commercial strength of an association is of central importance to the membership, the basis of such association must be trust between members, equal levels of commitment and feeling of ownership and responsibility for the success of the venture.

Policy Responses

- Practice-led communities based on Wenger's scheme of Shared Repertoire, Mutual Engagement, and a Joint Enterprise, (Wenger, 1998) may be encouraged and fostered by the support activities of extension agents, but intervention should be maintained at a facilitative level to allow each group of farmers to develop their own approaches to social learning rather than to over-formalise and structure activity. As in other industry sectors farmers are able to recognise suitable peers and identify for themselves those individuals with whom they are most likely to form useful association.

- Social Learning based on a scheme similar to the Community of Practice approach requires constant reinforcement to maintain mutual engagement and to reinforce confidence and evidence of political commitment. Such an approach should be designed with a long term investment in communal development in mind.
- Policy actors must be aware of the dynamic nature of the sector. Encouragement of social learning activity, where learning and knowledge exchange includes actors from all the relevant knowledge domains, should be a significant tool in developing Organic Agriculture. Intervention should, therefore, include the facilitation of fora that involves actors from all the knowledge domains that contribute to the shaping of Organic Agriculture. In this process, social learning should include the consumer and other 'non-expert' participants in a way that reflects an attitude of interaction rather than top-down knowledge transfer.

9.7 The Limits of the Research and Future Directions

The study was designed to be an exploration of the ways by which farmers gathered and generated knowledge about organic agriculture, and how their knowledge changed as they become more proficient practitioners. As such the fieldwork was kept open and grounded in what the farmers demonstrated to be their ways of learning. The theoretical background, suggested that routines and practice were important carriers of knowledge and learning. Whilst the fieldwork demonstrated the ways that these featured, there remains an opportunity to develop a more detailed exploration of the ways that working routines change for organic farmers on conversion, and how these changes may reflect on the different status of farmer knowledge in organic in comparison to conventional farming.

The research was, as always, restricted by time and resources, and an alternative approach to the study of the change in routines may be to employ a more thoroughgoing ethnographic approach and to limit the study to a smaller number of farmers. The empirical work was limited to qualitative fieldwork, and the statistical input from a survey of the knowledge and learning characteristics of organic farmers in Wales will add a more general aspect to the research. The work was also limited to the main sectors of Welsh agriculture, namely the red meat and dairy sectors, and in

the meantime the horticultural sector has been added to the AFP portfolio. Expanding the area of research in these directions should be of interest.

The other major area of interest in this study has been the ways that farmers have learned and the role of social learning. Peer to peer association has featured as the most prominent and favoured method of learning and the study explored three groups that offered the possibility of studying three different forms of associations. This study was hampered by the timing of the research, following close on to the Foot and Mouth epidemic that produced severe disruption in farming life and in the organisation of collaborative farm and discussion groups. The disruption caused by the epidemic meant that the groups that were researched had not had much time to become settled and the membership to be embedded into enduring relationships. A longitudinal analysis of the development of these groups may provide some interesting findings on the ways that relationships of trust and credibility are built up between farmers, and in conjunction with research on individual organic farmers how longer experience of organic farming practice affects the attitude and philosophical orientation of the farmers with respect to organic farming.

The groups studied for this thesis were relatively new formations, having been operating at the most for two or three years, which as suggested above might affect their degree of success in involving farmers. The groups may, however, have a natural life-span or a natural turn-over rate in membership that may depend on a number of different factors. As individual farmers achieve some of their goals they may find that their interest and needs have developed in different directions and that the groups will be reorganised and re-constituted.

The role of organic institutions in the development of knowledge about what organic agriculture entails is also open to further research. The institutions of organic agriculture may still be said to be in their infancy in Wales, and given the targets for expansion and the continued low percentage of land and number of farmers that have been converted to organic farming, their activity in support of development may need to be revised. The development of the consumers' knowledge of organic food and farming is one major area which continues to grow and the changing interaction between the farmer and market actors in general can be examined more closely.

It was noted in the discussion that organic agriculture can be considered to be under challenge from a number of directions. The conceptual understanding of organic agriculture differs among a range of actors, and its relationship to a more general understanding of sustainability is under scrutiny e.g. from such farming systems as Integrated Farming, other low input technologies and systems that utilise genetic modification. In this respect, the proposal that more sustainable forms of agriculture, such as Organic Farming, require a more interactive mode of knowledge generation is under criticism as scientific expertise reasserts a dominant position. A similar loss of farmer influence may be occurring as commercial market actors become more directly involved in vertical relationships with farmers in the food chain, and centrally defined quality issues and security of supply become more important considerations. Food quality issues are, however, contested and as the influence of market interest grows the state of creative conflict that had previously mainly involved production and agro-environmental concerns may become more directed toward the consumers' understanding and knowledge about organic food. The dynamic of knowledge exchange between organic producers and the organic consumer, mediated by the power of the retailer provides an interesting area for further research, as does the strength of hierarchical knowledge production regimes, and market power structures continue to challenge the legitimacy of the more radical interpretations of sustainable, and in this case, organic agriculture

Finally, agriculture continues to undergo a period of change due to the ongoing reform of the CAP and, in its shadow, the reorganisation of agri-environmental schemes and rural development policy instruments, all of which are occurring against the background of the changing role of agriculture in world trade. These regulatory changes can be expected to have some effect but, with the introduction of the Single Farm Payment, the decision environment that directly affects the organic farmer has entered a particularly unpredictable state, with consequent uncertainty for the future of all forms of agriculture.

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APPENDICES

Appendices are numbered according to corresponding chapter

Appendix 4.1: Interview Structure

Farmer Interviews

Interview structure and indicative content	
Semi – Structured interview. Headings are the main areas to be covered Estimated time: 1 ½ hours	
Group: Respondent Name: Respondent Address: Telephone Contact: Interview Dates:	Farm characteristics (Size, main enterprises) Additional Notes: e.g. Family members taking part
Introduction: Discuss the broad aims of the project Explanation of the structure of the interview	How farmers have dealt with the process of converting to organic agriculture How organic farmers are dealing with ongoing knowledge and learning needs, as they become more experienced.
Themes	
Biographical	Personal experience in farming including any formal training How long as an organic farmer The enterprise General approach to farming Current state of enterprise Market conditions and comparison with conventional farming Subsidies, Grants, and future developments
Attitude	Reasons for converting to Organic agriculture Commercial Environmental Food Quality Holistic Participation in Agri-environment Schemes Which schemes Opinion of schemes General attitude to environmental issues Relationship of organic agriculture to Agri-environment schemes
Process	Process of conversion Initial impetus Slow and progressive or whole farm Influence of neighbours, friends, family, in making decision and early conversion Conversion Support Soil Association or OFG or any other organisation (Union?) Financial support Veterinary Marketing
Peer Reaction	Reaction of other farmers Conventional farmers Organic farmers Usual level of interest by farmers in each other's affairs
System	
Changes in Practice	Changes in farming required when converting Main differences Most important areas which need attention when converting Most important areas to develop as you gain experience Greatest problems: Areas of Fodder- clover Veterinary and Animal health Mastitis

	<p>Calving Other Control of weeds- Dock, thistle, nettles etc Farming system: Choice of Considered alternatives What Alternatives are present locally</p> <p>Return to Conventional Circumstances for returning to conventional farming</p>
Commercial	<p>Changes in commercial terms Main differences Most important areas which need attention when converting Most important areas to develop as you gain experience Stocking Rates Influence on commercial/enterprise decision Knowledge about costs of production Prices: How do you find out and keep up? Subsidies/Quotas Personal opinion Local Discussion</p>
Learning and Advice	
Areas of knowledge in Farming-especially organic	<p>- Awareness of; interest in; extent of knowledge of: Soil structure Nutrients and methods of exploiting Manure Composting Plants for drawing up and releasing specific nutrients (as clover) Silage types and uses Other</p>
Need/ Interest for more information or new knowledge	<p>Want/need to learn more?- new research in organic agriculture Areas to learn about: Production Commercial Standards Policy, Regulation,</p>
Training in Agriculture	<p>Formal Full-time College Short Courses One-day courses Open days On-Farm training (Upbringing)- How has this been important?</p>
Local Knowledge	<p>Customs Generational Experience</p>
Sources of Knowledge/ Information about Organic farming	<p>Before and during, Since conversion Official Organisations (list) Media Discussion Groups Informal (inc. family and Market etc)</p>
Advisers	<p>Type and origin of advisers Government Organic Commercial Company representatives Environmental organisations Role and contribution</p>
Value and Trust	<p>Which sources of knowledge or information do you value most? List - order of preference? Basis for the order Trust Personal relationship Competence Understanding and sympathy for organic agriculture Other Official Sources of information Different value on this? Equal validity for own/local/informal sources?</p>
Networks	
Competition and Collaboration	<p>Competition in Farming Market Breeding – Shows Prices Appearance of farm</p> <p>Co-operation in Farming</p>

	<p>Membership of Machinery Rings (also informal borrowing) etc</p> <p>Discussion groups</p> <p>Co-op marketing etc</p>
Social Networks	<p>Foot and Mouth disrupted social life as well as the basic business of farming</p> <p>Where do you meet other farmers?</p> <p>How much do you meet other farmers?</p> <p>Dependence on proximity</p> <p>Dependence on common interest</p> <p>Voluntary work/ position/ activity</p> <p>Purpose of Meetings</p> <p>Seasonality of meetings/ frequency and changes over time</p>
Decision maker(s) and discussion about the enterprise	<p>Decision to convert</p> <p>Discussion about management of the enterprise since conversion</p> <p>Inside family</p> <p>Outside family</p>
Involvement in Organic or general agriculture	<p>Official positions?</p> <p>Participation in research</p> <p>Surveys</p> <p>Experiments</p> <p>Interviews</p> <p>Interest in Policy</p> <p>NAFW review of Organic agriculture</p> <p>Agri-Food Partnership</p> <p>CAP Reform</p> <p>Changing role of farmers</p> <p>Producing food rather than animals (different in dairy?)</p>

Appendix 4.2: Thematic matrix scheme : Farmer interviews

Farmer	Theme						Individual Far mer Summary of themes
	Embeddedness	Path Dependence	Attitude	Motivation	Forms of Knowledge	Learning and Learning Processes	
A1							
A2							
A3							
A4							
A5							
A6							
A7							
A8							
A9							
B1							
B2							
etc							

Appendix 5.1: Typical communication advertising Farm Open Days

The information is also given in Welsh.

Date:

FARMING CONNECT SHEEP AND BEEF OPEN DAY

Sheep and beef farmers are being invited to an open day tailored to lowering their costs and improving their businesses.

The open day at [name of farm] Bala on Wednesday 25, September 2002 at 2pm has been organised through the Farming Connect Sheep and Beef Development Programme, which is being run by MLC Cymru.

The day will be hosted by the farm's owners, [name of farmers], who farm [farm name] and nearby [farm name] as an upland beef and sheep unit.

[farm name] comprises of 50.61 hectares of grassland. The 80 strong Welsh Black suckler herd are mostly pedigree and has been actively involved in the Welsh Black Cattle Society's Herd Health Scheme and is also currently performance recording with Signet.

The 919 strong flock consists of Welsh ewes and Cheviot cross ewes, with Welsh, Cheviot, Texel and Suffolk tups being used. All cattle and lambs on the farm are sold finished.

A trial is currently underway on [farm name] to test Electronic Identification (EID) and to try and incorporate it into the farming system. All the farm records are currently kept on computer and [farmers] are keen to see the successful incorporation of EID into this system as it would cut down on paperwork still further.

The farm is just one of a number of demonstration farms in the Farming Connect Sheep and Beef Development Programme, which is being delivered by MLC Cymru.

Demonstration farms are aimed at improving commercial performance and production. Each farm has a group of farming professionals who will look at the best ways to increase profit on the farm and will then help to implement and monitor the performance. MLC Cymru experts and professionals also provide advice and support.

By demonstrating methods of best practice in farming and through constant monitoring of progress, the farms will help to transfer new technologies and information to farmers.

For further information regarding the Farming Connect Sheep and Beef Development Programme, please contact [given name], MLC Cymru Industry Development Manager on tel. no..

The Farming Connect Sheep and Beef Development Programme has been set up with the aim of improving the competitiveness of the beef and sheep industry.

Farming Connect aims to help farming families improve their farming business. It was launched last autumn by the Welsh Assembly Government, Welsh Development Agency, with a number of other key partners.

Farming Connect has been created to develop a single network for the delivery of advice and services to farming families and to help foster an entrepreneurial culture. The new service is geared to providing opportunities for farming families for income generation and employment both on and off the farm. Farming Connect can be accessed by telephoning [tel. no.].

Appendix 6.1: Farmer Biographical and Enterprise Characteristics

A: Biographical and Enterprise characteristics for Farmers (A1-A7) in Group A

Feature \ Farm	A1	A2	A3	A4	A5	A6	A7
Length of time in farming	Lifelong (about to retire)	Lifelong (giving control over to son)	Brought up on farm, now in late 20's	18 years following first career	Lifelong	18 years, following first career, brought up on a farm	Full-time for 8 years
Family involvement	Many generations in the same family No offspring Owner occupied	At least 3 generations Son main manager. Owner occupied	Husband and wife involved in decision making Owned by father who owns works adjoining farm	Farms alone Farming in family background Owner occupied	Son and daughter in law taking over the management Family owned	Wife works off-farm; Son part-time. Organic unit rented conventional land owned	Owner occupied No off-spring
Farm holding and location	40 Ha: Hill Farm	Total ~ 220 Ha Upland farm	~55Ha: Low- valley floor	44 Ha: Upland Farm	207 Ha Low- Valley floor	120 Ha organic and 93 ha not : Low- valley floor	50 Ha Hill Farm
Length of time as organic	Conversion in March 2000	Conversion 1998	6 years	Full certification in 2001	Full conversion November 2002	mid 2001	Full Conversion by 1999
Main Organic Enterprises							
Beef	-	70 store cattle	'few' suckler cows	Re-stocking after break following personal accident Had 25 head of cattle previously	Store cattle	-	20 suckler cows
Sheep	120 ewes	550 ewes, 200 hogs (yearling sheep)	200	Starting to re-stock after break Had 150 ewes previously	1195 ewes	550 organic (with another 500 on the conventional unit)	300 ewes
Other / comments	Winding down to retire	Business unrelated to farming run by husband.	1000 chickens, some horses ; Reassessing involvement in farming, Work off farm	B&B income and further independent income source	Farming a full time occupation to be continued by son and wife	Continue farming until retirement - has a son willing to take over	Ex- FWAG, part time on present farm when owned by uncle

Appendix 6.1 B: Biographical and Enterprise characteristics for Farmers (B1-B8) in Group B

Feature \ Farm	B1	B2	B3	B4	B5	B6	B7	B8
Length of time in farming	Lifelong	Born on farm 4 years university,	Wife's family farm	Born on farm, 9 years university in research	4 years College; 2 years working away	Lifelong	Lifelong; 13 years on present farm	Lifelong; 8 years on present farm
Family involvement	Parents and two sons all work on farm	Father help plus wife Father runs adjoining farm and helps out Young children	Husband and wife partnership Young children	Father as owner and overall manager	Parents work on farm- father runs dairy herd Young children	Husband and wife Young children	Husband and wife, some help from son	Husband, Wife works off the farm Young children
Size of home (organic) farm holding	40Ha	160Ha	80Ha	600Ha (in two units)	100Ha	136Ha	80Ha	19Ha
Ownership	Owner Occupied	Owned by father	Owner occupied	Owner occupied	Parents	Owner occupied	Owner Occupied	Owner Occupied
Length of time since conversion	5 years	1 year	2 years	1 year	2 years	1 year	3 years	5 years
Main Organic enterprises:								
Beef	20	-	-	-	-	-	-	-
Dairy	30	200	65	300	70	160	65	30
Sheep	100	-	-	200	-	-	-	-
Other / comments	Holiday cottage	-	Breeding is the main interest	Direct milk sales and bottling operation	Cheese making	-	Organic egg production	Bottles own milk; converting back to conventional

Appendix 6.1 C: Biographical and Enterprise characteristics for Farmers (C1-C8) in Group C

Feature \ Farm	C1	C2	C3	C4	C5	C6	C7	C8
Length of time in farming	All life, present farm since 1971	All life	All life, moved from Cardigan in 1970	All life	Bought by father; Present farmer born and bred	Moved from England, smallholder previously	Generations in farming in the area	Generations in the family
Family involvement	Originally a partnership of parents and brothers Daughter helps	Originally a partnership of parents and brothers Young children	Family farm Young children	Brother and Nephew	Family Young children	Father help Young children	Family farm	2 brothers and families
Size of farm holding	125Ha owned and 20Ha rented	89Ha with 20Ha of which woodland	162 Ha	69 Ha, rent another 10Ha	162Ha in two adjoining units	182Ha	72 Ha	70.8 Ha
Ownership	Owner occupied	Owner Occupied	Owner occupied	Owner Occupied	Owner Occupied	Owner occupied	Tenancy	
Length of time as organic	Conversion started 5 years previously		Staggered conversion over 4 years up to 2000. Fully converted for 3 years	Since 1995	12 months fully converted	3 years	Few months	3 Years
Main Organic enterprises:								
Beef				20			50-60 sucklers	
Dairy	125		250	80	120	300		80
Other / comments		Potato and beef; Future Uncertain						

Appendix 6.2: Farmer Relationship to the Farm and Farming

Category	Farmer	Quotation
Home Stay	A1	'My wife's family has been in farming for a long time in this area- on a farm down in the valley. This farm came into their possession in the 1780's around the Enclosure Act. These uplands were divided up and this piece was given to one of her ancestors for raising a militia for the Napoleonic wars.'
	A2	'This farm has been in the family since about 1947, and my mother used to farm it. She lived somewhere else and someone came up here once a week - that sort of farming,.... and when they had brucellosis...and they had a pedigree Welsh Black herd here...and they wiped out all the cattle and she didn't want to go on then.....Her brother had it for a bit but he had too many farms. We had one each in the end- me, my sister and my brother. That was in 1975.'
	A3	'It's a family farm, its been....my dad and my granddad both farmed it.... my dad split the farm up 3 ways, my dad still owns it but we took over about 130 acres ourselves - rented off my dad - he gave us the cows and quota. Same as for my brother - he had another farm about 3 miles away and set up there. My wife and I set up as a partnership and were milking the cows'
	A5	'Always been here, been farming all my life, and my son and daughter in law are taking over now'
	B1	'This is the family home-always been here farming, and my father before..'
	B3	'This is [wife's] birthplace, and we moved here eighteen years ago because her parents were getting on. It's always been a family farm and the main income (source) is the dairy herd.When we got married.... (we) moved to [name of local village] to my family's farm. Then my brother came back from college, and we moved back here.'
	B6	'(The)...farm's been in the family for three generations. I wanted to be a farmer since being a child- had my education in the local secondary school...work at home for a year... and then [name of agricultural college] to do National Diploma and returned to the farm in 1987, farmed with my parents until 1994... they retired and I and my wife took over from then.'
	B7	'My husband (was) born here....the fourth generation to farm there. I was born about two miles from here and farmed with my family since then. We don't know any other way of life. (We've) been here thirteen years on our own since his father retired.'
	B8	'(I was) born on a farm, and when I left school my parents' farm was not big enough so I went to work to work on fencing and making gates for about 10 years. I was then offered a job to work on a farm. Then a farm on rent became available in the village- a small farm of 15 acres, and so I went there for about 3 years. This farm - (was) with an old man and wife and he was interested in retiring and asked me how much I could offer for it. So I came here.'
	C3	'(I went to) [name of agricultural college] to do 4 years green crop technology, came back (...to the family farm, and...) started share farming'
	C4	'[name of farm] was my grandfather's farm and my father, and now my turn and my brother. So I farm in partnership with my brother who is now in poor health, and myself and then [name] my brother's...(son) (my) nephew, who have now come into the business to take over from [brother's name].'
	C5	'My father has been here thirty nine years and I was born and bred here; thirty eight years.'
C7	'(We) started farming in 1971. We were on the next door farm, and my father was on this one. When he retired we came back here then..... We were next door for twenty two and a half years and moved here in 1993. This farm is an estate farm- (and it is) still tenanted.'	
C8	'I farm with my brother.....my father bought the farm going back 40 years'	
Returnee	A6	'Started farming in 1985, having worked for [name of local manufacturing company] before that. Built a bungalow first, sold that then bought the farm.....(I) had an interest in it before - being a farmer son, and had been farming before when I was in [name of local manufacturing company] - had some land then.. and worked it part-time'
	A7	'I was brought up in [name of local town] - not on a farm. This was my grandparents' farm, and then my aunt and uncle. All my holidays were farming'
	B2	'This is the home farm; my parents farmed here. I was born just down the road in a smallholding and they had this farm after my granddad. They bought two other farms - one small and one large one...so we have 400 acres.'
	B4	'The farm itself has been in the family since 1945. My granddad moved up from Devon and then my father took it over in 1973, and has farmed here since. I've come home, he's still in charge and I came home three years ago -.... I've been away, I've been to university- did an Agriculture Science degree and did a PhD in animal physiology, and spent three years as a research scientist in the States- [name of university].'
	B5	'(My)...parents started here in 1961, they bought the place, had to borrow money- £5000 for 80 acres. They bought another couple of neighbouring farms, sold the houses off with a little bit of land with each one, and increased the size of the farm to 250 acres.'
In-Mover	C1	'I did a degree in Agriculture in [name of university] and came home on the farm - we were farming in [name of county] at the time and very soon after graduation we moved down to here.'
	C2	'I did a HND at [name of agricultural college] in Agricultural Science, and came home in [name of county] on to the family partnership, and when I got married this farm was bought by the partnership. Ten years ago I left the partnership and took over this place on my own.'
	C6	'(I) moved to [name of area] in 1981, - farmed in [name of county] before...(I) left school, didn't go to college, my father was at work, hadn't actually farmed but was involved with the [name of industry] industry. So when we moved down here - I was meant to go to college but didn't because somebody had to run this place.'
Entrant	A4	'I had no background in farming. I moved here 18 years ago. I bought the house and then acquired some land and now have just over 44 hectares.'

Appendix 6.3: Farming as a career and way of life

Category	Farmer	Commitment
Home Stay	A1	'My wife inherited it (farm) from her father. She inherited 123 acres and then he added another 45 and then we bought some. It also had a hill up above. In total there is 190 acres. She took it on in 1976 and I continued in my work- I was working for [name of company and local town] and I continued until 1988 and then did another job until 1994. So I was a part-time farmer and my wife was a full time farmer. I was very much involved.'
	A2	'My husband farmed it then (in 1975). He could see after a few years that hill farming wasn't going to educate the children because all our children are dyslexic and in those days they 'became remedial'. That wasn't the way we wanted to go.....so he said that he wanted to do a bit more (for the children - to avoid 'remedial' education). So he started the [name of enterprise] and was going to give up farming and sell the farm. I said well if you sell the farm where am I going to keep my pony? So I said I'll run the farm. It was in at the deep end and survived that - fourteen to fifteen years ago now.'
	A3	'...my dad still owns it but we took over about 130 acres ourselves - rented off my dad - he gave us the cows and quota. Same as for my brother - he had another farm about 3 miles away and set up there. My wife and I set up as a partnership and were milking the cows'
	A5	'Been in farming all life and my son and daughter in law taken over now...We've always been in this farm... (and)...bought some other pieces to this farm'
	B1	'Our income compared with a lot of people (not high).... but the deep freeze is full, and we are not hungry- the car and house is paid for'
	B6	'It's in the blood- my grandfather and father both farmed here. I have been brought up with it. I don't know anything else- I wouldn't do anything else.'
	B8	'(I). was born on a farm, and when I left school my parent's farm was not big enough so I went to work on fencing and making gates for about ten years. I was then offered a job to work on a farm. Then a farm on rent became available in the village - a small farm of 15 acres, and so I went there for about three years. This (present) farm was with an old man and wife and he was interested in retiring and asked me how much I could offer for it. So I came here.'
Returnee	A6	'Started farming in 1985, having worked for [name of local manufacturing company] before that. Built a bungalow first, sold that then bought the farm. Interest in it (farming) - being a farmer son, and had been farming before - part-time - when I was in [name of local manufacturing company](then) gave up [company name] job to work on the farm..... Helps that the wife is working full time and brings a steady income'
	B2	'I had started getting fed up with the type of people that I had to work with so I decided - I worked in civil engineering on the Severn Bridge- the old bridge and then in coal mining, and then hydroelectricity in Hampshire. I started to think that I would like to work for myself, so I then came home.'
	B4	'I always wanted to farm and it was at the time when there was a vacancy here, one of the lads had just left - a shepherd- so my dad was looking for someone else, and I had always fancied doing it and it was a crossroads for me in academia.....I think it built up from a young age (interest in farming)- when you have been brought up on a farm you always spend your holidays working on the farm I found it a very challenging job, and I found it very similar to academia in many respects.'
	B5	'...so about 60 of us were on standby (from his original job). So I was wondering about what to do in the future, and my parents had been talking about going organic for a number of years..... I then decided to come back and to go organic.'
In-Mover	C1	'It was a dairy farm- similar type of farming - and we moved the cows from there down to here and we started here in 1971/72 and farmed conventionally for perhaps 25 years.'
	C6	'We were farmers, but he (father) hadn't actually farmed- it was a hobby for him, I took an interest after I left school, and then we moved down here. He still travels back to [name of town] to work at the moment- just gone 73'
Entrant	A4	'...when I started in the late 80s everything was being run down. I consulted ADAS and I was told basically not to farm, that it was a stupid idea. The farming improvement schemes had all finished. I thought that I won't take a year out and go to agriculture college, I'll just see how I can make a go of it off my own bat.'

Appendix 6.4: Farmer Confidence and Expectations

The observations in this appendix represent direct comments and comments that imply farmers' views of the future. The way that the farmers discussed their activities in general implied much about what they expect from farming and the future as does the farmers' expectations of whether their children might remain in the industry or not.

Category	Farmer	Observation
Home Stay	A1	'I saw 2001 coming and that was when everyone was forecasting that Europe would rehash CAP and so we started to work towards it. We halved the farm by the time I was 62. We only have just over a 100 acres now. We saw that agricultural was changing. We like the idea rather than subsidies of having fixed term contracts, and we thought that is how the government should be going and contract with farmers on a fixed term basis to do specific things. What we didn't like about subsidies was that there was money but nobody quite knew what it was for..... This is our last year- we are not going on farming. This year will be the last year that we will have our own stock'
	A2	'In the past 2 years my son [name of son] has just finished at college and has been at home and he does more and more of the major decisions.'
	A3	'Year ago in May we sold the cows, and for 6 months after that we weren't enthusiastic about farming. We didn't want to give up on it but we felt we had been let down'
	A5	'Been in farming all life and my son and daughter in law taken over now'
	B1	'We are literally a family farm and run as such - with these (sons) waiting to push me out'
	B3	'Children hopefully won't stay on the farm - but up to them - (maybe) after getting a degree in something else'
	B6	'(He) likes (son) tractors and machinery, but I hope that he will want to get into real farming and that we will have the place for him to do so'
	B7	'He (son) worked for Tesco since he left school, works in the warehouse on Thursday Friday and Saturday. Sunday he has off, Monday he works for us and Tuesday and Wednesday he works for my brother on his farm.....He is now 22, and he has done that since he was 16, and he likes that - he has plenty of money - Tesco makes it all up - which we can't afford to pay him not on 60 odd cows. My brother has 60 cows as well and we can manage it'
	B8	'Up to them (children going into farming). (It's) very difficult for young people to start farming. Both of us (parents) are working- and always have, but it is still quite hard'
	C4	'...and then John (brother) - my brother's (son)..(my) nephew who have now come into the business to take over from John.'
C5	'..At the moment farming is looking pretty rough over the next-how many years. So I think you have to sit back and go with the flow a bit and do what suits yourself.'	
C8	'...it's always a problem we had that we were always a size that would be too much for one man. If I was here on my own I would have to employ somebody, but the farm's chief struggling point is that it has to make a living for two families...I am fifty two and my brother is forty four. I tell my two sons that there is a better live outside farming... My brother's boy, I don't think he wants to go into farming.'	
Returnee	A6	'(My) son is 23, has an interest in farming and contracts out in various jobs..... Farming has improved in the last year or so...(and)..helps that the wife is working full time and gives a steady income'
	B4	'I try not to think about it too much because it is all going to change. There is always going to be opportunity around.....One thing that I found coming back in - I never found any as a young farmer- there was nothing available for me - in terms of training or that there was a youth policy. The only thing I got was some cheap quota, and with Farming Connect there is more cash available. I would never have thought about coming back into farming if I didn't have a family farm.... There is no way that a young farmer could go into business unless he had a substantial amount of capital. Couldn't just start up these days - there is nothing out there which says that your interest rate will be halved over the first three years or something like that'
	B5	'There would be no point contemplating starting as a new or young farmer now. You would need at least 300 acres and milk 200 cows- as a conventional farmer- but even also as an organic farmer. And where would you get the money to buy that sort of farm? You would need a 30 year mortgage. A 300 acre farm around here would be <unclear>....I have a son and I am keeping him away from ideas about becoming a farmer. I want him to learn as much as he can in school, and if he has some interest in farming he would have another job so that he wouldn't be reliant on farming.'
In-Mover	C1	'I think that there are so many opportunities outside farming that are attracting farmers sons and daughters out of the business, and obviously not attracting anybody outside farming into the business... the general depression in agriculture... the other problem is that since people aren't being attracted that the agricultural labour force- farmers and employed workers - their average age is rising year by year, and there is going to be a gap somewhere in the future when there aren't enough people coming in to take the industry forward.'
	C2	'I'm just not very positive about anything at the moment concerning farming. That's fairly general really - a fairly (general) lack of interest in (by) the public and from the government in farming and the way that it has gone.'

Appendix 6.5: Observations on the farm as a business

Business Attitude Designation	Farmer	Observation
Business/ Diversifier	A3	'We did a 5 year cash flow and we stuck to our budgets and were quite keen to keep that going. We won an award 3 years ago in the Young Farmers of the Year in Aberystwyth because of our cash flow' '(its) taking us 12 months to work out the direction where the farm should go'
	B4	'You are faced with a problem and you have to think about it, you have to come up with solutions and you have to be everything from an accountant to a vet to a manager to shovelling shit to everything, and cope with the whole scope. I enjoyed it. There were times when you think what am I doing this for? And you're a businessman as well, and working with animals and working in the countryside- lots of pros to it, a few cons but I think a lot more pros. As long as you can make it a viable business- I think we are lucky in a way that the farm is big enough. I mean we employ 6 people plus me and dad working full time here. So there is enough time to have the odd weekend off and you are not finding that you are getting bogged down into milking cows twice a day. I think a lot of people are finding that you literally haven't got time to think about where you are going because you are on the grind all the time.'
	B5	'(My) interest gone in to cheese making and less in farming. Farming is too uncontrollable in comparison. But the farm must work to produce the milk. (We) need a particular quality of milk- need a particular butterfat content – coming from the feed and breed of cow.'
	B8	'I could not make any money off the farm, and I was working off it as well, but that (the farm) would be too much of a loss. So I thought that I would either have to buy a bigger farm, or finish, or to do what we have done, which is to bottle our own milk. So I went to see a couple of shops in [name of local town] and asked if they would be interested in buying milk if I did bottle my own, and they were interested. I said I was organic, and they would buy organic but only ten litres per day, so that was not possible. I might as well go back to conventional. So that made my mind up.'
	C2	'I would like to be involved with farming but its not going to be full on like to has been in the last 3- 4 years. It's been pretty large scale potatoes and vegetables and I would like to farm the way I want to farm and not the way I am forced to farm. I would like to have a few cattle and to have a bit of corn and to do twenty acres of potatoes and not rely on the farm for the whole of your income really.'
	C3	'I am more like a business man. Most conventional farmers are appalling. Because they think of themselves as farmers. You ask what they do and they are farmers....I have been on business courses..... Also my father ran a number of businesses from here so I get a slightly different background and input..... I went on a superb course Business investment Strategy which was in Cardiff'
	C6	'Four of us have got together to buy a property early this year which is quite interesting and is probably something I wouldn't have done on my own. Because there is four of us it is easier..... We are also looking at taking a second farm on to run, and could probably get a better return but it will be a lot more difficult to do- a lot more work.'
Production	A2	'You slightly feel that you want to make it work (organic farming) to prove that you can do it and being a woman I felt I really wanted to make it work and I didn't want them to think that I was going to fail.'
	A5	'We classify ourselves as traditional farmers'
	A6	'(It) helps that the wife is working full time and gives a steady income...(she) had thought about converting a barn (for holiday let) but don't have the money, and prefers to nurse'
	B3	'We have thought about processing, but there is such a lot of paper work and so many things that you have to know about, and marketing, cheese, or butter, ice cream etc. It's not within our grasp – a small group of us – three farms have looked at taking on some extra land, but there hasn't been enough time to push on with it any further – to develop the idea and to market it'
	B6	'I feel that I would like to expand in order to create a future for the children. I think that if you stay in the one place that you will be left behind. So we have to expand if the chance comes to get a bigger sized farm, or if the quotas come to an end then the price of milk will come down maybe 12ppl, so then you would need to be big enough then to make enough profit to keep the family going..... We have thought about keeping going like this for another ten years like this by ourselves and then from then on we want to be big enough to employ some one to do the milking and so on, and we could take it a little bit more easy.'
	B7	'When I started with the chickens I also knew that the land (rented) was going to disappear, and if we wanted to stay organic we couldn't stay organic with the amount of land we used to have and we would have to do some other thing as well and this (organic eggs) took up less land and the market was there too'
	C5	'...we did on the beef many years ago (use growth promoter)- didn't like the system and went back to the traditional way and we always have been pretty well traditional farmers..... Now its looking I might have to sell my dairy herd- I don't have the money to expand and I don't have the numbers to survive in today's environment or so it seems, so if they extend this over thirty months then I will be back into beef – traditional breeds' 'It is a beautiful area as well and I've got a few things up my sleeve in terms of diversification as in rides around the farm.'
Holistic	A1	'But we see it as something to pull the whole of framing into a more environmental and less intensive way of doing things and we like that idea.'
	A4	'I have been able to stand back and have a look at it. I am going back being even more extensive than I was before.....the farm is not big enough to be on its own. I do bed and breakfast. There is a 2 nd income coming in anyway, and I want to see how I can farm extensively with as few outside inputs as possible in the next few years.'
	B1	We have one holiday cottage and one in the making – those only pay because I do it all myself
	B2	we will have to try out tourism ideas- such as old buildings- it is not easy but it will be possible

Appendix 6.6: Reasons for Conversion to Organic Farming

This appendix contains responses from farmers to questions about reasons for conversion. As the collection of responses for each farmer indicates, the reasons were not always absolute or clear cut, and in some cases were confused. The broad categorisation of the farmers in Table 6.6 (also reproduced here) as Philosophical, Commercial- Opportunistic, and Commercial- Long Term is followed in this Appendix and as noted in Section 6.4 the designation rests on a judgment of the primary reasons for conversion.

Table 6.6: Categorisation of the principal reasons quoted for conversion

Category Designation	Category Description	Farmer
<i>Philosophical</i>	Environmental concern and general attitude to farming considered most significant	A1, A4, A7, B1, B2
<i>Commercial- Opportunistic</i>	Conversion support and current premium quoted as most significant without much reference to other reasons	A5, A6, B8, C2
<i>Commercial- Long term</i>	Commercial farming business reasons most prominent (including state support), with a mix of other motives e.g. Environmental, health, management, issues expressed as secondary concerns	A2, A3, B3, B4, B5, B6, B7, C1, C3, C4, C5, C6, C7, C8

Table of Quotations

Category/ Farmer/Theme	Quotation
<i>Philosophical</i>	
A1 Farm Management	'We got into organics because we started to close down the farm.....I saw 2001 coming and that was when everyone was forecasting that Europe would rehash CAP and so we started to work towards it. We halved the farm by the time I was 62. We only have just over a hundred acres now.'
Environmental	'We like the idea, rather than subsidies, of having fixed term contracts, and we thought that is how the government should be going and contract with farmers on a fixed term basis to do specific things. What we didn't like about subsidies was that there was money but nobody quite knew what it was for. Whereas if you took on an environmental scheme or organic scheme, obviously the politicians could sell it more easily to the taxpayer. Their taxes were going for something specific and they could see what it is and whether they liked it or not. So we thought it was a good idea, and we liked the idea of looking at a different way – a less intense way of farming. And we were in a good place to do it. Up on an upland farm- not a hill farm- you don't have that intensity anyway, so we thought that we were in a good place'
	'We sold our cattle just before the Foot and Mouth and we sold our quotas and we sold our quotas on sheep and now we have only got 120 ewes. But at that time I started to wonder whether there was going to be enough for me to do and I was looking for extra income. So we began looking at two things. We looked at a habitat scheme- something like 80% of the farm is under an environmental scheme and then we went organic at the same time.'
A4 Farm Characteristics/ Practice/ Opportunistic	'I had always been fairly extensive as a farmer. I was more or less organic and when the organic scheme came along I thought that it was a bit of extra money there and since one has to fill in so many forms one might as well fill in more and get the premium.'
Environmental	'...and I want to see how I can farm extensively with as few outside inputs as possible in the next few years.'
	'I think that my farming attitude is essentially environmental anyway- conservation and environmental- to return the farm to be environmentally friendly. I have done a lot of hedgerow restoration and so on.'
	'So I see it as an environmental thing. As a first principle it is keeping the soil naturally fertile and in good order and in good heart so that in the grand scheme of things I can hand on to another generation and not say that in the last fifty years I've knocked the shit out of it and here is a piece of barren land and see what you can do with it. My feeling is that a lot of conventional farming, especially up in these hills, and the amount of chemical fertiliser thrown at the ground is having a negative effect.'
A7 Farm Characteristics/ Practice/ Environmental	'Well the farm wasn't officially organic. My uncle was a very traditional stockholder. So for years he would use slag and lime and that was it. And so when people started using artificial fertilisers he didn't. So from my point of view that was wonderful ...because it meant that when I took over which was in 1996, we were already in an ESA, so we had proof that the land had only lime and slag on it so we were able to backdate our conversion. So we got organic status for the whole farm in 1999.'

	<p>'...for me it was a mixture of because it had always been a traditional [<i>farm</i>]...and he was a very good husbandry man. From a nature conservation point of view it made perfect sense'</p>
<p>B1 Farm Characteristics/ Practice</p> <p>Environmental Sustainability</p>	<p>'Then people like myself who were virtually organic anyway and I only had to tweak a few things and I have had to change hardly anything at allI was being rewarded for thinking – a lot of people don't think. For example, drying off cows without antibiotics- people have been drying off cows without antibiotics for years –it's only in the last 15 years that it has become doing all your cows with dry cow therapy because we put a big ad. in the <i>Farmers Weekly</i>- it works quite well without.'</p> <p>'This farm has never been sprayed at all for anything'</p> <p>'The most important thing said to us was that organic farming is not just an attitude of farming but it is an attitude of mind.....A lot of people do miss the point– it is an attitude of mind not just farming practice.....Difficult to quantify (sustainability).....and how far you want to go– we haven't gone down the horse road yet'</p> <p>'We have been in a lot longer than a lot of other farmers, and when we went in there were a lot more who really believed in the organic ethic, and...(now)..people have gone in to organic farming without that [<i>ethic</i>]</p>
<p>B2 Sustainability</p> <p>Environmental/ Health</p> <p>Food Quality</p>	<p>'I had always said to my father that we would go organic after he retired, but he started to think as the milk prices went down to change then as the grants were there. So I was glad that the grants were there to change his mind. So we went organic, but I did it because I wanted to go organic- nothing to do with the money. I would have gone without the money at some time.'</p> <p>'(I would have changed) because I believe in the system. Its sustainable farming. I have always been a little bit into alternative energies and the more natural ways of doing things. As I said I used to work with the Hydroelectric power scheme- and that was interesting and a lot of the Mechanical Engineering course had to do with buildings and efficient houses and so I was always around these alternative energies. And it is something – some one said sometime when I went to one of those meetings that it would take about 6 tons of oil to make 1 ton of fertiliser and then you start to wonder then just how sustainable is conventional farming. I think that organic is much more so.'</p> <p>'I think that sprays are bad- I hardly ever used it anyway- chemicals- toxins and there's a hell of a concoction out there. Even down to shampoos – I think that has a lot to do with the cancer rates and so on – you are what you eat and everything else on top of that– you use.</p> <p>There is nothing like home early potatoes. Maybe there isn't a different taste to the milk, but it's about where it has come from isn't it? We buy what we can – so about sixty percent of our diet is organic- so I am not doing it just for the money- I am spending money on organic also. I do believe in it.</p>
Commercial- Opportunistic	
<p>A5 Farm Management</p> <p>Environmental/ Practice</p> <p>Commercial</p>	<p>'[<i>name of son</i>]. the son was dubious about the amount of stock that we could keep'</p> <p>'Took up the extra ninety acres [<i>rented</i>] - (we) had a lot of quota that we wanted to fill - not so much too much stock, as every body does and were always getting short of grass – and then took the ninety acres for five years and became organic on it'</p> <p>'The decision to go organic and to get the extra land were taken together'</p> <p>'We were never high nitrogen users in any case- (but the) money was a big incentive'</p> <p>'(A) lot of people in this area (are) not much different to us - Not very many modern farmers in this area- people who use a lot of, with high cost and a lot of stock...'</p> <p>'(The) main incentive to change was the cash plus the thought of premium on the livestock- which is a bit disappointing at the present... But we do agree with being organically minded- but we have to take commercial reasons'</p> <p>'If we carry on with the organic scheme after five years and the payments are continuing there could be a place for Tir Gofal'</p>
<p>A6 Commercial</p> <p>Environmental</p>	<p>'The grant for conversion and the lamb price premium [<i>were reasons for conversion</i>]</p> <p>'(I) had £42 for the organic lambs last year compared with £38 conventional at the market - and there is a demand for them'</p> <p>'I have an interest in wildlife- would like to see it regenerated e.g. the birds- curlew, peewit, black grouse, and so on'</p>
<p>B8 Commercial/ Existing Farm Practice/ Opportunistic</p>	<p>'We had beef at the beginning (8 years ago). My wife worked away from the farm. Just then BSE came in and so I decided to look at organic and saw that the prices were as good as pre-BSE. I had never used much fertiliser or sprays so we were already nearly organic, so we changed in 1996 and were fully organic by 1999. I then thought that turnover was slow in beef, and since so many people were coming out of milk so I decided to go into it. Parlours and livestock were cheap so it seemed a good idea- especially organic....I changed to milk in 2000 and signed up with First Milk with an organic contract.'</p>
C2	

Opportunistic/ Commercial	<p>'Ten year s ago I took on this place on my own doing intensive bull beef and had been doing it for a while– for twenty years or so now, until the BSE thing when we gave that up. Didn't really know what to do. We had a neighbour who was organic and there seemed to be quite a good opportunity at the time- not for beef as we were doing but we went for potatoes and vegetables. We've been doing that for the last four years. I had never done organic beef. We just tailed off the beef over the conversion period.'</p> <p>'No, probably his (local experienced organic farmer) influence I would think. I said that I was going to go organic and grow potatoes – Organic potatoes were fetching £400 per ton or something like that.... Conventional were bet ween £80 and £120 perhaps. With £400 a ton you are going to get a reasonable margin on that'</p> <p>'(Main reason was) not ethical or anything. We hadn't been using ...intensive input use of conventional inputs up until then. We're not on good soils here but it was a fairly fertile farm anyway because we had all these cattle indoors all the year round so there was lot of muck had gone out on the land anyway'</p>
Commercial – Long Term	
A2 Practice/ Farm Management	<p>'(We) were chasing our tails at the time...Organic farming – (there's) less stock, you are doing it better, (there's) more time...and big up-front payment was available'</p> <p>'At time (there was) only her (working on the farm) and [name of husband]- (and) thought it would be like ranching'</p>
A3 Farm Management Environmental/ Farm Management	<p>'(We were)..quite under stocked here – lot of dairy farms are heavily stocked and have no way of increasing. The whole farm was under stocked and ..(we had).. the facilities-ground and buildings – could go up without any big investments. In the process of expanding we looked at the organic way, and we still found that our system would still cope with 70 cows. Cut the sheep down a little bit down to 90, from 180.</p> <p>'(So).. our system suited it - We took advice– from [name of consultancy], did cash flows and we - since we had started we were always keen to project what we were going to do as opposed to just seeing how things go – work out cash flows – a good guide to what you should expect. Because we weren't a high producing unit we weren't buying in a lot of concentrates, we weren't ploughing a lot of ground for corn and this and the other. We were quite straight forward with cows producing milk from grass, so it just suited our system, and we looked into it and we were able to maintain even during conversion we actually managed to increase yields from the cows because of better management of them'</p> <p>'We were always – she [wife] is not from a farming background- and we were quite keen to do something different. We never used much sprays, chemicals and we were quite keen on this idea- wouldn't say that we were typical organic – a lot of people are 100% for it- we were quite keen for the commercial reasons as well. We wanted to convert the farm because we thought it would be better for the environment, but also we needed to maintain a good income from it. It was pointless doing it for the fun of it, and we were on a tenancy farm so you have to pay your bills. We had borrowings to cover on it so you can't just do for the fun of it. With the eggs – we liked the idea of naturally produced eggs and the horses that go with it-try and keep as many chemicals off the farm as possible – got the stream going through it so if you can avoid putting stuff in that – all well and good.'</p>
B3 Commercial/ Farm Management	<p>'We had been considering that something different had to be done on the farm.....(We) started to think in 1999. The situation was either to grow- buy more livestock, more quota, ...- and we hadn't finished paying for the quota that we had bought before..'</p> <p>'There was a meeting in [name of local village] - 'Farming in 2010'- with the bank- giving different options on the table – one of which was organic. And we came from that meeting and looked at our system here – it wasn't very intensive- not using a lot of cake – about a ton per cow in a year, and that would have to bring that down a bit but not too much, and we weren't using too much fert (fertilizer). Then (we) went round to different meetings to see what was being said about organic farming and so on.'</p> <p>'To get bigger we would have had to get more buildings, we would need more quota, more space to keep the slurry, and to spend a lot of money – and we were happy enough to milk 50 – 60 cows. We felt that was enough for a family farm – for what we were doing, and we could see that you could get a bonus on organic milk - even though it was 29.5p at that time we were realistic enough to realise that any bonus would be enough.'</p>
B4 Farm Management/ Commercial	<p>'I came back September 1999 and my dad was pretty forward thinking and knew that there were two ways we could go- it was either to go as intensive and efficient as possible which would probably mean laying off a few folks, and either going for a big number of cows and block calving and all that sort of stuff, or for going down the organic route and try to make full use of the cash that was out there- the OFS plus TG (Tir Gofal) plus anything else. He talked about the best way – (the) economics. We knew the way we really wanted to farm was we didn't want to go down the way of becoming more and more intensive, because I think he had enough of forking out big bills for spray etc. etc. where we seemed to be lining everybody else's pockets. And at the time the organic market was looking reasonably buoyant so we went for that.'</p> <p>'It was ... the fact that we seemed to be spending it (money) and the price just seemed to be dropping. So it seemed the more you spend the more production you get the less price you get – it was the world commodity market type of thing, and it seemed to be the way that the country was going. You produce more and we can sell it for less. And the chap in the middle always gets his margin and the consumer will always get a ...price. But the producer will progressively get less, and in terms of margin per acre we weren't actually</p>

	<p>going anywhere.'</p> <p>'And it was what we doing to the (land) – and I was not too keen on – I guess that I am a little bit more conservationist than dad is- but I was certainly not keen on slapping on these sprays and this and the other that seemed to be killing everything for the sake of it.'</p>
<p>Environmental</p> <p>B5 Commercial/ Food Quality</p> <p>Environmental Sustainability</p>	<p>'So we went organic, and the farm was the most important part. I hadn't thought about producing organic cheese- the cheese had (already) established its own name (as conventional), and the organic symbol on it was just an extra symbol, a bonus. I never went about marketing it as an organic product. I thought that it would be easier for us to farm in an organic way. I believed in it and I didn't think that we should just be producing more and more milk but to try to improve the quality of the produce. We reduced the cow numbers to 70 and kept it at that then (from 250 acres). We grow our own grain and most of the feed ourselves. We buy some in but not much.'</p> <p>'I think that he (his father) was getting more interested in what was in the food, and why was there pressure to produce more while we were getting less for it. So it seemed better to try to produce better quality. Also understanding more about what was in the food- the effect of chemicals and so on.'</p> <p>'So my father went off to these meetings and I think that he got the impression that a lot of the people in the organic movement were all a bit hippy –like. They had big ideas but he wasn't sure that they had a grasp of reality. But after a while he thought that maybe that those ideas actually made more sense after all. The people that my father had met were not the type to want to increase production and to get more out of the fields.'</p> <p>'My father had always been interested in looking after the hedges and the woodlands and in gardening and maybe that was part of it. It is an important part of farming now to look after what is in the hedgerows, and in the soil- the worms and bacteria and so on.'</p>
<p>B6 Farm Management/ Existing Practice</p> <p>Environmental</p> <p>Commercial</p>	<p>'I have never been someone who ever used much sprays, we used a fair amount of fertiliser- needed to push the ground since we had a fair number of stock here. But we didn't need the need for sprays, and we could see that the cows would be healthier in the long term and the produce as well, and we thought it was the right thing to do (convert to organic). The short-horn (cows) are quite hardy so I thought we had an animal which suited the system.'</p> <p>'I didn't think much about the environment at the start but I do think more about it now. I like wildlife and nature- we have a number of woodlands around us so we see a number of wild animals- nice to see them – different things and variety.'</p> <p>'(An) interest (curiosity) – at the beginning to see what it was. We went on the (organic farm) walks in 1999, and after seeing things we decided to convert in 2000'</p> <p>'The market was there at the time, but by now that has been filled and there is not enough demand'</p>
<p>B7 Farm Characteristic/ Management</p> <p>Commercial/ Opportunistic</p>	<p>'...with us being in a village- big problems up at the top side with us moving cows and a lot of our land is the other side of the village so we never felt– our cows are now up to 65, but we never- his father did have 100, but we had such a mess going through the village that there was so much hoo-ha that it wasn't worth it and that was 15-20 years ago and these days they would never tolerate it. So we thought organic – yes they will like that – the council will like that and everybody likes that, that's fine that's different- and they were enticing us to go in'</p> <p>'Where we are situated is the biggest reason why we went down that route- in the centre of the village and the problem of moving the cows'</p> <p>'I've got to be honest if it wasn't for the grants-that was the whole reason we went organic. It wasn't the only thing- we farmed more or less like that. It wasn't a big change to go – we were never big fertiliser people and we never liked the intensive system anyway and it seemed to us that we were farming a lot like that and why weren't we being paid the extra anyway...that's why we went down that route anyway'</p> <p>'So we just felt that if we kept the cow numbers down and we could have that price for our milk it was nearly double the conventional- our 60 was equivalent to their 120- we could make a living on that and still stay small. It hasn't quite turned out like that by no means but that was the idea'</p>
<p>C1 Commercial/ Opportunistic</p> <p>Environmental</p>	<p>'...and the higher rate of grant for conversion to organic came in about six years ago and so that made me think what the alternatives might be and we've got a near neighbour who had been farming organically for about 5 years before I had really thought about it, and he seemed to be doing ok. The other thing was that there seemed to be a big demand for organic milk.....Oh yes that was an attraction the organic premium on milk - that was a big attraction. And there was this useful grant as well to help with the conversion process. So the two together made it look more viable'</p> <p>'I'm a lot happier not using chemicals. I don't - fertilisers I'm not quite so bothered about, but certainly chemical sprays, herbicides, insecticides I really don't like using at all.'</p> <p>'Yes well I think that if we were to carry on farming conventionally we would have had to expand the dairy herd a lot- probably double it. I didn't really fancy doing that. I thought the – and we could have done that by not growing the cereals- putting the whole farm down to grass and increase the stocking rates. The other alternative was to go</p>

Farm Management	organic and put the whole farm down to grass but stay with the same number of stock - a lower stocking rate. And that seemed a lot more attractive to and easier to make it work as well.....I think it was -the farming and the lifestyle I think – you know running a less pressured system, less pressured for us and less pressured for the livestock. And the other thing was that it was a new challenge as well- an interesting challenge to actually farm without'
<p>C3 Farm Management</p> <p>Commercial/ Farm Characteristic</p> <p>Commercial</p> <p>Environmental</p>	<p>'Quite a few (reasons for conversion) – not simple. Main reason - (I) was bored with conventional farming...I needed a challenge. Been there and done it really. In the event going to spring calving and increasing the dairy herd was a much bigger challenge and a bigger change in mind set than going organic actually.....I have always played with the organic when I first came back from college I was quite keen to go organic on an arable enterprise, but couldn't work out how to do (it). I didn't think it was possible, and I still don't think that its particularly possible- organic on an arable enterprise certainly not to make money.'</p> <p>'Another major factor was I had decided that there was no future in being a mixed arable dairy enterprise (in this particular situation) in this part of the world and at our scale. Therefore we had to be either arable or dairy and there was no way you can make money growing corn in the west of Wales, but we can grow grass better than anyone else. So I needed to grow grass...(And)...One of the advantages of organic is that rather than 450 cows I only needed 150 cows. So quota, cows, capital investment would be a great deal less. I only had a 10 year tenancy with only 6 years left, so to put in that sort of investment that would be needed ...'</p> <p>'Although in '97 the (premium) price of milk was going to appear, though it duly disappeared again - so there was a financial element in it'</p> <p>'(And) particularly on the environmental impact. Organic farming's biggest plus is its effect on the environment rather than what it's marketed on which is as a cleaner, better food. I don't think that there is a lot wrong with the food produced by conventional farmers, but I don't like the ways that they produce it. For example- yesterdays [name of discussion group] discussion about inducing cows would be a classic example as a management tool – that sort of thing I am not overly keen on'</p>
<p>C4 Commercial/ Farm Management</p> <p>Environmental</p>	<p>'Well there you are. Can't really put your finger on it really. I suppose the fact that we had tried conventional farming and very much a dairy farm come beef (farm). Getting perhaps 22p for a litre and leasing in at 16p was slowly going to cripple us. I didn't know how to solve that. That probably stumped me. You had no control. You had control over your stock. If you want to sit down in the house and let them die then they will die. But you had no control jumping in your car and going to a market where an auctioneer is leasing or selling quota. That's market related. That was totally, I found- not stressful, but no control.'</p> <p>'If we were going to make money we would have probably to lease substantial quota or buy. So we said instead of doing that - we've still got to lease - and we don't buy but lease. But then openings came in then whereas you had (the) Organic Farm Scheme now - was (the) Organic Aid Scheme in '95. You was paying so much a hectare. Of course when you was going from one first of January to 31st of December, tremendous hours spent- real brain twisting decisions and making not a penny. You know – quite tough. So this seemed to be a good logic way, whereas you step back a bit. Still got to lease in but could you become more efficient like. And certainly the Organic Aid Scheme payment did help'</p> <p>'...going round your fields and seeing nice hedges and trees perhaps you are given the impression that I am a bit hippyish, but we're not. You respected your area..... But the principle of organic in our eyes is animal welfare and the environment.'</p>
<p>C5 Farm Characteristics/ Practice/ Opportunistic</p> <p>Farm Management</p> <p>Commercial</p>	<p>'Never been big fertiliser users and my father has always been leaning towards the organic side but always used a bit of fertilisers because we had the acreage and never really been heavily stocked. Organic came along and we were a bit late in taking the plunge but in the end we decided that we would give it a go. It looked good and it looked as if we could make money at it so we done it.'</p> <p>'We never use much fertiliser and we never use much sprays- never use growth promoters – well we did on the beef many years ago - didn't like the system and went back to the traditional way and we always have been pretty well traditional farmers.'</p> <p>'There seemed to be a good return on it. It seemed the best way to go. We either had to expand our dairy herd right up to 150, forget about the beef system and just concentrate totally on dairy - really push the cows, or lean towards organics and when we looked at it there was good returns coming back - in milk prices, so it was milk prices. Obviously the grant - to help you get set up and get your lays all going – so that was what we decided to do.'</p> <p>'It looked good for the size of my unit and it gave scope to expand up to a more comfortable number for the size of farm that we have got i.e. 100 – 120 cows again and everything in the garden would have been rosy. We would have made a comfortable living out of it; and I am afraid I am not in farming to make a fortune- I am into it to make a living.'</p> <p>'But that was when our neighbour had nagged us for years saying that we should go organic. We was talking to him one day and he showed me the returns he was getting and I thought that we are fools – because we are farming practically the same as him and we are not getting any benefit out of it. That was our main reason to go organic and besides from the rotation of the land our system hasn't changed a great deal.'</p> <p>'I am surrounded by organic farmers and I've seen in the last 10-20 years I've seen wildlife around here that I haven't seen for years. We have actually got SSSI here with the butterfly – supposed to be one of the biggest areas round here in Europe and we have actually got a big chunk of that on this land. They don't live here for nothing. Why do they</p>

Environmental	come here?. There is very little spraying going on around here, very little fertiliser used.'
C6 Commercial	'(The) main reason probably was (that) consumer demand seemed to be high – it was what people seemed to want so that is the main reason why I went really . The demand for conventional milk wasn't that high, and at the time there was a huge demand for organic milk. That's changed a bit, but there was an actual price differential when I first went organic was probably very similar to what it is now- about 4 or 5ppl. Conventional prices at the time were 24p and organic was about 29.5p. So in the meantime – there was a huge gap in 2001 – the organic price was double the conventional.' 'Yes – seeing the market. At the time I thought that that price was going to hold better than the conventional. Both has dropped down I know but at the time it was the better option and perhaps it is the better option- it suits me and suits the system here'
Environmental	'I think that the environment has had an impact. I wouldn't say that at the end of the day it was – if I couldn't make it pay I wouldn't do it. It would have to be able to pay for itself. If it was neck and neck I would say Organic. I do enjoy the system but we have got to be paid to do it and yes there are some people like [name of long established local organic farmer] who would be organic whatever. That is the way he thinks so I would agree with that but at the end of the day you have got to pay your bills.'
Food Quality/ Commercial	'I do think that food quality and the environment is important but I think we have to look seriously at things like GM. I don't know enough about it and before we go into it we have to look hard at it and just make sure that thing is safe and who is going to make the money out of it– Monsanto and people like that. Is the farmer going to benefit from it long term- I doubt. You are going to have to spray with their chemicals – and buy their seeds. And there is a huge glut of food in Europe anyway , and we can't feed the world - the whole issues'
C7 Environmental/ Farm Management	'I had always done a veg. (vegetable) patch organically as much as I can, and we are both quite keen on wild birds and animals and that sort of thing. And I liked the thought of being organic, because it is more friendly to the environment. It was seeing [name of local experienced organic farmer] as much ...and obviously the grants helped, but now you [to her husband] are keen now.' (C7: wife) 'I like anything natural and...We wouldn't be using much fertiliser before and with sucking cows it isn't as important as with milk producers.'
C8 Commercial/ Farm Management	'Going organic was 50% probably– we like the thought of it and the other 50% was down to commercial reasons.' 'Conventional milk prices were falling and we realised that if we had carried on like that drastic action would have been required – get rid of dairy, keep beef, and go and get a job. The organic gave a greater milk price, like increasing your herd by 50 % without having to go out and buy cows, and increasing the shed space and things like that.'
Food Quality	'..because if people care what they put into their stomach, if they look upon their bodies as an engine and if they get a product that is natural, and whether that is milk or meat or vegetables...It hasn't been tampered about or bugged about too much and there is less problem of a residue whether it is antibiotic, or spray, I think people who can afford it - and there is a premium, they are out buying it, but the British public must become more <unclear–careful/respectful?> of their food.'
Environmental	'Here on this farm we don't allow the hunt on the farm. Years ago my father used to sell the shooting rights – we don't do that anymore, and quite honestly the amount of wildlife on this farm is quite incredible – whether its birds, badgers...I like that'

Appendix 7.1: Sources of conversion information: Formal and Peer Sources

This appendix is a collection of the farmers' comments about accessing information on organic farming with particular reference to information about the initial stages of conversion. The table includes information gained from formal contact with various organisations, with codified sources, and from interaction with farming peers.

Farmer/ Level of Formality	Observation
A1 Formal/ Codified Knowledge	'We went through the standard procedures. We had somebody here for half a day and somebody here for a full day, - [named individuals and organisation], and then we went ahead. ...OCIS came at the beginning during our conversion period. The OCW are very good. They have good information and the Organic Handbook is very good.'
Peer	'We talked about a bit (with local farmers) - but that was what convinced us that it would fit in and we could handle it.'
A2 Formal	'I went to the Royal Show one day and they were promoting it (organic farming) there..... we had a visit from [name of organic farming consultant]. She was employed by the Welsh Organic Scheme'
Peer	'I am incredibly naive when it comes to things like this (getting advice and information) which is probably why I get away with it, because I don't lie awake at night worrying whether it is going to work or not, I just go for it and in the end I rang up [name of local experienced organic farmer] to see who he has gone with (organic certification body). He is along the road here and been in organic for years and years'
A3 Formal	'...free days from the OFS- they were helpful - from Aber (through OCW at Aberystwyth).....(they) made us aware that day that we can do it. (We)... could have done with more of that at the start to give us more direction. I've learnt a lot since, but you go into it and you are unsure of how you are going to cope with it and what is going to change. You need someone to come out that first six months. Once you are up and running, then you know the people there and you know who to contact and what to expect, but a day and half is not enough. Us not having been farming ourselves that long - there was a lot that we were learning and then to change to organic - a huge learning curve. I don't think that we did anything wrong but it would have been nice to have a bit more support at that stage of things.'
Formal / Peer	'(OMSCO were) quite helpful. They had discussion groups, based in [name of local town] area- established organic farms there- were quite helpful.....(the level of sophistication of the) OMSCO meetings was a mixture - a number in the same position as ourselves, going through or just finished their conversion period and it was more going to see someone's farm who had already established and to pick the brains and try to find out information. The idea was to be quite open about things and then you would learn from other people's mistakes and we found it quite helpful.'
A4 Formal	'I went to three meetings (with Cambrian Organics)- one was an introduction meeting at Aberystwyth with [name of organic consultant] . They were useful but they were on farm management. In the last couple of years I have become detached.'
Formal/ Peer	'As part of the [name of producer group - group A] I have been to their courses and open days. I have been a member more or less since conversion- about three years and for a while I subscribed to the Elm Farm research place and so used to get their newsletters. For a while I was a member of their beef and sheep group.'
Codified Knowledge	'I read a lot and got hold of most of the books on organic farming- Nick Lampkin (Organic Farm Management Handbook) and a couple of others. I read randomly and used common sense.'
A5 Formal	' (I) had a day consultation from Aberystwyth (OCW/OFS)...and. (the) OF&G came later with the inspection - (a) good inspector from OF&G ...'
Codified Knowledge	'(We had) a meeting a couple of months ago in a pub- (there was a) nutritionist there who came to visit later- through Farming Connect' '(I) use reading material - 'Farmers Guardian', 'Farmers Weekly' and other material- (I) digest and think about, (and) get a newsletter from OF&G every four to six months... (Elm Farm Research) Not used them- have a leaflet from them, (and) read some information that apply to us'
A6 Formal	'(I am) not sure (whether a member of....) Soil Association or the OF&G? (I'll) ask the wife- (it's) OF&G. Reason for choosing (them)? - don't know - maybe through [name of producer group - Group A] suggesting them. Have to be with some group or wouldn't be well off..' OFS suggested that they join OF&G (wife's comment)
Codified Knowledge	'(I) read Farmers Guardian, get material from FUW etc, watch some TV programmes e.g. Ffermio (Welsh Language production).....I haven't been on courses of any type'
Peer	'...When converting - taking advice?- (from) a number (of farmers) in the area who have converted for example [name of local experienced organic farmer], and we are with [name of local producer group - Group A].....(We) spoke to a number of farmers in the area who have converted e.g. [named individual and director of producer group].....knew other people who had converted-and they spoke about the prices they were getting and it would suit the land'
A7 Formal/ Peer	'And after the experience of [name of farmer] our neighbour was making use of this day and a half of free advice it was quite obvious that he would like to have that adviser to talk to quite regularly. We were saying wouldn't it be really good if we could have something that would be equivalent to an MP's surgery every month. Where you could have an organic adviser in one place in a village hall or a pub, and all the locals who were converting could go just to sit, chat, and compare questions, because I think that they would. But it would have to be very local and you would have to have an awful lot of them....because of the distances and the time.... I think that people do - not all of

	<p>them - but do want people to talk to. But something like that might be possible in Wales.'</p> <p>'Well I think that with typical farmers if there are such things, I always say go and see some other farms because I have to sort of remember that I tend to read about things, and they always say farmers go and look at things. So the first thing is to just go and look and talk and that's undoubtedly what's happened around here. We have three people converting now not miles away from us – and they have come and looked. And when they get braver they come and ask.'</p>
B1 Formal	'We went to the Soil Association because it was the most well known- people may not know what organic is but they have heard of the Soil Association but not the OF&G'
B2 Formal	'Yes – [<i>name of organic farming consultant with OFS</i>] came out and had a chat - which was a help - you learn something each time – however little it is it is always extra.'
Formal/ Peer	'When you fill in the form (with the Soil Association) you have to give the management plan – how you are going to convert the farm and the animals so you have to find out how you would do that or get a consultant in. I saw them as being too expensive to get them in. They would charge £200 per day, but I would prefer to read a book and to learn as I went along. So far I haven't done anything bad, and other people ask me questions and I know the answers- and I am still learning
Codified	'what I did was to go to many courses at [<i>agricultural college</i>] and I bought a couple of organic farming books and I read a lot and the way that you go through the joining process with the SA makes you ask the questions or to learn about it. So you are learning while you are going. There are articles in magazines and so on – so you gather a lot of information before you start.....I learnt mostly by myself at home' 'They [<i>agricultural college</i>] courses) were good – I did homeopathy, organic courses, I did about four or five – manure management, grass management- one day courses' 'I read the internet and the magazines that come through and [<i>name of adviser</i>]- he comes round- the quota adviser. You have to read the quota stuff. We have had one meeting- he writes articles (in the farming press). We get all the free magazines, some of the internet magazines including the 'Farmers Weekly' (online), and (we) get 'Gwlad'and 'CLA (material)'
B3 Formal	'(We) went to a meeting in [<i>name of venue</i>] (called) 'Farming in 2010' - (organised) by the bank- and putting different options on the table. One was Organic, and we came away from the meeting and went to look at our system here.....(and) it was the only one- organic was the only one that struck us would suit us best.....(furthermore) we were at meetings with OMSCO (and) Rachel's Dairy, organic conferences in Trawscoed (IGER) - everywhere to see places that were organic- during the period between 2000-2001- (and) everywhere saying that we were doing the right thing. Rachel's, for example, had plans to open a new factory and needing double the amount of milk'
Peer	'(and) during the first year had an independent consultant– and then with the OFS' '..but the best advice is (to do) like what we did – to go around and to see how things are working in different places, and to speak to different people, and then you just have to pitch in and see how it goes.....The best advisers – people who are farming organically – hands on the job every day, and they have the background, and speak on the same level as you do yourself'
B4 Formal	'We had our OCIS advisory visit which was the two half days that we were allowed at the time from an organic adviser, which was useful.' 'I went along to organic evening classes at [<i>name of local agricultural college</i>] which were great – once a week for 10-12 weeks, which covered everything from sheep, to growing crops, to muck – a very broad, basic and very practical – saying 'look, this is what you need to do'
Formal/Peer	'The SA sent out some useful leaflets which we read. We made sure we went to a few open days when we could manage it- one was run by the SA, and a couple by the OCW- full day jobs- which were good. A couple of them involved walking around a farm which was good. Early on that was where we were trying to get in as much as we could - mainly OCW or whatever it was before.'
Codified Knowledge	'If there is a good book I buy it and it will just sit on the shelf for six months until you are looking for something when there is a problem. 'The Organic Farmer handbook' (Lampkin et al, 2002) is useful which gives you more of a guide to costings and gives you titbits of information like utilising set aside and things like that.....The Organic Farmer' magazine from the Soil Association is as good an oracle as I have found- it's a good read. Got a lot of useful stuff in it and there's a few of Soil Association leaflets around, and I generally keep in touch. I don't use the web much to be honest, just a few occasions..... 'Farmers Guardian', 'Farmers Weekly', 'Organic Farming', that's probably about it.'
B5 Formal	'There was quite a hype about in 1999. I remember going to a meeting down in Narberth, organised by First Milk, and there must have been a hundred and fifty farmers there. The price of organic milk was nearly twice the conventional price. So that was an incentive.'
Codified Knowledge/ Peer	'We got people from the OFS / OCIS here. The main problem was filling out the paperwork. Everything else made sense in terms of regulations and rules... We knew about OF&G, and used to go to meetings' 'Just read the standards and talk to different people, as in the [<i>name of local Farming Connect organic discussion group – Group B</i>] group. And I used to read any leaflets that were available and magazines- 'Organic Farmer' magazine for example.' 'I am a member of the [<i>name of local organic farmers group – not Group B</i>] with [<i>name of local experienced organic farmer</i>], but I hardly go to that. We get by with what I learn from these things.'
B6 Formal	'(The) OCW - we went to a number of meetings with them and I went up to Aberystwyth as well doing a farm walk, and in lectures for the rest of the day, as well discussing what was the greatest areas of concern for us then during the first year or so.'
Codified Knowledge	'The regulations about the stock, slurry and manure- getting information about that which I didn't know much about'
Peer	'We went to two farms- [<i>reference to the farms</i>], and seeing systems as they developed. We had a lot of information from them and that helped in giving the confidence in going into the system'
B7 Formal	'(I used) Elm Farm (Organic Research Centre) and a day or two with the grant (OFS)'

<p>Codified Knowledge</p> <p>Peer</p>	<p>‘... and I have a few big ones (books) on organic farming- and I just feel safer picking something like that up- and talking to the old men around here that have done it and don’t have anything to gain from it. I have had an awful job sourcing information about my hens – terrible – I have had to learn as I go along.....I read mainly and I phone all the semen companies and I get all the booklets and everything else..... I try my best to use a source that hasn’t got money involved- not selling something.....Main source is reading- for anything to do with the farm is reading – I feel with that if you pick them all up (information booklets) for all the companies then you can decide for yourself’</p> <p>‘I prefer to use colleges - to use (them) because they haven’t got personal gain. If you have people coming selling you things - and I haven’t got a lot of confidence in that - and I would rather try it out myself first and then find out.’</p> <p>‘We get ‘Farmers Weekly’ every week – I don’t know how you can farm without it - everything that is coming up- rules and regulations- six month or a year on – its there and you can read it if you want.’</p> <p>‘I’ve learnt the most through two chaps here. My father has passed away a few years ago but these two chaps up the road – one in his eighties and the one just across the road here he died this year as well – he was ninety something, and I learnt much more off them than what we ever learnt off anybody coming here because they have just been putting what their experiences are like’</p>
<p>B8</p> <p>Formal/ Processors</p> <p>Codified Knowledge</p> <p>Peer</p>	<p>‘They (First Milk) did start to do that (run discussion meetings), and two years ago there was a West Wales organic group, but it finished after about two meetings. It seemed that they just thought that they were flogging a dead horse. I went to a meeting in St Clears, and there were about 35-40 there and it looked quite good. [Name of company representative] was there, but it hasn’t developed. I think that they would like to get rid of the organic producers and of the small farmer full stop.’</p> <p>‘I learnt a lot by going to various courses- I went up to Aberystwyth and I joined Elm Farm (Organic Research Centre) and got a lot back from them.’</p> <p>‘I would go to Frongoch (university organic farm) near Aberystwyth- that is very good, and I learnt a lot there. I also talked a lot with other farmers who had been organic, like [name of farmer] – brilliant, and he has a lot of experience. Then there is a group near Aberystwyth, with [name of organic consultant] - Welsh Beef organic group - that was good, and they bought people in to speak about topics..... To start I only used Frongoch and Elm Farm research and the stuff they sent me were interesting. Courses in England cost much more than in Wales- a course here might be £30 while in England it would be £130. I was with the Soil Association, but they haven’t been much help’</p> <p>‘It was [name of local experienced organic farmer] mostly, with [name of local experienced organic farmer], then there has been a group in Haverfordwest for the last couple of years.’</p>
<p>C1</p> <p>Formal</p> <p>Peer/ Codified knowledge</p>	<p>‘...(I wanted) just to get some on farm advice-the consultation visits. That seemed to go ok, and the adviser was very positive about our situation and we just went through the process then. Two visits- two half day visits and the second visit went pretty well. ... I’ve been there (Trawscoed – IGER farm) a couple of time to see what they are doing.’</p> <p>‘Well I think another organic farmer is the best way that I would hear about controlling docks- somebody who had actually done it. Or possibly if there was an experimental farm who had some success in controlling weeds or improving soil structure. I think that you would actually want to get fairly close to first hand experience. Reading about it is not convincing enough’</p>
<p>C2</p> <p>Formal</p> <p>Codified Knowledge</p> <p>Peer</p>	<p>‘I’d been to a couple of composting seminars which I found very interesting, but we’ve never done any composting. ...They were organised through [name of processor]. They had a chap – a Dutch chap over who had done a lot of research into it.....(and) they did have a chap- an adviser who used to come round and advise on the husbandry of the crops but he left and they haven’t replaced him. He would come three to four times a year maybe and he was there if we wanted to get in touch with him he was available.’</p> <p>‘I haven’t used any of them (OCW, Soil Association other support agencies). We have had invitation to go to open days in particular Henry Doubleday. We haven’t taken advantage of any of them probably to our own loss. The trouble from here is that it’s a long way to get anywhere. It hasn’t always fitted in with our workload either....No (don’t read support agency publications), I read the SA publications, which are quite useful at times. Apart from that- no. Our seeds man gives us trial results from variety trials from time to time and so we get some information from him. Apart from that it’s just what is in the (farming) press in general.’</p> <p>‘... probably his (local experienced organic farmer) influence I would think’</p>
<p>C3</p> <p>Formal</p> <p>Formal/ Processors</p> <p>Peer</p>	<p>‘Yes at the time there was a day and a half of consultancy from ... I can’t remember who they were, but they just turned up and we had a bloke for half a day who was totally useless- I can’t remember (not the SA) from Aberystwyth (the OCW) then [name of organic consultant] did the second day and he was very good. And then we had to go as well for a day in Aberystwyth with [name of organic consultant] which was quite good and looking at things.....(the first half day) was not very good - not a very good bloke basically, I expect he would have been very good if I had twenty sheep and three goats and a cow and a large veg. patch which is what he was used to – he was used to people with fifty acres up in the hills somewhere or smaller. I have four hundred acres milking two hundred and fifty cows - how do we do it, where do we go? And I thought I knew more than he did. He didn’t understand that – that’s just personality nothing to do with the scheme...He wasn’t aiming at smallholding but that was his experience- very much on a mixed farm- you have to compost all your muck and he was spending money like water, he had me in for half a million pounds of capital expenditure.’</p> <p>‘OMSCO – yes they are quite good- they have a technical man – you can ring him up and say I don’t understand these IACS rules –forty seven pages – good at that sort of thing. Yes they have a quality milk man who is actually just left the job, but he would come out if you have a problem and try to put things right if there is a problem. ...They also have mentor groups. They have a couple of mentors – the idea is that if you have anything you want to discuss you can ring up a mentor and they have two to three meetings (per annum)’</p> <p>‘There is enough advice out there. Plenty of other organic farmers around who would know where to go anyway.....’</p> <p>‘Other organic farmers (for advice) – but it depends entirely on the question (of what information is required)– standards- then SA, if seeds, then IGER, and (name of local seed supplier). There is not one answer to that’</p>
<p>C4</p> <p>Formal</p>	<p>‘You must remember then (circa 1995) there was no help at all. You had a list from Carmarthen- the ministry (Welsh Office)- where there</p>

Peer	<p>was a list of sector bodies and you might as well shut your eyes and with a pin say well I'll pick them. So you were going for a period of time to the phone and not ringing and then eventually you picked a bit of courage and ran a number and that was the opening point. Things are a lot different now. There is a lot more advice out there.'</p> <p>'I think that anybody that's got any sense in their heads that want to look at how experts (did things)... I have been to tremendous meetings in early stages certainly with [name of milk processor]- of giving you that confidence you needed of how to look at cell counts and how to run a herd and all that. Then there was so little out there. Meetings- on farm meetings is probably about the best.'</p> <p>'If you wanted to go organic you rang up a sector body and they would send somebody to sit at this table and say right well..... And them sector bodies were- one on Bristol- the Soil Association, and the gentleman who came here for the OF&G was from Oxford. So it wasn't from down the road. So it was totally no help.'</p> <p>'The other farmer in South Pembrokeshire that was organic was milk then. I don't know how many beef there was but I don't think there was many.....Well nowhere (to get information and advice) because generally there was nobody (no farmers) at it other than - only that one (farmer). And generally he was regarded as an average farmer, and I am probably being kind.'</p>
C5 Codified Knowledge Formal/ Peer	<p>'...(I use) media as in the magazines like stuff from the Soil Association, Gwlad (Welsh Assembly Government publication), I get a lot of stuff through the post. They have a lot of information on this - on soil - the Soil Association has good information on what is going on- what marketing research that is going on. There is meetings going on - Aberystwyth, a discussion group in Haverfordwest- go there and sit with other farmers and specialists come in - on organics- Cambrian Organic group (with [name of experienced organic farmer]). They have Open Days and you can meet other farmers.....The Open Days are put on by Aberystwyth - IGER. You meet other farmers and people who are running it. [agricultural college] are very involved in the organics. We don't seem to mind talking to each other and we discuss our problems and which ways you get over it and you learn a lot.'</p> <p>'(in) Haverfordwest- (I) go there and sit with other farmers, and specialists come in (with) [name of local organic farmer]- on organics- the Cambrian Organic group. They have Open Days and you can meet other farmers.'</p>
C6 Formal/ Peer Codified Knowledge	<p>'You got help through conversion with OMSCO (organic milk processor)- they have their own adviser.'</p> <p>'Well - discuss it (conversion decision) with my wife, and I was using a consultant-[name of organic consultant] at the time and (he) had an impact on what I decided. There was little organic advice to be had and what was a bit... in 1998.. was very organic - the advice I got there was - a lot of it wasn't particularly - it was sound advice but the organic system should be run probably on <unclear>.... I always use slurry when they say you should always use composted manure, but the system I run works well for me - its simple and its easy to operate'</p> <p>'(My own) research and [name of organic consultant] who was in IRS Aberystwyth (were) the main ones.....Well if you had any particular question, but they (Soil Association) weren't any great use - they were ok.....Not much with ADAS, - they did the first visit-[name of organic consultant] did the second and to be honest they said to me that I would take five years to convert and I couldn't do it any quicker. I said it's got to be two or nothing so we did it in two and it was not an issue. I wouldn't say he was negative but he was pessimistic- because we didn't have much clover on the farm and hew said you cant - to start off from where you are you need five years.'</p>
C7 Formal Peer	<p>'(We go).. to OCW first and [name of local organic farmer].....and from the Soil Association-for what to use and do'</p> <p>'[name of experienced organic farmer] is a friend of ours and we were always back and fore- he helps us and we help him and so on. One day we were walking the fields and the cattle were out in the spring and you could see that he had as much grass as we had and (he) is very keen on organic and I had been trying to talk him (husband) into it and suddenly with (neighbour's) fields looking good he (husband) thought that its not so bad.'</p>
C8 Formal /Peer Peer	<p>'OMSCO runs mentor days which I have attended - which is a good thing and helps those that come in behind you 'In conversion the established names in organic farming- farmers who had been doing it not because there was a premium price but because they believed in it - like [name of experienced organic farmer]'</p> <p>'... they (IGER, OCW, FC) constantly send information - we get invited to go for farm walks and things like this.....There is an element of thinking by myself and my brother that we don't need you - we are still ahead of you and there is still playing catch up..... (from the kind of material that they send out) because I don't think that commercial or the colleges - nobody believed that organic farming was going to take off and all of a sudden there we are and we are out ahead'</p> <p>'...So we went into it quite happily, and lucky in the sense that we had [name of experienced organic farmer] at [name of neighbouring farm] had been organic for twenty five years and so we had seen how well they were doing and they seem to be getting by and doing alright and so we went down that road.....It took the element of fear away in making the initial decision- sign that form and lets go into that conversion because if [name of organic farmer] can do it we can do it.....(and) we've got a 1000 acre estate down the road there that borders us and the neighbour at [name of other farm] - we are surrounded by organic farmers....As neighbouring farmers we meet and talk about various aspects of the job. There is nothing better'</p>

Appendix 7.2: Organic Certification Bodies, the Certification Process, and the Organic Rules

Farmer	Observation
A1 OCBs/ Preference	<p>'Yes, and that is another of my things. I believe that just as with grading if you have standards you have to have universal standards and you have to have a body monitoring those standards and does nothing else except set those standards and manage them. The OF&G does and that is all it does. It basically is certified sets out its standards and it inspects to them. However, the Soil Association, which is much the most powerful body does not. It has other axes to grind and I don't think that's a good thing at all. It is a charity and it has environmental axes which has nothing to do with farming and it has as huge urban membership- much bigger membership- I don't think that the OF&G has an urban membership, which must influence things. It appears to me that it (SA) has tried to divide the inspection off from the charity because it knows that this is a problem, by creating a limited company to manage that. But who owns the shares in that and who sits on the board- I suspect that it is virtually the same people. Although it is a sort of Chinese wall.'</p> <p>'We got their book of standards (SA) in the beginning and it was twice the thickness of the OF&G - it was very detailed. To us the OF&G is more down to earth and it is more local - in Shrewsbury'</p>
Learning by the Rules	<p>'We try with the organic standards to keep up with things. But there is always a difficulty with the Organic Certifiers with drugs that the vets will prescribe... and if the vet prescribes then that is alright as a basic rule. But there are rules about things you must not use, and some of the vitamins we used recently - we got into trouble - we used these pellets for lambs- GM free- in our conversion years. We suddenly found that we weren't meant to use them, because the rules had been changed and there were vitamins were in these..... It wasn't just that - they weren't registered with UKROFS and they didn't have that figure on the bottom of the label and so the lambs that were fed with these pellets had to be sold as conventional. The inspection person said you can appeal and we had a go. but.....'</p>
Common Sense application	<p>'We have had soil analysis done, but it (conversion to organic) has made us look at alternatives. It is a good discipline- the organic standards are very good discipline I think. They make you think about things whereas conventionally you just keep going on doing things- like automatically drenching every 3 weeks - which we used to do and we hardly ever do it now. It is just not necessary, although it has been this year- it has been a very bad year for nematodes and tape worms.... There wasn't much we could do this year. I took samples down to the vet and he said that there a heavy infestation and I asked about the tape-worms, because I had never seen so many tape worms in the lambs as this year. He said that he had never seen so many tapeworms and eggs and he gave me a letter to drench the lot.....we don't need an automatic derogation- all you need is that the vet says you have got to have it. I don't think we could get derogation, and the certification officer knows that if the vet says something we have got to do it'</p>
A2 Rule application	<p>'...in the end I rang up [name of local organic farmer] to see who he has gone with. He is along the road here and been in organic for years and years, and he had been in the SA and he couldn't get along with them so he is with the OF&G because they are more flexible and understanding, so I will go with them and I went straight in and joined and signed up before my first full day advisory visit'</p>
A3 Rule application	<p>'(I am) with the Soil Association- (who have) been very good. (There are) some rules that I don't agree with (but went) with them rather than OF&G even though they (SA) have a higher standard - but you are covered with everything ... (and its) the one that every one knows about - wherever you want to sell your produce. They have been ok - some things they have been pedantic on - can't think of any in particular, but (are) quite strict with their rules. (I) managed to get a derogation because we have had problems, and (the) inspectors have been fine. If some things aren't one hundred percent correct they give you time to sort things out - nothing serious, but it take a good few years to get in a complete system'</p> <p>'I am not the best at reading the rules, I tend to do things which I then finds I shouldn't have, to go one way about something when I should have done something else- nothing serious. You know the big points to avoid- (they are) drummed into you - the general attitude and direction'</p>
A4 Rule application	<p>'Up in these hills we are given a derogation for buying cake for sheep but I think that it is possible to run an ewe flock fairly extensively without any supplementary feed apart from home produced fodder.'</p> <p>'The trouble is that their stocking levels are - taking into account hill farmers- much more geared to lowland farming. Hill farmers look at the stocking levels within the organic certifiers and think that they can keep that number on this sort of land.'</p> <p>'I have been a member of the SA longer than I had been an organic farmer. I did think that they can be slightly dogmatic.'</p>
A5 Rule application	<p>'OF&G came later with the inspection - (a) good inspector from OF&G ... get a newsletter from OF&G every four to six months.....(We're with the) Farmers and Growers- only knew of OF&G and SA-(we) followed a friend, didn't compare them. OF&G has an office in Shrewsbury (local). Never been in it but phone them about issues to get permission on what you can or can't do. For example, had to do the cows for ... can we use the vaccine?.....and we had a cull during Foot and Mouth (and) needed permission to go and restock'</p> <p>'If you know what you are doing having a plan (Herd Health Plan) makes no difference. If you are a farmer you want to keep your stock healthy- no need for a health plan really. (You're) not going to get far without healthy stock...doing what is on the health plan- it is just putting it on paper for officialdom'</p>
A6	<p>'(I am) not sure (whether a member of....) Soil Association or the OF&G? (I'll) ask the wife- (it's) OF&G. Reason for choosing (them)? - don't know - maybe through [name of producer group - Group A] suggesting them. Have to be with some group or wouldn't be well off..' [OFS suggested that they join OF&G :wife's comment]</p>
A7 Rule application	<p>'- it depends of course on which people you're certified with and whose standards they are working to because they do vary. You could get people producing livestock who for instance are using more veterinary treatments than most people would actually like them to be using. As part of developing your organic system you should have a health plan and you should be working with their vets so that over a period of time they don't need routine vaccinations for example. Well that depends on how scrupulous the standards are and how good the inspectors are. And the inspectors vary in the same way as the advisers do. They don't a lot, but that's training as well. There is a huge training need within the organic movement because it's grown so fast again. We had this last week we had our inspection and we had one of the most experienced inspectors out and she is really interesting to work with because you see that she doesn't check everything by the book. She doesn't need to. She walks round</p>

	and she can see what is working and what isn't. And some people might think 'Oh she's not being very thorough' but you know perfectly well that she will pick up on – well this is the wrong medicine in the medicine cupboard ortoo many cows for – will overgraze that field. Whereas the less experienced inspectors will check up everything by the book because they have to. That's not to criticise them because it's a very difficult job.'
B1 Rule application	<p>'...the OF&G are a lot more slack before you start anyway. We know people who say that is why they went to them rather than the SA....We went to the SA because it was the most well known- people may not know what organic is but they have heard of the Soil Association but not the OF&G.'</p> <p>'That's an issue (organic regulation system) that gets me hot under the collar– There are no organic SA acreages on a large scale because they all go to the OF&G because they have a much more lenient standard, and have bigger crops.....And the other gripe is that everyone seems to run the SA via derogation for this that and the other.....We were on a [<i>name of discussion group- Group B</i>] farm walk a fortnight ago- 'oh we have a derogation for worming the young stock', 'a derogation for minerals for the dairy cows' (quoting from the Open Day host farmer)– they take a set of rules and adapt them to suit the farm -they don't adapt the farm to suit the rules.'</p>
B2 Learning from the rules	<p>'...and I read a lot and the way that you go through the joining process with the SA makes you ask the questions or to learn about it. So you are learning while you are going'</p> <p>'Paperwork puts a lot off- there is more paperwork in farming anyway, but at the start there is a lot- I have only just finished the farm plan this year- so that is two years late- but now with Farm Assurance and so on – they need everything now- when do you calve, how many- everything- so its similar to the organic. Tir Gofal and the stocking rates are the same as organic – so everything goes the same way'</p>
B3 Rule application	'(We're) with the OF&G – the support is fine. They are ready to answer questions.....(I) talked to different people– understood that they were more 'farmer friendly' than the Soil Association. Don't know if that is true, but we haven't been disappointed'
B4 Rule application	<p>'The SA sent out some useful leaflets which we read. We made sure we went to a few open days when we could manage it- one was run by the SA, and a couple by the OCW- full day jobs- which were good..... 'The Organic Farmer' magazine from the Soil Association is as good an oracle as I have found- it's a good read. Got a lot of useful stuff in it and there's a few of Soil Association leaflets around, and I generally keep in touch.'</p> <p>'There may have been a SA chap down there for a day.....I think the fact that you can't push them (livestock) too hard because of the rules and regulations leads to generally healthier stock.'</p> <p>'Individual treatment. You can use antibiotics but selective use of. The principle of organic is animal welfare. You can do anything when it is needed. With herd health plans our vet – on times we call out the vet we ask him to take blood samples on a bunch of fifteen heifers for parasites, because now I have to do that for my herd health plan. Where that came from (herd health plans) was probably big farms created... That 'we cannot farm like that'. So that farmer was so brainwashed into a way of farming that was taught by the manufacturers – you do this- big presentations – of (how to) look at that stock... well that particular treatment has done that. Probably they would have been alright anyhow.'</p>
B5 Learning from the rules Rule application	<p>'We knew about OF&G, and used to go to meetings.....Just read the standards and talk to different people, as in the [<i>name of local Farming Connect organic discussion group – Group B</i>] group. And I used to read any leaflets that were available and magazines- 'Organic Farmer' magazine for example.'</p> <p>'The main problem was filling out the paperwork. Everything else made sense in terms of regulations and rules. We even had a reduction of three months on the conversion period because we could prove that the land had not had any fertiliser or spray in the previous two years.'</p>
B6 Learning from the rules Learning from the rules	<p>'We get a lot of information and we can phone them up and they will give advice on what to do and not. They are very helpful, and we get material through the post from them as well to know what is happening.'</p> <p>'When I saw the regulations book - I wondered if I would ever get to the end of it, but things did come through. Looking at it was the worst part, but as we got down to it - it made a lot of sense what they said.'</p> <p>'A lot of things like that– such as the number of stock that you can put into a building etc- I think that it is us that would be able to say best how many we can put into a building- if you give them enough straw I think that you could put in many more than they say.....I don't know who helps them (SA) with the rules- there are some things that I would like to change, but most things make sense, but some are daft- I would like to change.'</p> <p>'... we had lung worm as I said- things like that worried me and they said that animal welfare was important to them, but wasn't allowed to give them preventative medicine, - worming them for example. So if we did have a problem we had to ask advice from them (SA). So it was things like that which put me off a little – off organic. Preventative medicine is for the good of the animal in the long term, and if that animal is put back it wont develop at the same rate as the others, it creates a – no one wants to see an animal being ill and so on- so they could change that a little bit, it would be a big improvement. But we as farmers are supposed to create the immunity for the calves- at least that is how they put it. Its true sometimes – you can do it but not each time. They should be able to help us there I think.'</p>
B7 Rule application	<p>'Their rules (SA) are very strict in comparison to OF&G, but I don't think that they would get any stricter- because their fees are quite expensive and if they went any stricter a lot of farmers would change over to OF&G.There is a bit of competition in that area as well , although the SA have stuck to their guns on some things- maybe they should pay more attention to that sort of detail than other things.'</p> <p>'When I read the rules and regulations, my God I thought... that's another reason why I am not bothering with the calves anymore- its very difficult to rear any quantity of calves with no antibiotics, and I've got a problem with ring worm here as well, so I just drop them out....Keeping herd health is one of the big challenges when you are going into organic ad to keep it without bending the rules....I've got a good market conventionally for them so I don't have to bend rules'</p>
B8 Rule	'I was with the Soil Association, but they haven't been much help. They allow you to feed ten percent non-organic, but in 2005 that will be stopped. They are always trying to make things a bit more difficult. I am not saying that they should be making it easy, but they should help farmers to go organic more. The membership was over £500, and there was £50 difference between me and [<i>name of local farmer</i>] - me with

application	<p>thirty cows and he has two hundred. I had 150 000litres and he is on over a million (litres of milk).’</p> <p>‘(At the time) I kept working on the next door farm. He went organic two years after. He has 190 cows. So next year he changed his system to having his cows out all the year and sold off all his machines, and I wasn’t all that happy about that - the cows were out in all weather, out during calving and when they were born, and a couple of other things- that was one of the things- animal welfare didn’t seem to get a look in. He is organic, but how he gets by on the animal welfare side don’t know. He was happy doing it so that’s fine for him, but I wasn’t happy.’</p>
C1 Rule application	‘I think if you phone them up (SA) they give you some fairly basic advice.....’They (SA inspectors) are not allowed to give advice as such, but you usually ask, and you usually get to know what you want. The ones – I’ve had three different ones and they are pretty knowledgeable..’
C2	‘I haven’t used any of them (OCW, Soil Association other support agencies).....’No (don’t read support agency publications), I read the SA publications, which are quite useful at times. Apart from that- no.’
C3 Rule application	<p>‘(to get information about) standards- then SA’</p> <p>‘We staggered our conversion over 4 years – 60% in the 1st year, but we went from 60 to 120 to 180 to 230 cows each year so we still did some arable and also the rules allow you to feed 40% in conversion so I played the rules by having 60% converted and in conversion which gives you another year and it means that the grant is staggered more- rather than all in one big lump. I would do that again staggering the conversion is the ways to do it. They produce the rules and I think that its beholden on us to read the rules and understand them and use them to your best advantage’</p>
C4 (Choosing OCB Rule application	<p>‘If you wanted to go organic you rang up a sector body and they would send somebody to sit at this table and say right well..... And them sector bodies were- one on Bristol – the Soil Association, and the gentleman who came here for the OF&G was from Oxford. So it wasn’t from down the road. So it was totally no help.’</p> <p>‘Now allowing a 10% or so that’s – policing of that is impossible. And now here comes a statement now that would have to be – I would have thought many are flouting that. With policing of one inspection a year is a joke.’</p> <p>‘And when it becomes that you can’t have none of that cheap feed in, then things will start to get extremely tough. So where that came from UKROFS, I don’t think that was the sector body – perhaps the Soil Association and the OF&G came together and said we believe that some farmers especially the new generation of organic farmer, and by no means am I saying that the wrong way, that I am sure some of these farms that they go to that I doubt that this is an organic minded farm. This is a farmer that can see pence per litre.’</p>
C5 Rule application	<p>‘...(I use) media as in the magazines like stuff from the Soil Association, Gwlad (Welsh Assembly Government publication), I get a lot of stuff through the post. They have a lot of information on this – on soil – the Soil Association has good information on what is going on- what marketing research that is going on.’</p> <p>‘If I have a problem – like mastitis- I don’t let the animal suffer I get a licence and I don’t have a problem with it because I don’t have an organic contract so my milk goes as conventional. On saying that I use very minimal drug use. I get a lot of support from the vet. She is very good but she will not be dictated to by the SA. If an animal needs to be treated then it is treated. I had a bit of an argument with them over the use of dry cow therapy because of mastitis but they did come round to my way of thinking and so I am allowed to use dry cow therapy on some of the cows that are a bit more vulnerable for it. This is a fluke farm. It is quite wet here and we do suffer quite a lot from fluke, and I do expect them to permit me to give, especially young stock a fluke treatment.’</p>
C6 Rule application	<p>‘Well if you had any particular question, but they weren’t any great use – they were ok. Didn’t have any problem- any problem and you ring them up and they were always very good. I do everything according to the book and they come round and I have my inspection and I haven’t had any problems really’</p> <p>‘You have the standards and you just have to play to their rules and you just have to get on with it. Permanent grass and milk as many cows as we can off that land. I probably push it as hard as anybody.’</p>
C7	‘(We had the) Soil Association support- for what to use, (what) to do – guidance...’
C8 Learning by the rules Rule application	<p>‘Yes to a certain extent - we haven’t had an awful lot of contact with them (Soil Association). When starting off, when you wanted to know can I use this or that and you made the phone call and they were always very helpful and came up with an answer very quickly.’</p> <p>‘We have the annual inspections, and had an inspection that the SA inspectors are doing their job properly.....But you have to have that and you have to have the stringent checks to be made – because there is always some wide boy who is going to try and cut corners and pull a fast one, and once that has got out into the media we are knackered. There is a perception by the public that organic food is better – it is more wholesome and better- and you only need a couple of wide boys – and they do exist- and they can’t seem to do it by the rules.’</p>

Appendix 7.3: Descriptions from field notes of Organic Open Days.

Open Day 1: 'Organic Livestock Husbandry and Environmental Conservation' July, 2002

Introduction

The host farm has been fully certified as organic since 1st June 2001. The farm is associated with the National Botanic Garden of Wales and as such is not run on commercial lines but maintained to explore the inter-relation of organic farm management and the demands of environmental conservation. It is registered with both Tir Gofal agri-environmental scheme and the Woodland Management scheme, and the management aims of the farm are to maintain and enhance bio-diversity, encouraging indigenous species to thrive and to provide grassland forage for the livestock. The farm has been designated as one of Farming Connects' development farms, and CCW, IGER, OCW, ADAS and Coed Cymru have all been involved in advising on the farm's development. The livestock is supplied by ADAS, who are involved in the farm's daily management, and the stocking rate is kept low, in accordance with organic principles, but also with a view to the maintenance of bio-diversity on the farm.

The Open Day commenced with a gathering in a barn and with a presentation by the farm manager of the farming and natural features of the farm, along with a description of the main objectives of the management plan. The status of the farm as a development farm was also explained, and the discussion included a description of the work of ADAS, and the current compatibility of the Organic Farming Scheme (OFS) and Tir Gofal. This discussion also extended to comment on the planned merger of the OFS and the agri-environment schemes.

Over forty farmers had attended, and in response to a request for a show of hands four claimed to be certified as organic, while the same number were in the process of conversion. Some of the other farmers said that they felt that they were farming organically but had not applied for certification as yet. Others intimated that they had attended out of curiosity and an interest in finding out some more information about organic farming and about the general operation of agri-environment schemes.

The description of the farm emphasised that it was not a typical farm for the area, and not directly comparable to the holdings of most of the day's participants. Much of the farm, which had been part of a large estate, had been maintained as open parkland, landscaped for a local mansion and its deer herd. Field boundaries were, therefore, in the form of fences rather than the more common hedgerows.

The Farm Walk

The farm walk began on a part-improved field in which some Welsh Black cattle grazed. Some of these were described as suffering from a liver-fluke problem, and it was noted that many of the fields experienced very wet conditions in winter, which made managing for liver-fluke difficult. This information encouraged various suggestions and further queries on management difficulties.

The state of the land, and its possible effect on livestock and on bio-diversity continued through most of the walk. For example, discussions, led by the CCW

representative, became centred on the best time for cutting rushes in order to optimise its value for wildlife. Farmers were interested in the detailed requirement of the Tir Gofal scheme and its restrictions on land improvements. The strategic approach of the Assembly government to combining the organic and agri-environment schemes was of particular concern, from a food-production as well as from an environmental perspective.

Discussions

The day was completed by a return to the barn for refreshments and further discussion. An organic consultant described some of his experiences of providing advice to prospective organic farmers, and farmers were themselves encouraged to relate their own experiences and to ask questions. The consultants' experiences included a story about an inexperienced couple (part-time farmers) who owned on a very small small-holding. They had planned to the nth degree what they would have on the land, and the consultant had pointed out that this was an unreasonable way to approach farming. The couple ditched their initial plans and also decided to go non-organic.

The consultant remarked that there were many similar inexperienced farmers especially in south west Wales, where they take small holdings as a hobby, many with retirement money or work part-time in their previous employment. But he had seen a resurgence of interest from small holders in the previous year or so following a period about five years previously when, as the OFS started, the main interest had been from larger farmers who were going in with long term market driven motivations.

A number of the farmers present admitted to being inexperienced as farmers, and much of the discussion was concerned with the problems that were encountered with maintaining animal health under the organic system. Farmers used the Soil Association as a first source of information and advice but complained that it was not always possible to obtain a firm answer. The problems seemed to be largely about interpreting organic rules and regulations, with uncertainty about when antibiotics and other medications could be used on sick animals. A consensus was reached that in such cases that animal welfare was paramount and that the farmers were free to administer whatever the vet recommended.

The less experienced farmers were also prepared to admit that they were learning in other ways as one noted from his experience of talking to some local farmers. One mentioned an old local farmer who 'seemed to speak a lot of rubbish, but often had a lot of sense in what he said'. A couple of more experienced farmers noted problems involved in obtaining allowed material, where suppliers were accused of profiteering, and supply was in small quantities. Complaints were also aired about the high costs of accreditation.

The group discussion did not continue for a long time, as farmers either began to discuss specific issues among themselves, or began to drift away. The Open Day had lasted some four hours in total and most farmers had stayed for the majority of that time. Discussion during the farm walk in particular was between individuals and farmers who knew each other, but farmers also took the opportunity to seek out the representatives of the various organisations that were present to pursue particular issues of concern.

Open Day 2: 'Balancing The Enterprises On Mixed Organic Farms: Getting The Mix Right'
July 2002

Introduction

Between thirty and forty people attended the presentation, not all of whom were farmers and not all of whom stayed for the duration of the activity. In response to a request for a show of hands only three could claim that their farms were already certified as being organic.

The day began in a barn, with a prolonged session of technical discussions about various aspects of farming practices, including the use of crop rotations, leys, mix of grasses, clovers and legumes. The objective was to discuss what may be used and why, the effect of soil and climate conditions and any other constraints on the farmer's decision making process. A representative from IGER led the session, supported by comments from the host farmer.

The host farmer further described the attributes of the farm, the enterprises that it currently supported, and the management decisions that were required to achieve the desired objectives. The farm had become a designated demonstration farm for Farming Connect and had been certified as organic for a year. It was representative of other local farm units, comprising of 240 acres, including 50 acres that were rented but considered a long-term part of the farm, and an additional 20 acres that was rented for a shorter period from a neighbour. The land supported a herd of a hundred dairy cows, twenty to thirty beef and sixty heifers, and the milk was sold to an organic milk co-operative.

The Farm Walk

The walk commenced with a discussion of an area of permanent pasture composed of white clover and a nearby area of red clover. The farmer could confirm that the field had not been ploughed in at least a generation, given that his father had never ploughed it and neither had he. The quality and relative merits of the two clovers were discussed and related to the milk yields of cows grazed on this pasture. Inputs to the discussion came from the IGER representative, and from an experienced organic farmer. It was noted that the clover growth is so good that it is verging on being too rich. This was linked to fertility problems in cows deriving from an associated higher level of Urea in the milk.

The discussion moved from production to the outlook for the organic food market, and there was optimism that it will be profitable again in around five years. This optimism was based on the current growth of the market, improving sales channels and the expectation that improvements in co-operative working arrangements will bear fruit.

The walk continued to another pasture that the farmer claimed had the worst dock problem on the farm. Many of the farmers in the group commented that the field was not in a bad condition, in comparison to their own and other fields. It was noted that a beetle is currently attacking the dock leaves and limiting their effect on the pasture. Dock is a constant point of interest among organic farmers and how to control it

became the focus of a later discussion. The solutions offered were to cut and graze heavily. However, the farmer's freedom of action is curtailed by having to take care not to destroy the root system of the red clover: which has a deep taproot, with single crown, and the white clover: with its networked root system. The clover content forms the basis of the pasture's contribution to the cows' nutrition.

In a barley field the problem encountered was the growth of thistles. These are dealt with by with by topping and cutting low a couple of times in quick succession, which is usually enough to kill off the problem. Some problems are found, however, in growing barley (and its winter management), as part of an organic rotation and maintaining agreement with the Tir Gofal scheme (should the farm be entered in the scheme) of the barley field. Crop management has to be integrated with management of the fields as habitats and winter feeding areas for birds. The suggestion was made that a greater knowledge about conservation and wildlife issues becomes important if the farmer is engaged in both an organic and an agri-environment scheme. Bio-diversity management was further illustrated at a later point on the walk with the aim of achieving a balance between space for pasture and other fodder crops with the land demand of woods and of woodland management.

Discussion

The walk and open day was concluded with a question and answer session that repeated many of the issues raised during the walk. Since a large part of the meeting had been devoted to exploring the support that organic farmers might receive many of the farmers were interested in how agri-environmental and organic management might be reconciled. In this case the interest is in the operation of the Tir Gofal scheme alongside the organic scheme, and in particular how bio-diversity demands fits with the soil treatment (as in ploughing) of organic farming. The few organic farmers present with Tir Gofal land suggested that they had found no problem with managing both schemes. Worries about compatibility appeared to reduce with more experience of each system.

Similarly, worries about the practical management of docks and thistle were treated with the suggestion that farmers may think about these plants in a different way. The obsession with cleaning fields of docks in particular was countered with the idea that it may not be a wholly negative presence, with reference being made to its roots' ability to bring up minerals that, hence, become more available to plants with shallower roots.

But at the end of the discussion the bottom line for farmers, was to consider the prospects for the milk market. Farmers identified that there was a need for a dedicated organic milk processor to focus on building the market for organic milk to improve the attractiveness of the system. Currently farmers at the meeting felt that there was a rough balance between the cost advantages and disadvantages of organic, suggesting that premium prices are still necessary and that the current milk premium is seen to be just about enough. However, a number of farmers suggested that at current prices they would decide not to go through the organic conversion.

Open Day 3: General Management of an Organic Hill Farm October 2002

Introduction

About fifteen farmers were in attendance at the beginning of the day (11.00 am), but more joined later in the morning and most stayed till about 4.00pm.

There was a brief introduction to the farm from the farm manager and described how the farm is used as a research centre dedicated to exploring the management of organic hill farms in Wales. A representative of OCW described the objectives of the Farming Connect programme as organised through OCW, the manager of the OCIS programme described the varying kinds of advisory services available from the different agencies, and a representative from IGER described what was specifically available from the research station.

Farm Walk and Discussion

The group then went to the sheds where there was a poster display, and explanation of some of the work carried out on the farm. This included the problems of providing enough fodder on the farm for the animals. Discussion included the current and forthcoming rules on the percentage of organic content to dry-matter fodder that is required. Currently there is a derogation of a % overall p.a. is allowed to be non-organic foodstuff, for which a maximum of % of the feed on a daily basis is allowed to be non-organic. The derogation will come to an end in a couple of years. This puts a requirement on the farm to plan to produce as much organic feed on the farm as possible. On a hill farm this becomes somewhat of a problem in that growth is more limited, and only two cuts of silage may be possible – including that taken by a flock of sheep. On this particular farm there was an additional problem since they had previously decided to include the main grass-producing field in an ESA, and it had been designated for reversion to hay meadow. This reversion did not seem to be working all that well, but it was conceded that it had not been in this state for more than about three to four years. Anyhow the field required to be re-seeded to bring it up to a standard that would support the flock, and re-seeding would not be allowed under the ESA. So it had been decided that the ESA money had to be paid back and the re-seeding carried out.

This discussion on re-seeding illustrated how agri-environment schemes dovetailed together and with Organic schemes. It was stressed that Organic followed by e.g. Tir Gofal would work, but work done to prepare for the schemes should be planned. Proceeding the other way round would not work very well because the agri-environment schemes had a historical element that constrained future changes to the regimes on the farm.

Further topics covered included the various types of feed, the planning of fodder to suit the type of livestock that is kept, and the type of farm that is being planned. Feed blocks allowed and the best type for sheep on the moor was discussed, linking again to a discussion of which type of non-organic feed-blocks can be allowed. The final discussion was on parasites and the organic methods of control.

The farmers were directed to fact sheets that had been prepared on most of the subjects raised during the talks and these were freely available during this time. The discussion continued with questions from farmers and these came from a Welsh (speaking) farmer, and a couple of visiting student in addition to some of the converted (incoming) farmers. The questions were specific and related to problems encountered in practice by the farmer on their own farms.

Lunch had been provided on the farm and the conversation concentrated on complying with regulations of various kinds, and of particular farming problem, particularly dealing with bovine TB. This topic came to dominate discussion and there was little further discussion on organic regulations.

Farmers related anecdotes about how TB has affected various farmers and the ways that they manage their farm. One farmer was from an area close to where TB is a major problem, and he commented on a lack of trust among local farmers in the scientific methods being used to test for TB and the differences in attitudes that existed between different inspectors testing for TB. A lot of confusion seems to exist about the way that TB sampling is done including what the reactors mean and what creates the effects. The way that the system subsequently handles a positive (or apparent positive) result is in question.

After lunch there was a further brief visit to look at cattle and the weighing of sheep with remarks on the confirmation of the carcass. Then the attendees walked to the re-seeded field to compare various strips which had been seeded with different seed mixes. Some of the farmers had been at a previous Open Day and had seen the same field in June, and could, therefore, observe how it had changed over time. Attendees were also taken by means of a couple of Land Rovers around the further reaches of the farm, up to the highest point which was above the tree line of the surrounding Forestry Commission plantation, where the discussion was on the management of sheep on the moor and the relationship with the afforested land.

Appendix 7.4: Open Days and Farm Walks: Farmer Observations

The observations are separated into those with reference to:

- The usefulness of the main topic of the events
- The social and networking benefits

(H): designates the Husband; (W): the wife

Farmer	Observation
<p>A1</p> <p>Usefulness/ Relevance Convenience</p> <p>Networking</p> <p>Commercial Contacts</p>	<p>'For me it is very seldom that anything new comes across. It is not a talking shop but it is a chance where you can have comparisons among your fellow producers just by chatting to them. The farm open day was very interesting. You learn something at all Open Days.' (H)</p> <p>'But we have been going to so many over the years that we tend to just pick and choose. Certainly we have been to [name of local organic farmer], but then this is such a small farm compared to his, and we are fairly lightly stocked now.....(We attend) three to four a year- depending on the distance we have to travel. I like to go to as many local do's. (as possible). There is hardly much point in us going down to Hereford.' (W)</p> <p>'The open days are useful, and particularly useful for networking. That is you meet people and you know that if you go to two to three meetings and they go to two to three meetings you get to know them. I think that its [name of producer group – Group A] open days enables us to – whatever you learn or don't learn at them – ...and they all interesting and you always pick up something. If you go to sit down at a meeting for a day you have to try to pick up something- I normally do. But when you get to know people, and [name of producer group – Group A] is a biggest-introduction for us to people, and when you do start dealing to them.....' (H)</p> <p>'It is quite difficult in organics. We now have yearlings to sell. You can't sell them through a market. You have got to go through either [name of producer group – Group A] or Organic Centre Wales website, or you have got to ring round the people in organics, and that is the way you do it. We network more than we do anything else- buying, selling, finding out about things, finding out about when people have meetings, standards, OF&G standards.' (H)</p>
<p>A2</p> <p>Discrimination/ Relevance</p> <p>Relevance</p>	<p>'(I) go to the [name of producer group – Group A] discussion group, but haven't been to many open days recently. There was one down in Gloucestershire- a beef farmer- who had some strange logic – and I couldn't see why he was seen as a good farmer.....'</p> <p>'The (more local) Beef Group is a good group to be in every six weeks- its small groups and (people) gelled in.... Didn't use Cambrian Organics – that was for small producers'</p>
<p>A4</p> <p>Relevance</p> <p>Discrimination</p>	<p>'As part of the [name of producer group – Group A] group I have been to their courses and open days. I have been a member more or less since conversion- about three years and for a while I subscribed to the Elm Farm research place and so used to get their newsletters. For a while I was a member of their beef and sheep group. There was usually a meeting which was get-at-able about once a year, but they would have them four times a year all over the country. They were very useful, especially they did one on parasite control..... it was two to three people in the course of a day (presenting at the Open Day), I suspect from Elm Farm- that was a general livestock one so the main part was on grassland management but it was also on marketing ..'</p> <p>'I went to 3 meetings (with Cambrian Organics)- one was an introduction meeting at Aberystwyth with [name of organic consultant]. They were useful but they were on farm management. In the last couple of years I have become detached. ... farms walk ones (meetings) as Soil Association do as well because you can see what another farmer is doing and you can compare. But on the whole as time goes on, and I know what I am doing here, it is slightly superficial..... But you can pick up a bit but comparing different farms with the different environment but it may be interesting but given my circumstances in terms of scale, climate or soil it is quite difficult.'</p> <p>'(The) Soil Association and SA and [name of producer group – Group A] will have a few more open days and you then meet people through that and then there is usually a spin off.'</p>

Networking	
A5 Discrimination	'There's an IGER farm- a demonstration farm near by – we go to see their demonstration days –(but) they have nothing that will be applicable here.... Funny ideas as regards to stock – go by figures not looks. When you get people going to the farm and measuring grass.... – not much use. He is a good farmer in many ways – a modern farmer. We classify ourselves as traditional farmers.'
A7 Networking	'Farmers love to go and see other peoples' farms out of curiosity and socially. But I think that its probably more that it comes further up the list if they have converted. I think that they often don't know where to get information from- its very confusing. They certainly don't want to spend money on getting information. They can go on a farm walk and talk and ask questions, and its pretty informal and half of them don't need to ask questions. It only needs one of them to ask a question and they all get an answer. So I think that it's a lot less threatening..... But I find it quite difficult because you are listening to the answers that they are getting and half the time they only get half the answer that they need or I think that its only half the answer they need and you don't know how to deal with it really. But maybe you just have to accept it- that's how they are going to learn.'
Relevance	'.....when I was with FWAG we used to look at the percentage of people who came to things out of the number you mail and all this sort of thing- ADAS used to say that they would only get 5-10% response to all their events. But when I was in FWAG we would get 40-50% response but then people belonged to FWAG presumably had already self-selected- 10 % of farmers are leaders basically. I suppose it's the same even when they have converted. Even within that group that have decided to convert you have then got maybe 10% of those who are avidly going out to get information and the others are waiting and then they talk to the ones who have got information. It seems to be like that– but it makes it terribly hit and miss.'
B4 Relevance/ Discrimination	'.....we get an invitation a week to various things and by the time you have your Soil Association open day and the OCW open day, local grazing group day and a local organic group, dairy, arable....., I could spend all day every day going round open days. They are useful- and they will all have consultants at them.. I went to one the other day – there were three of us there and two consultants. There is a big danger of overload and what you end up doing is – what I first started to do is when you get something you just chuck it into the bin'
Discrimination	'They (local discussion group – Group B) are a bit more useful to me than a general (agricultural college) open day or some other general open day. Perhaps that is just me. Perhaps its because we've had four through the post in the last few weeks. But there is a lot of cash going into those things. I don't know how much it is helping. I just think that it maybe overloading farmers- you tend to have a feeling – what are they doing this time- there is another open day in this place and it looks as if it is just geared to just keep people who are there in their jobs rather than to actually to help. Maybe I am being a bit cynical. Having said that, they are useful, as I said in the beginning we went along to a few open days at the beginning of the conversion. So for people who are at that stage then the fact that there are a few around is a plus point but once you have got into the organic farming and you are running a farm then maybe they tail off in usefulness.'
	'Any open day is useful, - you are never going to not get anything out of them. It is just that there seems to be so many around'
	'We actually go to Soil Association open days now- actually paying for them which is a real in-depth look.... We went to an arable farm in Worcestershire a month ago which is a big set up – big arable farm with a few sheep, and we were actually trying to work out how he was able to farm organically, but got a lot of tips about farming crops and things like that from him. That was useful- more useful than a general topic about converting to organic.'
Relevance	'We had an open day here (on B4's farm) on slurry which was quite useful and we actually changed a fair few- we changed our slurry policy a fair bit over the last year, year and a half and we are still changing it again, a lot based on what that chap said- using slurry injectors rather than just spreading it because so much gets wasted into the environment- cant afford to do it. We have been in touch with the local contractor who is prepared to try these things out, which is more – it's a big thing for him because he is the chap who has to invest in the hardware. That was useful.'
B6 Usefulness	'Having been to one or two farm walks with [name of local organic farmer] in [place name] and seeing how well the grass grew – had a big shock about that'
Networking	'Oh yes, pulls people together, and we have open days and we can see the livestock and systems and so on'

B7 Relevance	'We went up to a place up in Aberystwyth and they had a massive shed and we all just stood there and looked at it and said well we might as well go home now- because we had seen what was important- it must have been mega money and we hadn't seen anything like it'
Discrimination	'All depends on what time of year they have them...When we started off with the organic I went to a lot, because we needed to and didn't know enough about it, I'm not saying that I know it all now- far from it but if we collect one bit from each day its worth it'
C1 Relevance	'Some (Open Days), probably one or two a year perhaps, certainly not all of them.'
Trust and Credibility	'I think that it would have to be something (in the Open Day) that was relevant to my farming system. If there was something in an open day about controlling bloat then I would be very interested to see if there was anything else that I could do. So it would have to be relevant to my farming system. I suppose that I would look to see who was giving the information- what the source was. I am a bit dubious about a lot of information put out and how much experience there is behind it.'
C2 Accessibility/ relevance	'We have had invitation to go to open days in particular Henry Doubleday. We haven't taken advantage of any of them probably to our own loss. The trouble from here is that it's a long way to get anywhere. It hasn't always fitted in with our workload either.'
C5 Relevance	'They (farmers) come from all over the area. In Open meetings you see people you have never seen in your life.' '(I go to) as many as I can. I don't go to the Open Days on fruit and veg. This isn't a roots farm- too much a variation of soils here. Overall it's too heavy. People have said 'why don't you go into potatoes'. I am not interested. If you are not interested in something you will never prosper. Anything else I would go - like at [name of local organic estate] - I'd like to go to see what lays they've got there, which ways they've gone about it. You learn from every experience and you will never learn unless you go and experience it for yourself.'

Appendix 7.5: Miscellaneous sources of Information and Advice used by Farmers

The sources included in this table were not all thought to be major sources of advice and were not volunteered by all the farmers in the sample. However, some of the sources, particularly the seed merchants, had become more important on conversion to organic farming.

Farmer	Observation
A1 Vets/ Homeopathy	<p>'We try with the organic standards to keep up with things. But there is always a difficulty with the organic certifiers with drugs that the vets will prescribe drugs and if the vet prescribes than that is alright as a basic rule.'</p> <p>'...all you need is that the vet says you have got to have it. I don't think we could get derogation, and the certification officer knows that if the vet says something we have got to do it.'</p> <p>'There is a homeopathic chap in [name of place and person], and I was put in touch with him just by talking to another organic farmer. I haven't been to any of his open evenings - time and distance.....As far as we know there are no booklets with statistics, no logic about it. It is a sort of belief and a sort of craft, and it is not controlled in any way.'</p>
Unions	<p>'They (Farming Union) have a policy on it but you don't see them selling organics very strongly in the 'Farmers Weekly' or in their policies, because as with all unions they go along with the main requirements of their members.'</p> <p>'The local [name of farming union] meet once every two months and we are the only organic farmers who go to these meetings and quite often there is twenty to thirty people there and if you mention the word 'organic' you can hear a pin drop. They are not keen on organic farming generally.'</p>
A2 Consultant	<p>'I always had an ADAS person - I know people don't think much of ADAS - who comes to see me. He never suggests anything but I put things past him, and that has been very supportive.'</p> <p>'My ADAS man had not followed that (organic conversion) and hadn't understood itI said that I thought I would go organic and he said 'oh no what a waste of time you only get £40 and acre you are better off doing what you are doing'. I said 'would you look further', and he looked further</p> <p>'Now (I) use him as 'an expensive friend' to walk around the farm five times a year to talk things through- no one else does that (with her)'</p>
A3 Consultant	<p>'We took advice – from [name of consultancy], (and) did cash flows.....The other thing was doing with [name of consultancy],– we altered our consultancy program and we had – not an organic specialist but a grassland specialist - who was dealing with quite a few organic farms. They set aside a few people who had a few organic farms in their portfolio and they could give you advice and see how other people were doing- that was the best advice we got'</p>
Seed merchants	<p>'(Advice on seeds) Within [name of consultancy] getting rotation and getting red and white clover lays in we did take some advice on that.....A lot of that you have to find out yourself and go to people like the [name of seed merchants] – (they) have got an organic section – the lays that they recommend. There wasn't a lot of advice as such about what to pick – this is the sort of plan they would like you to do and then you have to decide how best to go about it. It wasn't excessively difficult it was that you had to do your own ground work on it. There wasn't anybody saying these are the best lays for you and this is what you should be putting in – you have to go out and find somebody in a seed company that would give you advice having sold organic seed to other people'</p>
Vet	<p>'Yes – certain vets ...very helpful- some a bit sceptical. Used quite a bit of homeopathy on the cattle which I found quite successful. (For the) majority of vets that is complete nonsense- but they were saying we could try it– no reason for it to work – helped with management plans and health plans.....(They were) quite supportive. (I) try to get the right vets to come out. You have some vets - if you are p-ding (test on pregnant cattle) (they) want to 'Estromate' everything that is not in calf. (You) can't just go and do that. Then the right ones will try to work out why its not in calf and to try to get it in calf as opposed to 'Estromate' and knock it over.</p>
Unions	<p>'(With the) [name of union], not a lot with them - not really useful for the conversion period, (and) don't have any particularly helpful policy.....Certain amount (of advice) on grants, subsidies, but we haven't asked about Tir Gofal'</p>

A4 Consultants Vet	<p>'No I didn't because when I started in the late 80s everything was being run down. I consulted ADAS and I was told basically not to farm, that it was a stupid idea. The farming improvement schemes had all finished.'</p> <p>'He (Vet) was very sympathetic. There are other organic farmers in their practice.'</p>
A5 Consultants Vet Seed Merchant	<p>'(They are a) high cost- (the Farming Connect) paying the consultants a lot of money- more than the farmers are getting out of it I imagine- to review business plans etc. They know what they are talking about, but I can't see how you are going to make more profit by talking to them. The reason to have them here was to get a grant on the sheep shed'</p> <p>'(Vet) been alright - had experienced of other (organic) farmers...(and I) have a farm health plan'</p> <p>'Yes, we had a survey with the seed merchant- [name of seed company]. They seem to be getting to know more about it now (organic farming)- didn't seem to know so much about it at the start. In last couple of years they have improved- know what you are talking about more, and so do the cake merchants'</p>
B1 Agri-Suppliers	<p>'I was being rewarded for thinking (through the conversion grant)- a lot of people don't think. For example, drying off cows without antibiotics - people have been drying off cows without antibiotics for years. It's only in the last fifteen years that it has become doing all your cows with dry cow therapy because 'we' put a big ad in the 'Farmers Weekly'- it works quite well without. As farmers we are a gullible profession and big glossy ad in FW....'</p>
B2 Consultants Seed Merchants Vets Unions	<p>'I saw them (consultants) as being too expensive to get them in. They would charge £200 per day'</p> <p>'For grass and barley we started last year with [name of seed merchant], and he is pretty good, and knows his stuff. We had a problem with <unclear> in one place and he said that it had nothing to do with the seed mix. We phoned a number of places and they had no idea.... well a lot of people thought that he was just cashing in on the price he was getting on private seeds, so I used to have stuff from [name of a second seed company] - the person there was going to the courses in [name of college] about the same time (as me) and I thought that he was trying to learn about organics with me.....Then (we tried) the (supplier) co-op. - we thought we needed good advice and we came across [name of seed merchant] - I saw him with [name of local organic farmer] and he was speaking there and he supplied also to [name of local large organic estate], and as I said I needed advice about this <unclear> and he was the only one who came up I don't know if he has actually managed to sort out the problem yet, but it seems like winter rye roots and <unclear> are not compatible so we will try it.'</p> <p>'...they are good-two of the vets are organic anyway.'</p> <p>'(member of) CLA, but not one of the unions. Don't really like the way that the unions work- they are only out to sell insurance'</p>
B3 Seed Merchant Vet Union	<p>'A lot of it is trial and error and a lot of learning from the experience...The first advice had come from a lot of different places and often e.g. the seed merchant, (more) recently. It sounds right and it might well be correctThe seed merchant is very happy for that (feedback and discussion) and he gives a lot of information and deals (with) a lot of organic farms too'</p> <p>'He (vet) doesn't advise (on organics)- looks through the Health Plan. Don't see the vet very often- shows that our animals are healthier and aren't pushed as hard'</p> <p>'(I'm) not a member - there are reasons for that...(unexplained)'</p>
B4 Consultant	<p>'We also had an organic consultant come down for a day from Herefordshire who was also really good and hands on. He was doing the costings.'</p> <p>'Yes there are a few private consultants are about and I am sure that OCW would probably be able to give more advice. I know that the private consultants - the chap I spoke to- I went to in the SA open day a month ago.. where there is a big group of organic consultants around in Worcestershire called [name of consultancy company], and in the last two weeks he had put together ten English Countryside Stewardship Schemes, and he said 'right you tell me what- you fill the form in and tell me what you don't want to do''</p> <p>'We work quite closely with [name of seed merchant]- been involved with us for a while and (was) one of the folks who was telling dad he should think about organics a while back and is an useful bloke to speak to. He supplies a lot of our seeds and knows what an organic farmer needs. It is great because of his experience- and there is not a lot of that around. When you sow a 6-7</p>

Seed Merchant	year lay and he has seen a 7 year lay through out its life as opposed to someone who has just started selling organic seed.'
B5 Seed Merchant	'We used [name of seed merchant] in [name of local town]. They are very good. I knew him for a number of years in buying wheat seed. He has a great attitude, knows his customers and teaches farmers about what they might need. Many farmers just used to buy seeds without really knowing what or why they had bought. He would teach people what they would need to do to get a good crop. He would explain exactly to every one what would be happening with the land....Yes he is great for that (seed mixes). He had been with NAAB for a number of years and so understood and he knew a lot about seeds. And he wasn't there just to sell but to advise people as well. He sells both organic and conventional. He comes to some of the Open Days to give advice too.'
B6 Seed Merchant	'At the start the advice we had was about the same (conventional as when an organic farmer). We had to find out a lot of things out ourselves – trial and error – with both conventional and organic at the start....Now we have been dealing with [name of seed merchant] - he is quite experienced since he has done it on his own farm and he has been selling organic seed for years so we have had a lot of advice from him - during the last year- which has been of great help to us....Yes, with the people that I used before, I might not actually see the people who sold me the seed, I would phone them up and I wouldn't see the field technician. But [name of seed merchant] would come round and would tell you what suited really.... I would have liked to see one (field technician), because we were learning the system and we would have saved a bit of money in doing so'
Vet	'Not that much (organic advice)- they only have one organic chap, but they don't have as much advice as I would like. I know that most of them are conventional vets and they use drugs – but I feel that they should know more perhaps.....No they didn't try to persuade me not to go (organic). One of them is quite supportive- the organic one. They didn't do it to my face but I think that they were a bit dismissive'
Unions	'I was a member of both (unions) a few years ago- one after the other...But now I don't think that they help as much and they may – (they) discuss things a lot but I am not a member with either now.'
B7 Consultants	'Consultants? –no. This chap coming on Thursday is the first that we have had coming here since we went into organic and we did the day and a half then..... I've got a chap coming from Farming Connect on Thursday and I've got a shed – and old dairy out here that's converted into a packing station ... (I'll) get help from Farming Connect to do this'
Seed Merchants	'I've got five5 different companies with grasses around the farm and there is one or two that is absolutely crap. And if say you just try that one there is no way that you are going to make it with that.....I got as many that could supply organic seed – they are very far and few between, and deliberately sowed different fields out every year with different grasses to see what suited this farm best.....Don't get an awful lot of support from any of them (seed merchants)....If you want to know anything you have to read and go up to IGER – which I have done.....A lot of them (seed merchants) seem to fling you off and say that's good enough for you and just get on with it sort of thing.....And I don't know if it's the farmers fault in showing a lack of interest in the past in what they are sowing, and leaving the seed merchants to make the decision. I really don't want to do that because I think that this is the key to organic – making sure that the grass is right or else you've had it, and I wasn't prepared to put that in somebody else's hands'
Unions	'(The) [name of union] - not much good at all– for organic- don't show much interest or support. They are useful for arable aid etc. I do switches every year- switching from one field to the next and that affects the payments and they check it over for me every year and spend an hour doing that every year. If I want help fair dos they will, but as an union in itself they have nothing specifically for organic farmers that I know of anyway'
Vets	'Vets – (are) quite good. If you cant treat it any other way you have to use drugs. He (vet) has not got this thing that you can't use anything- he does the health plans out every year, he is up on it.....He is not into homeopathy.....(but)..we are in one of these trialswith this Homeopathy stuff –(run by) Bristol University'
B8 Unions	'[name of union], but I don't do much with them- insurance and help with the IACS forms'
C2 Potato Seed merchant	'I just phoned up the chap we get our seeds from. We normally go with what he suggests. I don't think he- he was surprised that that variety got nipped off by the frosts.... (He's) not specifically organic but he is concentrating on the organic sector. He is quite knowledgeable about a lot of things. I think he was surprised that they didn't survive the winter as well.'
Potato Packers	'Yes they will be quite specific and look at the field you want to grow potatoes and will advise on which type and variety to use according to soil type and things...Some of the other potato people we can sell (to) if we have a contract- they will provide some technical assistance as well.'

Union	'I am a member of the [name of union] but I am not involved with it in any way'
C3 Seed Merchant	'I would ring a guy called [name of seed merchant] who is a specialist - he deals in organic seeds and he is very good. You can always buy experts and it's a lot of common sense'
C4 Vet	'Our own personal vet in the past would not regard organic farms as a lot of good... Yes he would sort of say you haven't got a hope in hell. But then they in that practice had enough farmers coming in (to organic) that they had to look into it. In all fairness to our vets they are bright, so they soon came to the view that they can't take that attitude. Well we've got to look at this thing more. When they went to meetings with their cynical attitudes that some of these treatments are a joke - homeopathy that is.'
C5 Vet	'I get a lot of support from the vet. She is very good but she will not be dictated to by the SA. If an animal needs to be treated then it is treated.'
Seed Merchant /grass lays	'However when year 2 was finished and we had spent all our grant on seeds and everything and we did spend a lot on our lays, because we did go into it 100% - really put our hearts into it..... When we get off the fertiliser- a lot of these big farmers with a lot of fertiliser they actually stopped using it for 12 months and then tested it and found that the soils are poor. Their fertility was in a bag. There are ways of doing different things - [name of seed merchant] is very helpful with his advice. That is all I do - I listen to people and their advice, and I cost it out - take it or not, but you have to get fertile soil.'
Union	'[name of union] is mine- it depends with them what you want to know- they will find out if you ask. There is not much that comes through that supports organics in particular'
C6 Consultant	'[name of experienced organic consultant] has done a lot of conversions and he is very good. I was with [name of consultancy] at the time (of conversion)... and their guy didn't have a clue - I was teaching him as much as he was teaching me. He was into conventional farming, so he went and [name of organic consultant] replaced him really.....and (he) had an impact on what I decided'
Seed Merchant	'I do have my seed consultant and we look at different ways of doing it and we go to late heading varieties but also we want a bit of early spring vigour because I want the cows out early so its balancing the two really.....Yes (did) a lot of reseeded and very good - [name of seed merchant] - and I actually rent his land He is very much into organic seed and so was a huge benefit to me really and what seeds to use and the lays that you have'
Vets/ Health Plans	'We have used it (homeopathy) on individual cows..... I do believe to a certain extent it works. If you are going to use it individually its quite complex. You need to know what you are doing and I wouldn't have that sort of knowledge. It is a waste of time learning because half the time I am not here so the herdsman would have to learn it as well. It would be interesting to know how to use it. We don't use as much antibiotics as we used to use - nowhere near....(and) we've a herd health plan'
General Suppliers	'No - suppliers all they try and do is sell you stuff- no technical advice'
C8 Seed and Feed Merchants	'...and you look round for advice from the papers or the grass seed merchants and it wasn't there...(But) the chap who we buy our organic seed from has got some organic land and he is very thorough and knowledgeable with his grasses which is obviously a help.....As for the cake firms we have gone to an evening for organic farmers to listen to a bloody wally with a screen and telling us what we should be doing and I've come away and thinking that is total crap- they think that they have only got to change the figures and change the jargon that organic can do it just as good as conventional - its not. But they were trying to help and don't get me wrong [name of feed company] do offer a good back up in the sense that providing the feed charts for the SA. The feed program is there and they do it for you and its all printed up and it's very good. I still think that they haven't quite grasped - they are coming from a different point....They are wanting to tell you - they want to sell cake, so they want you to be humping as much cake as you can into the organic cow, and that doesn't work. There is a limit on the amount of dry matter you can put into an animal. So whilst they are trying to say - look boys you can up your milk yield by this if we do this - it's the same thing that they are saying to the conventional farmer and I just feel that the chap who was talking to us isn't the organic expert - he is just their chap who the next time will be talking to conventional farmers.'

Appendix 7.6: Informal Sources of Knowledge: Peer Influence, Local Exemplars, Producer Groups, Discussion Groups, and Grazing Groups

Farmer	Observation
A1	<p>'We talked about a bit (with local farmers)- but that was what convinced us that it would fit in and we could handle it.'</p> <p>'For me it is very seldom that anything new comes across (in producer group meeting). It is not a talking shop but it is a chance where you can have comparisons among your fellow producers just by chatting to them.'</p> <p>'(I am) a (union) representative of [name of area] and there is a small group of people who represent each county that meet up. There is also an [name of union] committee – national organic committee, but mine is a working group for Wales. They meet once every six months.....The local [name of union] meet once every two months and we are the only organic farmers who go to these meetings and quite often there is twenty to thirty people there and if you mention the word organic you can hear a pin drop. They are not keen on organic farming generally.'</p> <p>'But there is a general problem with dead-weight selling which affects organics. That is that farmers bang on all the time and the unions bang on all the time about markets. More and more people are using dead-weight. But they are always talking about markets- how to change them and getting subsidies and grants for markets. Yet a huge proportion of stock goes dead-weight now because it is much easier for farmers but nobody is dealing with that. They are all interested in the problems of markets but not in that.'</p>
A2	<p>'In the past two years my son [name] has just finished at college ...and has been at home and he does more and more of the major decisions. (But) it is actually me who thought of going to organic.'</p> <p>'(a member of) [name of producer group]...(but) not been many open days recently..'</p> <p>'(was a) member of a Beef Group - a good group to be in, meeting every six weeks. It was small groups, and we got gelled....(was) not in Cambrian Organics –that's for small producers...Go to [name of supermarket group] discussion group and get visits and quick feedback – to learn what the judgment was....(the) [name of producer group] can be bad on admin.'</p> <p>'Sheep were (also) involved with the beef group...- need more sheep discussion groups -need to improve (knowledge) on sheep breeds'</p>
A3	<p>'He (father) was a bit sceptical as far as whether we should be doing it (converting). But he was quite prepared – not concerned about the ground becoming organic.'</p> <p>'(I) get a mixture of responses (from local farmers). Some people think you are stupid – not in a nasty way but (they) think that it's a ridiculous thing to do –(but also) a lot of interest.....(and) put in some red clovers a few years ago and the grass that grow there is better than many of the neighbours in terms of the quality, consistency and crops off it'</p> <p>'Yes, more and more (conventional farmers) are interested in things like that (improved pasture), especially the ones that have good stock and do a lot of these things and a lot more than I do- very interested in how the stock perform as opposed to people who are just plodding along not really that fussed so long as they get the subsidy cheque and they get a bit of an income and they have no borrowings and they are nice and comfortable- people in their mid to late fifties who have no reason to try to change things- people who aren't that fussed about it'</p> <p>'(The) problems I have with farming is that the average age is over fifty five so I am in the minority- not that many people close by in my age group and fewer dairy farmers. I found the Grassland Society useful because the majority of people in that are interested in progression anyway- the reason for being in the society - most with beef and sheep (as opposed to dairy)- but the ideas coming from them were quite helpful. We meet once a month for six months during the winter. They (meetings) are about grassland management- have speakers coming in ... a lot irrelevant for organic farmers- sprays etc, vets with drugs....'</p> <p>'Occasionally (go to market), but it suited our system of taking the lambs- one of the reasons is that we would pick our lambs in between milking and you could take them during the day. If you</p>

	<p>went to market you would have a problem with the milking.'</p> <p>'.....I don't go to the market to socialise- I drop the animals off and come from there'</p>
A4	<p>'The extraordinary thing was that the one neighbour who I thought might have been rather anti in fact converted almost simultaneously. He also has one of the largest farms in this parish. He is a young farmer.....Not totally negative (reaction) because I am an outsider. I moved in from London 19-20 years ago and so I was always considered to be a bit peculiar. So it wasn't surprising that I was going (organic). I have talked to some of the younger farmers, and they are slightly tempted, but they are still on the treadmill.</p> <p>This neighbour is one and it seemed that there were more organic but they were going on the sly... They weren't very public about it and especially going to [producer group] meetings I remember that you saw people there you never thought would be going organic....Very secretive. It was almost as if they were frightened to come out. I don't think that it has changed much.'</p> <p>'As part of the [name of producer group] I have been to their courses and open days. I have been a member more or less since conversion... For a while I was a member of their (Elm Farm Research) beef and sheep group. There was usually a meeting which was get-at-able about once a year, but they would have them four times a year all over the country.'</p> <p>'For a couple of years when there were little groups and we went to meetings – its all coming back to me now (Cambrian Organics) when we all sat down and spoke about what we were going to do and pie in the sky. There were bimonthly meetings I was going to. If you are only producing hundred and fifty lambs and five to ten fat cattle a year you have got to be able to sell them to an organisation that will take what you have got more or less when they are ready. Whereas when you trying to sell direct then you are going to have problems. I don't have period of glut or famine when you don't have anything to sell and I think that you can waste a lot of energy trying to do direct marketing apart from to friends. And then there is the whole problem of processing – slaughter, packaging, and distribution. So somewhere along the line you have to go into a producer group or a co-operative.'</p> <p>'The livestock market I suppose (circulates information locally), and its what you are getting for your stock is basically what will prompt people to change their ways or to think about what they are doing.'</p>
A5	<p>'Picked up off dad (farming knowledge); experience; look around you see what people do and you make up your own mind. Go on one or two farm walks and see what other people are doing and if they are doing better then you have to do better'</p> <p>'Some people think that you are simple for going organic- it's the way they have been educated in farming'</p> <p>'Now selling through the [name of supermarket producer club] scheme- convenient through [name of local representative] – independent.....Still members of[name of producer group] - use them as a second outlet if we need them - (as) insurance'</p> <p>'Never sold to abattoir- always to mart in [name of local town], so never got that feedback (from abattoir)- but at the same time you see other peoples' stock and you can see things in different ways- get a heck of a lot of feedback that way...Both ways has good points...When you send them dead you see more how they are picked out and the quality of them.....Another thing is that you haven't got to pick out even sizes as you do when you take a pen to [name of local town] market – doesn't matter with the abattoir'</p>
A6	<p>'Not many people know since the landlord doesn't want people to know-(keep a) low profile- don't want people to visit. (He) was a little uncomfortable about the land becoming organic, but he wont be worried that they (A6) keep the land'</p> <p>'(We) spoke to a number of farmers in the area who have converted e.g. [named individual and director of producer group]....knew other people who had converted-and they spoke about the prices they were gettin g and it would suit the land'</p> <p>'Member of the Grassland Society- [name of local society] and meet once a month in the winter. Usually talk about anything but farming- about diversification etc- starting other businesses...'</p> <p>'Attend meetings with [name of union], but not too much- meetings can tend to drag on- discussing grants etc...(but) am the chairman of the local branch and we meet only once a year.. the county branch meets every month- but (I) don't attend'</p>
A7	

	<p>'I was brought up in [<i>name of town</i>]- not on a farm. This was my grandparents' farm, and then my aunt and uncle. All my holidays were farming.....My uncle was a very traditional stockholder. So for years he would use slag and lime and that was it. And so when people started using artificial fertilisers he didn't. So from my point of view that was wonderful.....For me it was a mixture of because it had always been a traditional and he was a very good husbandry man'</p> <p>'They just look and they can see that it doesn't look a complete mess and its not a sea of nettles and thistles as everyone tells us that it will be. And then we started growing potatoes and everyone said they wouldn't grow but we had people along the top there who were coming to look at the potatoes... .. Potatoes are a local crop but actually quite few people grow potatoes and presumably someone had told them that our potatoes were not going to grow because we had not put any fertiliser on them and so the came to look'</p>
B1	<p>'My dad used to write down in a book how many bales of hay he got out of each field, then I thought , lets keep it up and we will record how many trailer loads of silage come out of it- well it has gone down every year because the contractor has got such a big trailer that he puts a whole acre in one trailer- five loads in one field, where I would have myself taken twenty five - his trailer is so much bigger and he is chopping so fine- no point in measuring it.....Why my father did it- I don't know- no long term instructions'</p> <p>'...people do learn from the family, and the boys were always farming - (it's a) practical approach (to learning how to farm)..... But it is interesting with the boys - they will know the farm as intimately as [B1]'</p> <p>'(It was a) huge social loss when Carmarthen market has been moved from the town centre. We used to take the calves to Carmarthen; she [<i>wife</i>] would go shopping and I would go to the market and we would meet up at a café for lunch. Now I go on my own I dump the calves and I come home.'</p> <p>B1(husband): 'We found that since we converted that we meet lots of people - farming is a very isolated occupation - and we have met a lot of people through organic farming that we wouldn't have met otherwise.....'</p> <p>B1 (wife):'.... not just through [<i>name of Farming Connect Discussion group</i>] but generally - (for example) through organic milk - First Milk meetings'</p> <p>'We go to them (local discussion group), if they are farm visits, for example [<i>name of local member</i>] talking about injecting slurry in to the tramlines- dangling pipe so it is not spread.....We found that since we converted that we meet lots of people. Farming is a very isolated occupation and we have met a lot of people through organic farming that we wouldn't have met otherwise - not just through [<i>local discussion group- Group B</i>] but generally - organic milk - First Milk... Until it divided in to OMSCO and Calon Wen. That was a huge rift- people like [<i>name of local farmer</i>]- we've lost that. He joined another camp, and we have four meetings a year and we don't meet him in those four meetings- he goes to different meetings- with OMSCO and we are with First Milk'</p> <p>'When we started organic farming our neighbours thought it was a strange thing to do. One saw it as a retrograde step. Then after that they accepted that was what we were doing. Then we managed to get a lot of snide remarks about why we were getting 28-29 ppl. A lot of 'its alright for you' - people didn't like it- (it was) thought to be very cranky and divisive.....Now they say that 'its alright for you have only a hundred sheep' - well they don't have to have five hundred sheep- they can go down to a hundred if they want to...It was divisive - but its getting better now'</p>
B2	<p>'...so I came back and took over instead of the herdsman who wanted to retire- so in at the deep end. And I came here to this house and my parents lived on the farmhouse on the other large farm....Yes- (had been) helping out at weekends and so on, but I had never done a lot of milking, so I made a lot of mistakes at the beginning. I just talked to the reps and to every one at the beginning - including the old herdsman- so that I would learn. I got into it then.....I didn't understand about their feet and so on and why they were lame and so they went too weak and we had to put them down and so you learnt then from such mistakes. My father was there to help.'</p> <p>'I had always said to my father that we would go organic after he retired': Father: 'Over the years, (we were) putting on nitrogen - you were brainwashed'</p> <p>'I don't see anyone keeping things back (information)- but we are all friends at the end of the day.'</p> <p>'I don't go there enough times (local discussion group)- I tend to get a lot out of the Grazing Groups and I go to all their meetings if I can, and a trips to Ireland. I get a lot more out of them (then from the discussion group). I don't want to sound big headed but I think that groups like the [<i>name of local discussion group - Group B</i>] is not advanced enough. I do learn something each time I go but I feel that it is more like a 'way of life organic' and how to get things to work organically and weed control and how farmers work as organic farmers rather than motivating you to make it into a business.'</p>

	<p>'I don't see anyone keeping things back (in local discussion group – Group B) but we are all friends at the end of the day. It's the same thing with [name of Grazing Group]. At the start we were all nervous about things, but by now we are all friends. Especially when we go on trips and so on you get to know each other. And by the end we will be comparing profits and bank statements and all- very open- in the group-no one from outside will get to know these things.'</p> <p>'They are different things altogether (Group B and the Grazing Group). One group looks at the bottom line and the cost of production and the price of milk- that's the [name of Grazing Group], and the organic group is about the ethos of farming and what we can do. Say someone - I am not saying that this is true- made something out of dock (that) is good – then its stuff like that that we discuss.....Those people I have met through the groups I tend to talk to them about things especially organic matters. Some of the people in [name of Grazing Group] are more commercial and you would talk about fertility and about <unclear> but you close your ears when they talk about fertilisers'</p>
B3	<p>'People like to look over each other's hedges to see what's going on – a bit of it does go on. I remember talking to some people – who don't milk anymore, but was milking and (asking) 'how are you going to deal with a cow getting mastitis, and how are you going to deal with that sort of thing?...Nobody said to us that we were stupid or advised us against it, and if they had I wouldn't have taken any notice because its our decision and we would never turn to any other farmer and say that I did not understand why he hadn't converted as well. Its no one else's business'</p> <p>'[name of local organic exemplar]is doing it (discussion group)- Cambrian Organics – There's on e now down in Haverfordwest and [name of local organic exemplar] is in that as well. And I was speaking to someone who had been to that and was asking if it would be beneficial to be part of that group. He felt that it was a talking shop and it would mean travelling down to Haverfordwest - so we kept out of that one'</p> <p>'We are members of a drama company with ninety percent from a farming background, and that is when we discuss (farming) mainly. We meet once a week – talk about farming with the farming crew.'</p> <p>'A feeling that you are all at the same place- that's what it is, and that knowledge is changing hands (with the discussion group – Group B).....(I) don't socialise with people from the [name of discussion group], apart from on the day that we discuss (things)...(but) no problem in phoning if we think that someone could help'</p>
B4	<p>'I think it's a general mentality (conversion), and you can understand why because I think back in the sixties and seventies when chaps like dad were in college they were pushed into industrial type farming with lectureships sponsored by ICI and halls of residence sponsored by Monsanto and all this sort of stuff. Their college training has been to use this spray and that spray and this fertiliser and so when you have been trained to do that it is very hard to change and think about it in a different way. I think that is the problem with some conventional fifty or sixty year olds who work that is the way they have always done it. I think you just need to – come to it with an open mind. To see what is out there and be prepared to accept that some things are going to work and some things are not and know that you are hopefully going to get a better market for it.'</p> <p>'(go to meetings) Because its[name of Farming Connect Discussion group]. local, and it's a chance to meet the local farmers so it's quite useful. We have done a fair bit with the [name of Farming Connect Discussion group]. Its more really geared to what we are doing. Its dairy farming – organic in West Wales with all the problems that we have around here.'</p> <p>'Yes we are a member of the – not the Grassland Society- we are a member of a Grazing [name] group- a New Zealand type of grazing group, which isn't as relevant to us as the [name of Farming Connect Discussion group] group. But it is useful for just monitoring cow performance – just looking at grass and how you are utilising your grass in the most effective way. This one (discussion group) is more of a pinpointing subtle ways in which you can improve your grassland management, which is quite useful to us..... [name of Farming Connect Discussion group] tends to be a bit more relaxed, maybe because the [name of Grazing Group] has a consultant there who is running the show.No there is not so many differences,. There are quite a few of the [discussion] group who are in the [Grazing] group as well. There may be a couple who are not quite as business like farmers in the [discussion] group – or that is not their main business- the farm being a second enterprise.'</p> <p>'No I would say that is the local pub to be honest (for socialising). I don't go to the mart much.'</p> <p>' I am sure it (discussion groups) is important because you get a topic, and you probably wont be discussing slurry management in the pub because you go there to avoid talking about that. But you get just as much from other farmers in these meetings as you get from the bloke sitting in front of you but then that is the whole point of getting everybody there so that we can have a chat</p>

	<p>with each other.'</p> <p>'There is a general – I think it's the old generation – 'looking over the hedge'- 'so and so's got a green field' and 'I grow a better field than you' is still out there. Nobody ever says anything but I think that its still out there.'</p>
B5	<p>'So my father went off to these meetings and I think that he got the impression that a lot of the people in the organic movement were all a bit hippy-like. They had big ideas but he wasn't sure that they had a grasp of reality. But after a while he thought that maybe that those ideas actually made more sense after all. The people that my father had met were not the type to want to increase production and to get more out of the fields.'</p> <p>'My father had always been interested in looking after the hedges and the woodlands and in gardening and maybe that was part of it. It is an important part of farming now to look after what is in the hedgerows, and in the soil- the worms and bacteria and so on.'</p> <p>'The best way is the informal way- to get someone's judgement on something. I think that the [name of Farming Connect Discussion group] is quite social.I don't see farmers in many other places- mainly through meetings like the [name of Farming Connect Discussion group]. There are a number of organic farmers round here – [names of other local organic farmers] and they go to the meetings. There are a number of organic farmers within eight miles.'</p> <p>'I am a member of the Pembrokeshire Organic Group with [name of local organic farmer], but I hardly go to that. We get by with what I learn from these things. I am not a member of Grassland groups or Grazing groups.'</p> <p>'Its quite good (the discussion group- Group B). It has grown. It was me and three others who are still there after the first meeting. Those that were at the first meeting have not come back, but newer people have come in. Yes it is good, but I don't have the time to implement the things we discuss down there. I do come back and talk about it. It is interesting to learn about the seeds, rotations and use of slurry and so on.'</p> <p>'The best way is the informal way- to get someone's judgement on something. I think that the [name of discussion group] is quite social. I don't see farmers in many other places- mainly through meetings like the [name of discussion group]. There are a number of organic farmers round here – [names of three local organic farmers] and they go to the meetings. There are a number of organic farmers within eight miles.'</p>
B6	<p>'It's in the blood- my grandfather and father both farmed here. I have been brought up with it. I don't know anything else- I wouldn't do anything else'</p> <p>'We have been so over the years- my father has bred and shown cows and been a judge overseas'.</p> <p>'We are with the [name of Grazing Group] - we have a consultant from New Zealand about grazing systems and we are trying to do extended grazing, and that is a challenge for organic. We have conventional farmers in the group too and they can use fertiliser and it is a challenge at the moment to be able to turn cows out early. But it is proving to be quite successful so far Being in a group like that we can see both sides of the coin - what we have better and what they have, and that each farm is quite different - with different systems. If we could get 2-3p extra for the milk then we would be doing just as well and better than them. They do discuss different things depending on the time of the year'</p> <p>'They (Grazing Group facilitators) have had a good training in how to put things across and in terms of what they tell you..... Yes eight meetings a year, and then two trips out of the area- e.g. Ireland or England to see different systems'</p> <p>'A chap from across the cwm, he works with [name of livestock services company], and he is a member of the [name of Grazing Group] – and he started getting people bull semen from him and getting some trust in what he was doing and he collected some names together and started another group' (The way to start Grazing Groups)</p> <p>'(I belong to) South Wales and West Shorthorn Breeders- they have a committee..... and have been a member of the YFC -from leaving school- that was where you would be expanding your personality- public speaking and stock judging and that was where I started judging sheep- persuaded to do so – not that I wanted to do it. After doing it I felt that I had learnt a lot, and a year later I was confident that I knew a lot about sheep. We got some sheep then for some six years , but I felt that YFC was a good club- a lot of activities- helped you to grow up more quickly'</p>

	<p>'We have been so over the years (breeders)- my father has bred and shown cows and been a judge overseas. It is another society (Shorthorn) that brings people together, especially with the Shorthorn, since we don't have a big nucleus, and it is important to have information about cows so we can breed bulls which are very scarce to breed from- so we get to know about cows through the society, which are good enough to breed bulls from different farms</p> <p>Yes we think that we need to put by a day a week to attend things like that (all the meetings)... I have missed the last two [name of Grazing Group] meetings ... You can't get to every one but I try my best because I think that they are important to the business in the future'</p>
B7	<p>'I've learnt the most through two chaps here. My father has passed away a few years ago but these two chaps up the road – one in his eighties and the one just across the road here, he died this year as well – he was ninety something, and I learnt much more off them than what we ever learnt off anybody coming here because they have just been putting what their experiences are like.....Their experience was similar to the organic system.....Yes, they have done it and this chap up the road is eighty four he had been growing (potatoes) out at Mathry – near St David's- sixty year ago – 30 to 40 acre at a time – and they were 15 acre fields and he had to hoe them- six pence each way up and down and it took a day to go up and down.'</p> <p>'...in all fairness we have had more meetings through the organic system and people willing to help than we ever had conventionally'</p> <p>'That is not in the college now – its in the pubWe used to be a member of Cambrian Organic Group before that finished and the [name of discussion group – Group B] group is there instead... We use groups- the [name of discussion group – Group B] and the Pembrokeshire one- started off down in the college and we have meetings with OMSCO as well. We had a few last year – none this year. We meet in someone's house and we discuss what– about production – weeds, anything- in all fairness we have had more meetings through the organic system and people willing to help than we ever had conventionally'</p> <p>'Yes (Different aim)– the one at Pembrokeshire college is mainly beef which is quite handy for me because when we have had calves and I have just stood up at the end of the meeting and said we've got fifteen ready – so it saves advertising and so on....I've done it with the [name of discussion group – Group B] group as wellthe Pembrokeshire lot are tight- mean lot.... I wouldn't give up any of them (discussion groups). If you just learn one thing then its more than if you stayed at home'</p> <p>'I've been tempted (to join the Grazing Groups), but I can't compete with their measuring– when they are slapping two- three hundred weight on . I know they have got this New Zealand style whatever that is – they are pulling the cows in and putting them in cubicles in September/October for years and we've kept ours out till Christmas, and they are calling that New Zealand, and we have never had to change that system'</p>
B8	<p>'I haven't been for a while (to Discussion group – Group B). The next one is about seeds. I don't think that I will go to that. It is a good group. There is one at Haverfordwest but the [name of Discussion Group – Group B] group is a lot better. The [name of farmers] boys are there and there are a couple of milk farms there. The [name of local town] one is smaller with a couple of beef farmers, and a couple of smallholders.I would like to go much more, if I had the time.'</p> <p>'...then there has been a group in [name of local town] for the last couple of yearsThe [name of local town] one- at the college. It is much more deeply into organic- it's organic first rather than seeing things on business terms.'</p> <p>'I go to a grassland group in [name of local village] occasionally - the Grassland Society. They are ok, and I am giving them a talk about starting the bottling thing up. Not that many people go I was there a couple of months back and there were about fifteen there. (talk about) farming in general and we meet about once a month.'</p> <p>'I have a winter seeder and I do a bit of contract work with that (with other local organic farmers). I see them in meetings with First Milk and organic groups. A lot of them are in OMSCO. I know them and talk but nothing else.'</p> <p>'They did start to do that (milk processor meetings), and two years ago there was a West Wales organic group, but it finished after about two meetings. It seemed that they just thought that they were flogging a dead horse. I went to a meeting in [name of local town], and there were about thirty five to forty there and it looked quite good..... but it hasn't developed. I think that they would like to get rid of the organic producers and of the small farmer full stop.'</p>
C1	

	<p>'I think there's interest (locally in the conversion), but in this little patch, there were several of us converting at the same time and most of our neighbours are organic now anyway. So obviously they were thinking about the same process. So it was not like we've got any neighbour on our boundary that's not thought about the process. So we weren't sticking out like a sore thumb in that respect..... I didn't actually discuss it a lot with these other farmers in the area who were converting at the same time. In fact I wasn't even aware that they were converting until we went to the same meetings or something like that.'</p> <p>'(a member of) Only- its not an organic one it's a grazing one- discussion about grassland (Grazing Group)..... There is about twenty in the group and there are groups all over the country.....Its got connections with the Grassland society, but it has evolved in this emphasis on grass, spring calving, New Zealand influenced. (It) brought over New Zealand or Irish consultants who are leading the groups. There are about four organic farmers in that group with a very similar system to what we are doing. I don't go to any organic discussion groups at the moment.....No I never started (with organic groups), but there is - I do this Green group one (Grazing group) and I get quite a lot from that, and I haven't joined any others. I am probably a bit - I don't go to every meeting that's going. I used to go to nearly everything that was going. If I was younger I would probably go to a few more.'</p> <p>'They (milk processor) organise a meeting on a farm amongst OMSCO members and run through certain topics. I have been to one of those. But it's quite difficult- as I say it's the facilitator or the consultant who actually runs that group has got to really know what he is doing. He has got to - and I don't think that skills been developed very well in this country.'</p>
C2	<p>'No (don't go to discussion groups). I used to go to them but I've given them up entirely.....(because of) time as much as anything.'</p> <p>'The SA organise most of these but you've got to travel half a day to get to them. If its on down here I'll go to it but I don't like the idea of sitting in the car for four hours to get to somewhere and then have to get back again the same day.'</p> <p>'There's the Cambrian Organic group - I don't know if there's a local group. I probably should go to them but I don't.'</p> <p>'Well that is quite a big thing co-operating with a neighbour like that (as he does). You are working together and we discuss a lot. That's as much use as anything really'</p> <p>'No I wouldn't attach any major importance to it (socialising with farmers in order to learn). If something is organised locally about organic vegetables or potatoes we would go to it. But nothing much has happened recently.'</p>
C3	<p>'I am not a member (Grassland Society)- I don't know- I don't have much time for them They have the wrong attitude- so negative- moaning.'</p> <p>'They also have mentor groups (OMMSCO milk processor). They have a couple of mentors - the idea is that if you have anything you want to discuss you can ring up a mentor and they have two to three meetings'</p> <p>'But I only tend to associate with people who are going places , other wise - yes the group (Grazing Group is influential) but that is not an organic group and to be honest that is a far bigger mindset change and more technical problem to go to spring calving than it is to go to organic.'</p> <p>'Things like the <i>[name of grazing group]</i> is quite important- important to see (and for) discussing costs etc'</p>
C4	<p>'Basically left school now so had the experience probably of being told by my father how to care for stock, and that generally is organic farming. And that's care of stock and that's our principle- what organic meansI have always been lectured by my father because I never knew my grandfather, that you always look after your animals and that principle was drummed into me.'</p> <p>'I had no great buzz out of seeing someone saying how many cows you've got and saying 'oh gosh that's all or that many'. It never interested me. I would say well you've made a mess there like, and did your father and grandfather ever visualise you making a cock up like that.'</p> <p>'Yes. Picking up and clocking it and remembering and when somebody who really meant what they were saying - 'well I made a mistake there, don't you do that'- you remember that and you don't make that mistake. Because something that was a mistake in the middle sixties is probably still a mistake now like. So basically you were leaving school you realise how green you was and as helping farmers and seeing how they... we were all farming the same way'</p>

	<p>'How did we think it was tougher? (organic farming) Well possibly probably from – you had been twenty, thirty years in farming and you knew the pitfalls, and you knew those pitfalls would come and you knew they would be more severe as an organic farm than they would be in a conventional farm.'</p> <p>'No but I'll follow them up (Grazing Groups). I have been many time to Trawscoed- wonderful- learning- best thing I've said to many – I don't say don't go to (grazing groups) (but) go to meeting that have been run by IGER on how to grow grass if that is what you want. It has to be what the farmer individually wants. The new generation organic farmer I would say still done it for pence per litre.'</p> <p>'Some farmers want that social contact and some don't. Farmers are very independent persons. I find meetings quite hard. Its not good going to a mart and having that social when a lot of it is a load of rubbish, but if its good genuine contact then that's fine. It's such a dodgy one. So many farmers are so independent and so many farmers want that. Some farmers will spend ten minutes there, and some will spend all day cause that's their day. Such a wide window of people. The younger farmer will want more contact, whereas the older farmer is more independent, and been brought up different.'</p> <p>'They will probably turnout to a bigger meeting at Trawscoed – not just organic. I going there I would be milling in and lost and I would be going round there and clocking this.'</p> <p>'Yes you weigh him up (farmers you want to talk to).The best thing that can come out of Farming Connect is not so much business plans but if they can get together free and enough farmers who can get together and pick a few brains and they can stay there long enough for their children to learn from them as well.....You have to be careful that you be too arrogant. But it depends what you want. I am the kind who doesn't spend much time in a mart but I would in Trawscoed. You wouldn't want to be all day long in ...'</p>
C5	<p>'I was at [<i>name of local agricultural college</i>] College, and I learnt quite a lot there but I learnt a lot more from my father for this farm. He has farmed this farm all my life. He was my best educator for this place, and he has been my best educator in organics because that was the way he was brought up. It wasn't called organics in those days. He loves this system as well. He is not greatly involved now but it's going back to his youth and he can see how its been brought on by the seed breeding and stock and so on. He can see the difference in the farm since converting to organics – he can see the farm changing again to what it used to be before we started using fertiliser.'</p> <p>'The organic side of things its. is quite a few (farmers attending meetings). We all want to improve and in meetings that we go to are always well attended. Conventional farming – it used to vary really. Sometimes the farmer wants a day out.'</p> <p>'There is meetings going on – Aberystwyth. a discussion group in Haverfordwest –(I) go there and sit with other farmers and specialists come in – on organics'</p> <p>'(the) Grass Discussion group (Grazing Groups)- didn't agree with the New Zealand system of spring calving- not suitable for this farm'</p>
C6	<p>'I was probably the first big farmer to go organic – the new wave organic- one of the biggest and a lot of people thought I was mad. Farmers have come round to thinking that organic is alright because they can see that it can be done..... People say to me in the pub- 'why are you going organic?' – 'you are doing well as you are' – 'you wont grow any grass'- 'you wont be able to keep any cows unless...' I've actually got a hundred cows more than what I had- in fact more than a hundred- and my stocking rates are the same now as it was then. People just couldn't see it and I suppose organic has in the mainstream has grown a lot in five years.'</p> <p>'(I'm a) member of the [<i>name of grazing group- G2</i>] - a discussion group which is both conventional and organic. It is exactly the same as the [<i>name of another grazing group- G1</i>] but it is a different group. <i>G1</i> were the first and the <i>G2</i> followed it– same person set both the groups up- a New Zealand consultant..... There is about twenty farmers in each. I enjoy it– we compare costs of production and look at farms from a business perspective and where we are going...– it is quite interesting to have a good comparison (between organic and conventional).</p> <p>I started off in the <i>G1</i> and was offered a place in the <i>G2</i> so I moved – which didn't go down very well – but <i>G2</i> is probably more interested in off-farm investments and looking at moving on, whereas most of the <i>G1</i> – I am sure they wouldn't mind me saying this -prefer to stay on the farm. They want to milk the cows seven days a week- that is what they enjoy where as the <i>G2</i> want to set something up and invest in stocks and shares or in property or...There is definitely a difference between the two and I wanted to move on and did a business course and a lot of the <i>G2</i> were in that and so I moved'</p> <p>'.....I am the only person to actually join <i>G2</i>, and its been going for about six years now. They started off with a core, although there are some people dropping out now because you are</p>

	<p>finding that the G2 is looking to definitely move on and some people don't want to do that they are just interested in running their own farm. That's fine- but it will be interesting to see where they will get new members from- it certainly is an issue.....It's not as easy as what you might think, and you also wasn't somebody – G2 is six years down the line and the way we run our businesses and if we get somebody in who, for want of a better word, has got no idea, he would struggle. You have got to get somebody in who has some sort of business ideas in there – to match. It's quite interesting to see where it will go from now because everyone has got their farms up and running and they have done what they wanted to do. It will be interesting what we do from now- we have achieved what we set out to achieve- it will be interesting few years.'</p> <p>'(We aim at) maximising output from grazed grass, and cost control- monitor cost and cash flow- which is not everyone's cup of tea.....It's good to have new members – fresh blood. When I went in there I was the only organic member, one has since gone organic, but it was quite interesting to them to have an organic person in there to compare with'</p> <p>'Yes financially very open, which obviously takes a bit of getting used to really. You get to know quite a lot about everyone's business- because you learn about everything about the farm profit. (Use) software you put all your information on it and it gives you what every enterprise on the farm is costing you and you have a total there and then total per litre and you compare it per litre and it gives you a good idea if you don't know the cost of production how can you run a business? A lot of people don't– about 85% of farmers don't know the cost of production.'</p> <p>'But a lot of them (farmers) can't quite understand why we want to do anything else– why don't we just milk the cows – which is fine. Every one is different there'</p> <p>'(member of) the local Grassland Society group. That is low key really – quite boring really. It is the oldest Grassland Society in the UK. I suppose things like [name of grazing group] have taken the shine off that because they used to be the only societies around. The [names of grazing groups] taken the keener people out of those societies perhaps'</p> <p>'....you definitely need a facilitator. The Grassland Society is just a society no facilitator- a chair man – its alright. Again its mixed – its not just dairy –its beef and sheep, though mainly dairy.....It has a chairman and a committee and all it does is meet about six times a year and have a talk'</p> <p>'(farmers) we talk in meetings and socially – rugby things like that, the (union). I am not a rep- I go to the odd meeting, and depends what is on- e.g. the MTR. My neighbour is the chairman so I try to go to support him'</p> <p>'I don't think any farmers co-operate with each other....I suppose the ones that want to co-operate do so and the ones that don't don't. I think everyone has their own opinions and farmers very much stick to what they think is right rather than what would perhaps benefit the whole group. For example Milk Marque – if every one stuck together we might have had more control on price but in the end of the day 40%-50% of the farmers decided to go and supply direct suppliers and probably done very well from it but at the end of the day they have been their own worst enemy'</p>
C7	<p>'Well you probably did think that it was old fashioned and it was the way that your father did it years ago. And things had moved on and I think you thought it was going backwards in a way.'</p> <p>'I think that all the farmers- [names of neighbours], - they have 1700 acres. They are next door, and they are dead against organic. I think that they think that it is backward. (Although) they have changed in the last couple of years.' (Wife)</p> <p>'They have changed quite a bit but they wont admit it' (Husband)</p> <p>'A couple of years ago [name of farmer] came, a big conventional farmer when he heard that we were going organic and said 'You be careful and watch out' (Wife)</p> <p>'(I'm) member of Pembrokeshire Organic Group'</p> <p>'(We) like markets – for the social side...(but) marts are out of town and getting smaller. (you) get information - about prices, who is buying/ selling at markets, and (I) go even if not selling'</p> <p>'(we) do keep good neighbourly relations (but) no social life for some of these (young) farmers.....(the) pub is the place to meet people'</p>
C8	<p>'But we always farmed low cost production as did our father before us, and we still carry on in that way now, so we are probably better suited to organic farming anyway.....The farm has been in the family for generations and generat ions'</p> <p>'Hard earned (farming knowledge)– when I left school it was hard work...I went to day release for five years and found it was good- starting place with the simple subjects such as grassland and machinery and you worked your way up to farm accounts and management- it was all good and I enjoyed it and probably lot of what I learnt was carried forward into farming except.. when I was</p>

early twenties my father had this policy 'if I can't afford it I'm not going to have it'. He was a hard working farmer.....Aberystwyth University had a low production league table at one time and he was always at the top and he was a good farmer and when lot of other boys were arguing with their fathers – 'we should be doing this or that'. I was thinking well I can't really fault what he is doing- he is doing alright making money'

'No it – I don't know if we called ourselves anything – the meetings were called and they were well attended, and there were some people who had been at it for a while and were apprehensive and they could see all these new faces coming in and all this milk'

'The mentor meetings organised by OMSCO are still held now- maybe two to three times a year. I haven't attended the last two – I did intend to – for personal reasons. I will attend future ones- we have been at it five years (and) I can still learn something and maybe I can pass on to somebody who is coming up behind'

'As neighbouring (organic) farmers we meet and talk about various aspects of the job.....There is nothing better. One thing that I noticed when we went into conversion- when we were farming conventionally and we went to the local market with calves for sale – because of the state of conventional farming there was bloody doom and gloom. Half of the farmers were going home looking for the piece of rope. Farmers were at a terribly low ebb, and when we signed up for conversion and we went to meetings with other organic farmers, there was a total change....The boys who were already organic were very happy with the situation because they had been having a good milk price for a while, and there was an optimism with everybody who were in conversion as if 'O yeah, bloody hell, what a difference' and I think it was a pleasure to go to a meeting with organic farmers than stand and talk to a bunch of conventional farmers- it was a totally different aspect and I think probably it has been tempered a little bit by this problem certainly in the milk part of over supply- we haven't achieved the increase in the we thought we were going to make , but there tends to be an overall feeling that this is the way to farm'

'No (other groups)- that is the way I stay sane. I finish farming at the end of the day – I finish farming! I train myself – when I walk through the yard gate at night I live like a normal person.....People in this part of this world are very laid back. There are grassland organisation and some one or two organic farmers attend them, but no – there will be farming discussion down at the [name of local pub] pub or watching the cricket match at [name of local village] or...that is just about right for me- we aren't great about 'right just finished milking lets get in and have a quick shower and go and talk farming again!'



