

Converting Europe - the potential for organic farming as mainstream

Paper presented to 11th National Organic Farming Conference, Cirencester, January 1999

Nic Lampkin

Welsh Institute of Rural Studies, University of Wales, Aberystwyth

Introduction

Organic farming is increasingly recognised, by consumers, farmers, environmentalists and policy-makers, as one of a number of possible models for environmental, social and financial sustainability in agriculture. It has taken a long time to get this far. Organic farming's roots can be traced back more than 100 years. Certified organic production dates back 25-30 years (70 years in the case of Demeter-certified bio-dynamic production). Yet little more than one percent of agriculture in Europe is organic, and much less than that in other parts of the world. Many have argued that organic farming will never capture the hearts and minds of the majority of farmers, because it is too idealistic and restrictive. What is needed, they argue, is an intermediate approach, such as integrated crop management or an ill-specified 'low-input' or 'sustainable' agriculture that is not as 'extreme' as organic farming and is therefore more likely to be acceptable to the majority of farmers. Policy-makers face a difficult choice. Should they encourage more organic farming, which, as research increasingly demonstrates, often offers more environmental and other benefits than the intermediate approaches, but is believed to be only a minority interest? Or should they encourage the intermediate approaches, which, although the environmental benefits are more limited, may be adopted by more farmers, with possibly greater overall impact? And if, contrary to expectations, organic farming did become widely adopted, how could we feed a growing global population?

It is time to dispel the myths and challenge the assumptions behind some of these statements in order to permit a fairer assessment of the potential of organic farming to meet sustainability goals in a European context, while also contributing to the pressing need to feed a growing global population in the next century.

The growth of organic farming in Europe

Recent years have seen very rapid growth in organic farming. In 1985, certified and policy-supported organic production accounted for just 100,000 ha in western Europe (EU and EFTA), or less than 0.1% of the total agricultural area. By the end of 1997, this figure had increased to 2.3 million ha, more than 1.6% of the total agricultural area. It is likely that by the end of 1998, nearly 3.0 million ha was managed organically, representing a 30-fold increase in 13 years. These figures hide great variability within and between countries. Several countries have now achieved 5-10% of their agricultural area managed organically, and in some cases more than 30% on a regional basis. Countries like Austria, Italy, Sweden and Switzerland, and this year the UK, have seen the fastest rates of growth. But many others still languish below the 1% level.

Alongside the increase in the supply base, the market for organic produce has also grown, but statistics on the overall size of the market for organic produce in Europe are still very limited. Recent estimates have suggested that the retail sales value of the European market for organic food was of the order of £3-5 billion in 1997.

70% of the expansion in the land area has taken place in the last five years, since the implementation in 1993 of EC Regulation 2092/91 defining organic crop production, and the widespread application of policies to support conversion to and continued organic farming as part of the agri-environment programme (EC Reg. 2078/92). The former has provided a secure basis for the agri-food sector to respond to the rapidly increasing demand for organic food across Europe. The latter has provided the financial basis to overcome perceived and real barriers to conversion.

The agri-environment measures came into effect in 1993, although the majority of organic aid schemes under EC Reg. 2078/92 were not fully implemented by EU member states until 1996. By October 1997, more than 65,000 holdings and nearly 1.3 million ha were supported by organic farming support measures at an annual cost of more than 260 million ECU. Organic farming's share of the total agri-environment programme amounted to 3.9% of agreements, 5.0% of land area and nearly 11% of expenditure, the differing shares reflecting in part the widespread uptake of baseline programmes in France, Austria, Germany and Finland.

Potential for widespread conversion

Although growth trends in individual countries have varied considerably, with periods of rapid expansion followed by periods of consolidation and occasionally decline, overall growth in Europe has been consistently around 25% per year for the last ten years, i.e. exponential growth. There is no indication yet of this rate of growth declining. Similar growth rates are reported for organic farming in the United States. If these growth rates are projected forward to 2010, this gives some indication of the potential significance of organic farming within a relatively short period. Assuming a starting point of 1.6% of western European agriculture in 1997, continued 25% growth each year would imply a 10% share by 2005 and nearly 30% by 2010. Faster growth at 35% annually would lead to 18% by 2005 and 80% by 2010, but this seems highly unlikely on the basis of past performance. A slower rate of growth of 15% each year would still result in just under 5% by 2005 and 10% by 2010. In the UK, current growth rates are much faster (100% in 1998), but an average 25% a year growth from the 1% base at the end of 1998 would lead to 5% by 2005 and 15% by 2010.

At the western European level, 10%, whether achieved by 2005 or 2010, may still sound like a small proportion of the total, but it is very significant in absolute terms. It represents nearly 14 million ha and more than 800,000 farms, compared with the current total of 100,000 holdings. This is close to the UK agricultural land area (16 million ha) and three times the total number of UK holdings.

This level of growth has tremendous implications for the provision of training, advice and other information to farmers, as well as for the development of inspection and certification procedures.

It also has major implications for the development of the market for organic food, as it progresses from niche to mainstream status, with a likely retail sales value in 2005 of £20-30 billion.

Pre-conditions for widespread conversion

Projections into the future based on past performance are not sufficient to realise the potential of organic farming. There is no guarantee that the rates of growth seen in the past will continue, and the normal expectation would be for rates of growth to decline eventually. A better understanding of the factors lying behind the growth of organic farming, and in particular the differences between countries, is needed. This will be a key focus of work to be carried out this year by colleagues at Aberystwyth and in Denmark as part of our EU-funded research on organic farming and agricultural policy.

In many respects, the development of organic farming has parallels to the traditional adoption-diffusion model for the adoption of innovations. Over time, the individualistic and socially-isolated innovators or pioneers are followed by the early adopters typified as community opinion leaders, to be followed in turn by the majority of farmers. In many countries, including the UK, this shift can be clearly seen. However, the rate at which this change takes place depends on the complexity of the innovation, and the adoption of organic farming is clearly a complex innovation.

The adoption-diffusion model does not seem to explain why the development of organic farming may be characterised by periods of stagnation followed by very rapid growth, as we have seen in the UK. A possible explanation for this is that farmers need to perceive the *need* to change before significant change will take place. A period of financial prosperity, as UK farmers experienced between 1992 and 1995 due to the CAP Reform package combined with the low value of the pound, was clearly not the basis for change. The reversal of circumstances since 1996, with the BSE crisis, the high value of the pound, and falling prices and agricultural support levels, has changed this perception dramatically. Similarly unsettling circumstances have arisen in other countries, for example in eastern Germany following re-unification, and in Austria on accession to the EU, leading to large increases in the number of farms converting.

The perception of the need for change needs to be accompanied by a conviction that organic farming is a suitable alternative. This requires a high degree of confidence-building because of the perceived financial, social and psychological barriers to conversion. It is not simply a case of 'more profits = more farmers' as many might argue. Our preliminary assessment of this issue indicates that four key factors are involved:

- policy signals from government and other policy-related institutions;
- market signals from the food industry;
- access to information;
- and the removal of institutional blockages or antagonisms.

It seems clear that each of these has been problematic in the UK at some point in the last decade. However, the changes that have taken place in all four areas over the last two years mean that the UK is now poised for substantial growth. Assuming that this analysis is correct, it provides a new basis for future policy development to encourage organic farming, particularly in the context of

Agenda 2000, with a focus on integrated action plans rather than single measures like the organic support schemes under the agri-environment programme.

Implications of widespread conversion

An expansion of organic farming to 10% of western European agriculture by 2005 or even 30% by 2010 has significant implications for policy makers with respect to the likely impact on food production, surpluses and global food security, rural employment and incomes, international trade and consumption patterns. These issues have not even begun to be analysed seriously – the limited studies that have been done to date suffer from serious problems with underlying assumptions, availability of data, and the limited range of factors analysed.

For example, we know that crops yields are 20-40% lower in organic systems compared with conventional systems in western Europe. Rotational constraints prevent crops being grown so frequently on arable farms, so that the overall yield reduction for cereal crops may be 40-50%. Grain legumes are likely to increase substantially, while some studies suggest that vegetable crops will stay stable or increase slightly, and other crops such as oilseeds and sugar beet will decline by as much as 75%. But most of these assumptions reflect current demand patterns, which place more emphasis on horticultural crops and less emphasis on crops for processing such as oilseeds and sugar beet. The extent to which these crops are produced organically will depend on the market demand for them and this is still very difficult to predict.

Future livestock production levels are equally difficult to determine. It is reasonable to suppose that the production of ruminant livestock might decline by 10-30%, and that pigs and poultry production levels might be substantially lower as a consequence of reverting to land-based, extensive systems.

Do these levels of output reduction matter? From the perspective of global food security, the answer might be yes, but this reflects an over-simplistic analysis. Many authors have argued that it would be possible to feed double the current global population only if we continue to intensify production through increased use of fertilisers, energy, bio-technology and water. And yet it is increasingly clear that the pressures on some of these resources, particularly water, and the negative environmental impacts of intensive input use on soils, water courses and the atmosphere, are such that further intensification is not a sustainable option. Instead, a strategy which increases total food supply over time, while doing this with lower levels of resource use and environmental pollution per unit of food produced, is a fundamental requirement – increasingly organic farming is demonstrating its capacity to do this. In addition, the assumption is often made that the yield reductions associated with organic farming in western Europe will also apply in other parts of the world. The evidence is to the contrary – organic yield levels in extensively managed regions of the developed world are often very similar to those achieved in conventional systems. And in some less-developed countries (including parts of eastern Europe) where resource-poor farmers are unable to afford purchased inputs, yields can even be higher using the information-intensive, agro-ecosystem management approaches which characterise organic farming. But it is important not to assume that organic farming in these regions will have the same technical characteristics, or even market focus, as organic farming in Europe.

In any case, western Europe still faces problems of over-production and surpluses. 10% of arable land is targeted for set-aside this year, and the situation is likely to get worse, not better, with the accession of central and eastern European countries to the EU. Therefore, a degree of output reduction is beneficial in economic terms as well as environmentally. But there is a further issue: an implicit assumption is often made that we actually need to maintain current patterns of crop use. In western Europe, substantial quantities of cereals and grain legumes are fed to livestock.. The UK for example relies on land elsewhere in the world equivalent to 30% of its agricultural land area to feed its livestock. In Germany, the figure is closer to 50%, and in the Netherlands substantially higher. Organic farming, with its emphasis on farm-produced feed for livestock, is likely to result in significant reductions in the total quantities of cereals and other crops used to feed livestock, emphasising instead forages produced as part of maintaining soil fertility or in areas not suited to crop production. By relying more on home-produced proteins, organic farming is also likely to reduce the need for protein crops like soya produced in developing countries, thus releasing resources to meet domestic food needs. Consumer demand patterns may also change to favour low meat diets as awareness of the real environmental, welfare and health costs of intensive livestock production systems increases.

A further concern about widespread adoption of organic farming is the potential for erosion of premium prices as supply increases, leading to reductions in farm incomes. A number of factors that imply this may not happen in the near future need to be considered here: expansion of demand as more outlets stock organic products, improvements in the efficiency of processing, marketing and distribution through economies of scale, and improvements in technical efficiency on the part of organic producers. But there is a more interesting possibility: to the extent that falling conventional prices are a result of over-supply in conventional markets, the expansion of organic farming and the associated reduction in total output should help to increase prices for conventional producers. It may even cause an increase in organic food prices. While this may not improve the relative profitability of organic farming, it should lead to increased incomes for all farmers. This potential to reverse Cochrane's agricultural treadmill, where increased output leads to lower prices and lower incomes, leading in turn to increases in output, suggests that conventional producers, far from being threatened by organic farming, should welcome its widespread adoption with open arms.

Policy-makers should take heed: organic farming may be a challenge for farmers to adopt, but its potential to meet environmental, economic and other policy goals while incorporating consumer 'willingness to pay' through the market mechanism makes it an attractive option. The likelihood that organic farming can also happen on a wide scale, without serious undesirable consequences in relation to food security, means that it is time that organic farming is treated as a mainstream policy option.