

Farmer groups for animal health and welfare planning in European organic dairy herds

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Abstract: A set of common principles for active animal health and welfare planning in organic dairy farming has been developed in the ANIPLAN project group of seven European countries. Health and welfare planning is a farmer-owned process of continuous development and improvement and may be practised in many different ways. It should incorporate health promotion and disease handling, based on a strategy where assessment of current status and risks forms the basis for evaluation, action and review. Besides this, it should be 1) farm-specific, 2) involve external person(s) and 3) external knowledge, 4) be based on organic principles, 5) be written, and 6) acknowledge good aspects in addition to targeting the problem areas in order to stimulate the learning process. Establishing farmer groups seems to be a beneficial way of stimulating a dynamic development on the farms towards continuous improvement, as in this case with focus on animal health and welfare planning. Various factors influence the process in different contexts, e.g. geographical, cultural, traditional factors, and a proper analysis of the situation as well as the purpose of the group is necessary, and can relevantly be negotiated and co-developed with farmers as well as facilitators before being implemented. Farmer groups based on farmer-to-farmer advice and co-development need a facilitator who takes on the role of facilitating the process and 'decodes' him- or herself from being 'expert'.

Keywords: farmer groups, planning processes, organic dairy, learning

Introduction

Good animal health and welfare is an explicit goal of organic livestock farming, and need continuous development and adjustment on the farms. Furthermore, the different conditions in different European regions call for models that can be integrated into local practice and are relevant for each

type of farming context. In 2007, a European project (ANIPLAN) with participants from seven countries (Austria, Switzerland, UK, Norway, The Netherlands, Germany and Denmark) has been established with the aim of minimising medicine use in organic dairy herds through animal health and welfare planning. All participating institutions in this project have a strong on-farm research and development experience and focus, and our common research facilities are the private farms. The research approach is action research oriented. This project will end by 2010 and data collection as well as analyses are on-going at the moment.

Very different farming conditions are represented – e.g. from large-scale highly specialized high output production in Danish, Dutch, Austrian, German and British farms to alpine farming in Switzerland, as well as mountain farming in Norway. The project aims at developing concepts for animal health and welfare improvement which are based on fundamental organic principles and, at the same time, are realistic to implement under any given regional conditions. Farmer groups may play an important role in this context. Based on interviews of farmer groups' facilitators in The Netherlands, Denmark, Austria and United Kingdom, data collection in farmer groups, and project researchers' previous experience exposed and discussed at project workshops, this paper presents suggestions for a set of principles for animal health and welfare planning in organic herds, and discusses their practical application in a diverse European context.

Material and methods

Theoretical framework

The theoretical framework for the farmer group approach within this action research project is derived from a combination of ideas concerning common learning in groups based on legitimate peripheral participation, as described by Lave and Wenger (1991; 2001), and social capital, as e.g. described by Munene et al. (2005) and Bebbington (2002). The farmer group members participate on an equal level in a common learning process, to which they all feed into, and relate to their own practical farming context. This process emphasizes empowerment and social capital development. One research question in the project was to identify and explore the preconditions for common learning and social capital building under European conditions, and include farmer groups in the development of country context-specific approaches to farmer group developments.

The 'Stable School principles'

The starting point of the discussion in the ANIPLAN project was the so-called Danish Stable Schools as well as existing approaches within the other participating countries, such as the Dutch Caring Dairy groups. The Danish Stable Schools are often characterized by farmers from 5-6 farms forming a group which, in a time limited period, works on the basis of farmer-to-farmer advice to reach a goal. The Stable School approach in the ANIPLAN project focuses on a rather systematic and continuous animal health and welfare planning process at farm level, the success being largely dependent on farmer commitment.

The Stable School approach is inspired by the Farmer Field Schools (FFS) for livestock development (Vaarst et al., 2007; Vaarst 2008). FFS is generally a concept for learning, knowledge exchange and empowerment that has been developed and used in some countries, particularly in the tropics over the last decades. In Denmark, the first four Stable Schools were established in 2004 with the aim of phasing out the use of antibiotics in organic dairy herds. Each group is facilitated by a facilitator, who guides the group process. The common goal kept the groups together, still bearing in mind each farm's individual goal when giving advice for this particular farm. Each Danish Stable School went through a one-year cycle with two visits to each of the five or six farms participating in each group. All groups aimed at finding farm specific solutions to the participants' very different complex farming situations. The farmers visited each other, with a focus on the host farm and the agenda set by this host farmer. The farmers' participation in Stable Schools proved to be a complex, interactive learning process both on the individual and the group level. Each farmer experienced both roles: to be the host and exposed in a situation of asking colleagues for advice and being given advice, and in the other role as an advisor for fellow farmers. All farmers in a Stable School group opened up their farm

and farm data, thereby exposing its challenges and weaknesses to the whole group. At each meeting, the host presented a success story thus enabling participants to learn from these successes. Common learning also occurred when the participants evaluated the outcomes of the improvements together, and at times experienced how a critical farm situation could be changed into a positive development. All dialogue, as well as the formulation of the agenda and the minutes, was done in collaboration with a facilitator. The dialogue was open-minded and respectful, and learning took place in farmer groups as a common social process, as described by Lave and Wenger (1991) where learning is described as taking place in a social, physical and personal context. Each person participating in a learning process is not learning only as an individual person, but as a person in a socio-cultural and historical context.

In the ANIPLAN project, this approach is further developed, and it should be possible to implement in different contexts in collaboration with national advisory service institutions. Farmer groups using the Danish Stable Schools, or Farmer Field Schools, have been or are currently being established in five countries, and the preliminary results suggest that they are successful in motivating the farmers to analyse their own situations, commit themselves to permanent and, in some cases, quite radical changes as well as inspiring them in their daily management.

Development of principles for animal health and welfare planning

A set of principles for animal health and welfare planning was identified through a process involving evaluation of the project participants' practical experience with farmer groups in the participating countries. This set of overall principles is continuously discussed and evaluated during the project period (2007 - 2010), and will finally be reviewed in relation to collected experience both with the practical application within the project, as well as with experience from existing farmer groups.

Data collection: participants' experience with existing farmer groups and common continuous evaluation of newly established farmer groups

Experience with existing farmer group structures was included in the data collection from all participating countries. This was done partly through the project participants from these countries, and through interviews carried out by the first author (interviews carried out in The Netherlands, Denmark, Austria and UK; results to be published by the end of 2010). In addition to this, ANIPLAN farmer groups based on the Stable School principles (see below) have been established in Austria (1 group), Switzerland (3 groups), UK (2 groups), and Denmark (1 group), and are currently being established in Germany (4 groups).

Results and discussion: development of principles and their applications in practice under different European conditions

Common principles for animal health and welfare planning developed

The group of project researcher developed a set of principles for a process of planning animal health and welfare at the project start. We based their inputs on their own research experience and communication with farmers, advisors and other actors related to on-farm research and development.

The first principle emphasizes farmer ownership of the process and resulting plan. The conceptual framework for the animal health and welfare planning process is based on the assumption that the most profound and sustainable change on the farm is created when the process provides an enabling environment for the farmer to take ownership by identifying the issues, setting goals and drawing up the action points required to achieve these goals. The common starting point is that health planning is a process of continuous development and improvement, and should incorporate health promotion and disease handling, based on a strategy where the following elements are included: a) current status and risks (animal-based and resource-based variables), b) evaluation, c) action, and d) review. Besides this, it should 1) be farm-specific, 2) involve external person(s) (animal health and welfare professionals or fellow farmers), 3) make use of external knowledge (knowledge from advisors or fellow farmers, or data from the farm analysed and presented in ways which provides an overview),

4) be based on organic principles (systems approach), 5) be written, and 6) acknowledge good aspects in addition to targeting the problem areas in order to stimulate the common learning process. Learning is based on reflections both based on failures and successful outcomes.

Dialogue as a part of a planning process

The farmer has to be the driving force behind the planning process, but external advice (e.g. veterinarian, advisor or other farmers) is regarded as a crucial part of the planning process and something that keeps it dynamic and reflective. This is based on the premise that people 'from outside' see things differently to the person who works in the same herd every day, and that common learning takes place as a result of communication about what is seen and perceived among members in the group, as referred to above (theoretical framework). The communication between the external person and farmer may be a part of a formal health advisory system via one-to-one dialogue, but it can also take place in different types of farmer groups or networks. Current research and development activities in Denmark, The Netherlands, Germany and Switzerland show the benefits of various types of dialogue taking place as a continuous process (Goeritz et al., 2007; Gratzer et al., 2009).

The principles of learning and empowerment behind the farmer group approach

Learning is often defined as the internalization of knowledge from 'the outside world', seeing learning as absorption or assimilation between two worlds; the outside and the inside, and where learning is perceived as a primarily intellectual phenomenon (Lave and Wenger, 1991). As described in the theoretical framework above, when viewing learning as a social phenomenon and process, it can be interpreted as an interaction between the learner and the learning environment where the world is not an inside and outside world, but rather one with interrelations between the learner (and his or her background and competencies) and the surroundings, which also includes co-learners, cultural and social context, facilitator, teachers and specific situations. When working with farmer groups, this is a crucial point because, in this context, learning is a social process, which takes place in a group where knowledge is developed and related to practice, and this is a central element of the learning theory which forms the theoretical framework for this analysis. Everybody in the group links whatever is learned within his or her own context and makes it relevant in practice, and in this way, the participants share experiences, which become relevant and concrete for everybody. This link between knowledge development and practice is crucial because all people learn when the knowledge is relevant to them and to their daily practice. Therefore, the participants will support each other in the development of this knowledge because and when it is relevant to them. This is very different from the thinking of an advisor 'pouring knowledge' into the mind of a farmer. If the farmer does not find it relevant, he or she simply will not pick it up.

The concept of 'situated learning' refers to learning from and within a given specific context and situation, and this is a key in the theoretical framework of this analysis, as referred to above. This also links the knowledge, the learned, to the experience of the learner, and of the participants in a learning process, as described by e.g. Kolb (1984): *'the process whereby knowledge is created through the transformation of experience'*. When working in a farmer group, the participants expose their experience and share it with fellow farmers, and the consequence of this is that common learning takes place. When farmers' experiences are different, a negotiation process necessarily has to take place and this happens in the dialogue, and is very meaningful to the group members because they negotiate their own experience and thereby put it into a context which – together with the experience of the fellow farmers – constitutes a learning process for everybody.

The learning process leads the learner from one point to another, and is therefore transformative by nature. It is a very complicated process, involving both first and second order learning experiences (Percy, 2005), and therefore also deep reflection, periods with disorientation, surprise or 'optimal frustration' - all of these facilitating transformation and learning when negotiated and being subject to a dialogue.

As referred to in the theoretical framework above, learning in this way is empowering because the new knowledge is based on each person's own experience and situation, and because it can be used and brought into action in a relevant and immediate way. Empowerment has been discussed and

defined in different contexts in different parts of the world and society, and is generally defined as enabling humans, as individuals, in groups or in local communities, to master their own life situations and take control over and responsibility for their own life situation within a given framework (Andersen et al., 2000). One can ask why this is relevant for organic dairy farmers who, in some ways, are the vanguard and as such considered to be very 'empowered' in their attempts to plan herd improvements. The term 'empowerment' implies a fundamental understanding of society as unequal and with underprivileged groups, and empowerment is linked to 'empowering the underprivileged group', and very often, one or more 'privileged persons' guide this process. In this context, we use it to emphasize the importance of farmer ownership and responsibility for herd improvements. This means power to take action and responsibility, and to set the agenda for one's own herd, including the implementation of things that may be innovative, untraditional and against common advice.

Learning and becoming increasingly conscious about one's own situation, skills, capacities, challenges as well as potential weaknesses are crucial elements of an empowerment process, because it strengthens the identity both as an individual and as a group. Individuals and/or groups of individuals are stimulated to take action in their own lives, and this is both transformative, as discussed above, and empowering.

The role of the facilitator

Traditionally, farmer groups often involve an 'expert' advisor who co-ordinates and frequently delivers technical information, occasionally using host farms and analysis of farm records as a knowledge resource. In these situations, terms such as 'training', 'education' and 'knowledge dissemination' are used, illustrating the view on learning as explained above. Each meeting may be organised around a theme or a topic. In such cases, the coordinator may be seen as taking the role of 'the expert who knows more than the farmers'. In other situations, external experts may be invited to present specific subjects in a seminar format e.g. claw trimming. Of course, there are variations, although a 'farm walk' element frequently enables host farmers to demonstrate their personal experiences and expertise. Experience from the Netherlands shows that farmers are often challenged and therefore more active in discussions if they are confronted with farmers who are perceived as "excellent farmers" by their colleagues.

This approach is different from the common participatory learning situation, where the main focus is on exchange and mutual advice between farmers. Here, the role of the professional advisor will be more of a facilitator rather than as a trainer or teacher. Experiences from Denmark, UK and other countries show that if the facilitator takes the role of being an expert, farmers will often be less open to give their own experience and knowledge as freely because they consider 'the expert' to be the person with the correct answers. There may be a fear of being judged by the expert and, as expressed by one British facilitator, 'the whole group dynamic is disrupted' (unpublished interview data). Many advisors and considered experts have severe doubts whether farmers would accept them in this non-traditional role of facilitator rather than advisor (unpublished interview data).

Many advisors have expressed concern that farmers may offer advice to others that is incorrect and even potentially harmful, and in such cases, an 'expert' intervention' is justified. However, whilst this concern also existed among some facilitators in Denmark, practical experience working with this approach has demonstrated that farmers themselves were very knowledgeable and gave different views and experiences, which taken together resulted in a more balanced discussion (Vaarst et al., 2007; unpublished interview data). There are different perceptions across countries as to what 'a professional educated advisor' is supposed to contribute. A general consensus is that it requires a special effort by a facilitator to make a farmer group work with maximum participation and openness, and the emphasis on farmers' own responsibility and ownership over the process is crucial. A Danish facilitator described 'decoding' from the expert role as being the most challenging and difficult role, and this is particularly true when the facilitator also acts as an advisor outside the Stable School environment. This situation might be best avoided by becoming fully occupied in their facilitation role (unpublished interview data). Interviewed facilitators said that they sometimes steer the discussion by asking questions, which they find particularly relevant. In addition to this, they used their professional skills and knowledge when formulating the agenda together with the host farmer.

Considering the context of farmer groups

In the ANIPLAN group, the process of animal health and welfare promotion was discussed between the participating researchers, focusing on the different country contexts, taking issues into consideration such as specific farming and farmer characteristics, needs and conditions in the respective countries in relation to farmer discussion groups, as well as more generic issues to consider when taking a farmer group approach to animal health and welfare planning (Vaarst & Roderick, 2008, 2009). The background for this joint analysis and discussion (based on the participants' experiences) was an acknowledgement of the many factors that will influence the way in which a given farmer group can work, e.g. various geographical, practical, cultural, technical and traditional issues in a given region or country. Based on the understanding of learning expressed in the theoretical framework, the farmers themselves guide this learning process. The acknowledgement of the need to adjust the approach of farmer groups to the life and farming conditions of the participating farmers, points to the necessity of making a context analysis when starting a farmer group, and to ensure flexibility during the process based on feedback from the farmers in the group.

When analysing the successes and characteristics of farmer groups, it is paramount to remember and consider the original purpose of a certain farmer group type. Some farmer groups may be formed by advisory organisation to disseminate knowledge, by dairy companies to ensure that their producers have high standards of animal health and welfare, hygiene and/or production or perhaps as a loose social gathering of farmers with the aim of gaining and sharing common knowledge. For example, the so-called 'erfa-groups' in Denmark ('erfa' as an abbreviation of 'erfaring', which in Danish means 'experience') have worked for decades on dissemination of new knowledge and ideas to and among farmers, focusing on separate themes at each meeting, such as approaches to parasite control, winter feeding strategies, or the use of lameness scores. In The Netherlands, 'Dairy Academy groups' have been formed to serve as a platform for dialogue with research institutions and research to identify future research needs.

The background of the farmer

The educational background of farmers may be a relevant consideration. In countries where agricultural colleges exist (e.g. many Northern European countries), many farmers have a professional farming background, and they generally have access to a considerable amount of educational material and internet based news about farming. Young farmers in particular are more educated and many organic farmers have a specific education in organic farming in addition to the basic conventional education. In Denmark (as an example), a formal education is required in order to own a farm, whereas in other countries this is not a requirement. Farmers' motivation to participate in groups may not have anything to do with their educational level, but it may influence the starting point of farmer groups e.g. differences between farmer groups with regard to knowledge of the nutritional requirements of livestock would influence the extent to which farmers in a group can constructively contribute knowledge and experience and offer advice to each other.

Decision makers on farm vs. participants in farmer groups

The issue of 'family-run farms' as well as large farms with many staff members raises other issues with regard to participation in the groups. Family-run farms often involve people from more than one generation and therefore present potential different interests in changing farm structures or management routines. Farmers who work alone may be more motivated to participate in professional discussions with fellow farmers, as this may give new inspiration and may also serve as a social activity in an otherwise isolated working environment. In Switzerland, Norway and Austria, an emphasis on the importance of involving the whole family was identified and discussed, especially with regard to the involvement of a spouse. In other countries quite dramatic changes over recent decades have resulted in increasingly larger farms with more people involved (e.g. Germany, UK and Denmark). In such situations, the persons conducting daily farm tasks work may not be the main decision maker. This may create conflicts and underlines the importance of involving all relevant individuals within group situations or ensuring knowledge exchange among farm employees if only

one or few participate in within a farmer group. Of course, mass participation of many persons from one farm may not be convenient and can potentially result in an imbalance affecting group dynamics.

Experiences from Danish Stable Schools has raised the issue of inconsistent participation in groups, with some farm staff being replaced by others at different group meetings (unpublished data¹). This potentially impacts on the atmosphere of trust and feeling of common learning within a group.

Different traditions with regard to sharing of farm information and knowledge

Different traditions and perceptions within the various farming communities and regions exist with regard to the openness and mutual trust with which farmers communicate with each other. Based on the ANIPLAN project participants' experiences (Vaarst & Roderick, 2009) there are likely to be regional variations in the tradition of openness with regard to farmers sharing knowledge and information with other farmers. The degree to which this occurs may be influenced by previous history of personal and business contact between individual participants, and the nature of this contact i.e. either positive or negative. Some farmers who have participated in Stable Schools have explicitly expressed afterwards that it was an advantage that they had had little or no previous contact with the other group members (Lisborg et al., 2006).

The structure of the Danish Stable Schools, where one success case and two problem areas chosen by the host farmer are systematically included in the discussion, allows the possibility of avoiding meetings that are solely critical of the practices on host farms (Vaarst et al., 2007). Whereas experiences with apparently open-minded farmers existed in Denmark and the Netherlands, there were more doubts from participants from some of the other countries about whether farmers would be prepared to expose their farm records and results to colleagues where there was no tradition of such practice. The degree to which farm records may be used constructively as part of farmer discussion groups is also dependent on the quality, consistency and availability of farm records, which vary considerably within some countries e.g. milk production recording in the UK. If data is not commonly used and shared, the sudden expectation of sharing with colleagues may be perceived as a privacy threat (unpublished interview data).

Motivation to participate

Ownership has been identified as critical element in the successful development and implementation of animal health and welfare planning (Lisborg et al., 2006; Vaarst et al., 2007). Therefore, it is critical that if this is to be achieved through a group process, participants should be motivated to involve themselves fully and not have any feeling of compulsion. Learning only takes place through the participants' active participation and joint reflection (Pretty et al., 1995). The success of each group is dependent on this active participation by everybody. If one group member fails to fully participate, the dynamic and equality within the group is threatened. Farmers who are not really motivated to implement change are more likely to become reluctant participants and recipients of the group process. In such cases, other forms of knowledge acquisition and sharing may be more appropriate, where passive participation is likely to be less influential on the learning outcomes than it would be in a format akin to the Stable School approach.

This basic principle that each farmer has to be active and motivated in order to create the necessary dynamic and learning environment in a group has a major consequence for the recruitment of farmers to a group. Farmers who may be 'difficult to reach' and yet are considered 'in need of assistance' are unlikely to be motivated to participate in this type of farmer group where they expose themselves and are given advice from fellow farmers. In Denmark, research has shown that farmers who are in crisis may be less open expose their farm to colleagues, and because they may not have a sufficient overview to set the agenda themselves. They may not even have a sufficient overview to co-reflect on other farmers' situations and advise them. Farmer groups are thus perhaps more relevant to farmers who are ready to work towards a common goal within the framework of their individual farm goals, rather than farmers who need solutions to a crisis (Vaarst et al., 2007).

¹ A large quantity of unpublished interview data is currently being collected as part of the ANIPLAN project and is thus referred to as unpublished data.

In the first Danish Stable Schools (2004-2005) (Vaarst et al., 2007), the nature of the common goal (reduction in antibiotic use) made it possible to compose groups of farmers from very different farms, where the farmers emphasised the advantage of being different when having the same goal (Vaarst et al., 2007; Vaarst, 2008). In other situations the common goal may be very specific to certain farm types or situations, which will dictate the composition of the group e.g. groups of bio-dynamic farmers or those with Jersey herds, or herds with milking robots.

The influence of income and subsidies

In some countries, organic farmers obtain high subsidies and a good income as organic dairy producers, and in some regions, e.g. mountainous regions in Switzerland, there might be subsidies involved to keep farmers in business in rural areas (unpublished data). This was pointed out as a reason why farmers who are relatively financially more secure tend to be more open and interested in animal health and welfare improvements, whereas less affluent farmers in regions with fewer subsidies and under harder economic pressure may be seeking advice on increased production and greater economic efficiency. However, attending a farmer group and spending time and money (including paying the facilitator) on meetings must be expected to be profitable for all farmers on a long-term basis, through increased knowledge, improved management routines and improved animal health and welfare, in addition to social capital and network formation.

Timing of meetings and distance between farms

Farmer meetings need to fit into a farmer's busy schedule. The difficulties of establishing a group can be even larger when encouraging the participation of whole families and/or numerous staff. Differences in opinion on the most appropriate time span of meetings were expressed between ANIPLAN participants. Length of meeting is not only influenced by the stated goal of the meetings and the time commitment of the host farmer, but also by logistical factors. The distance and/or time, which the farmers have to travel in order to meet, partly determine how long a farmer meeting can take. Travelling with colleagues to meetings can increase motivation because farmers already start exchanging experiences during the travel. In the Netherlands, farmers prefer meetings in the middle of the day because of morning and evening traffic jam. Farmers in mountainous areas, such as those in Norway, generally travel longer distances, and in some areas there are also long distances between organic dairy farms. Bio-dynamic farmers often have to travel a long distance to meet other bio-dynamic farmers. In some areas of the UK, there are often clusters of organic farms which present a good opportunity for farmers to participate in the same group, although it is necessary then to consider the 'neighbour relations' in the group, as discussed above.

Organisational aspects

There are differences in the method of payment of advisors in different countries and in certain situations some farmers may be unwilling to pay an expensive advisor who facilitates rather than advises. Some farmers perceive that they pay for 'expert knowledge' and not for a good process not even in cases where they obviously benefit greatly from the latter. In Denmark, the host farmer pays the travel costs and fee for the advisor. The advice received from other farmers is not paid for. In a number of EU countries funding opportunities exist for training and education programmes, which could include the establishment of farmer groups. However, the availability of advisors – both agricultural and veterinary – is very different between countries. In some countries all advisors are privately employed e.g. in companies or in private veterinary practices, whereas in others, established advisory systems exist partly supported by organisations, general membership or the government.

Conclusions and future perspectives

Establishing farmer groups seems to be a relevant and beneficial way of stimulating dynamic developments towards a continuous improvement, as in this case where focus is on animal health and welfare planning. Certain principles are crucial to a successful process in the groups.

- Farmer ownership and taking responsibility for own development is crucial for a successful learning process leading to combined with actions on the farms.
- Various factors influence the process differently in different contexts, e.g. geographical, cultural, traditional factors, and a proper analysis of the situation as well as the purpose of the group are necessary conditions for success. These can be negotiated and co-developed with farmers as well as facilitators before being implemented.
- Farmer groups based on farmer-to-farmer advice and co-development will require a facilitation role. This requires a facilitator to refrain from taking a traditional advisory role. Farmers are experts in the group, and the special role of the facilitator needs to be acknowledged in order to fully capitalise on the knowledge base that exists a group of farmers. This does not preclude farmers – individually or as a group – from seeking external expert advice in other situations.

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