

## **Development of an advisory system that supports good animal welfare in organic milk production in Norway**

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### **Introduction**

An important objective of organic farming is to ensure the welfare of farm animals. Both national and international regulations for organic livestock husbandry aim to maintain a high level of animal health and welfare. Nonetheless, organic livestock husbandry has been criticised for cases of poor animal welfare. It is recognised that the regulations themselves cannot guarantee animal health and welfare and that the application of regulations by farmers and the general husbandry standards on the farm are decisive for good animal welfare.

The Norwegian government has an objective that 10 % of the farmland in Norway shall be converted to organic farming by the year 2010. The number of farms converting to organic agriculture will thus increase in the years ahead. Presumably, a broader range of farmers will convert to organic farming than earlier, from experienced, successful farmers to those who have been less fortunate, and want to try organic farming as a last chance. Organic livestock husbandry places some different demands on the farmer from those seen in conventional livestock farming. These differences are most pronounced with regard to housing, access to open-air runs, feedstuffs, disease treatment and breeding stock. Also, there are different risk factors in organic than in conventional livestock farming. The production system places stringent requirements on farm operations, surveillance and risk management. Thus, the dissemination of know-how aimed at the challenges inherent in organic farming methods are important in order to secure a high level of animal health and welfare.

### **Animal welfare advisory service in Norway**

To meet the need for information and expertise, an advisory and development project "Good animal welfare in organic dairy farming"<sup>1</sup> started in May 2003 and will last until the end of 2005. The project's main goal is to develop and establish a permanent advisory service aimed at securing a high level of animal health and welfare in organic dairy farming.

The secondary goals are to:

1. Disseminate knowledge about organic livestock husbandry among experts working directly with livestock farmers (TINE Dairy advisers, veterinarians, etc.);
2. Develop and test an advisory system for use in organic dairy farming;

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<sup>1</sup> "Good animal welfare in organic dairy farming" is funded by the Norwegian Agricultural Authority, and is carried out as a joint project between the Norwegian School of Veterinary Science (NVH), TINE's producer advisory service and the Norwegian Centre for Ecological Agriculture (NORSØK). NORSØK functions as the project's coordinator.

3. Develop and test a system of standards, assessment and documentation of animal health and welfare in organic dairy herds; and
4. Develop information material and templates for group counselling and for training farm advisers.

Danish studies have shown that farm advisers' and veterinarians' knowledge and understanding of organic agriculture, as well as good communication with the farmers, are important in order to ensure successful conversion to organic livestock husbandry (Vaarst *et al.*, 2001). It is therefore important to develop know-how regarding the potentials and challenges of organic farming. The most active sources of expertise, and those that are in closest contact with dairy farmers in Norway, are TINE's Dairy advisers and local veterinarians. TINE BA is Norway's largest producer, distributor and exporter of dairy products. It is the sales and marketing organisation for Norway's dairy cooperative, but do also have a well established producer advisory service. The project will base the development of health and welfare systems on TINE's group counselling and existing activities in the Norwegian Cattle Health Service, which are working with improving general cattle animal health and welfare in Norway. The Norwegian Cattle Health Service has had a complete health card recording system since 1976, where the information is regularly sent to a main frame at a central database in Oslo, combined with other production data from the same herd (The Norwegian Dairy Herd Recording System). Every disease and treatment, whether by the vet or by the farmer, must be recorded. They also have different "health advisory packages" for members. The project will also use information from The Norwegian Dairy Herd Recording System that records information about milking yield, fodder, breed etc.

#### **The advisory services in the future – a vision**

Farm advisory systems will be designed for organic dairy farmers, and will include farm visits by advisers in order to evaluate herd health and welfare, as well as advice on disease prevention and the improvement of animal welfare. On the first farm visit, the adviser and the farmer jointly consider the status of herd health and animal welfare with the help of a welfare check lists and health reports of the herd records. Then, either directly during the visit, or afterwards, a plan for improving animal welfare is set up. On later visits, the implementation of new, or the revision or removal of existing welfare measures are evaluated on the basis of the developed plan. In addition, counselling meetings will be held with groups of farmers, production advisers, veterinarians and other advisers as a forum for discussions. Relevant topics of current interest may also be presented at the group meetings.

#### **Developing the advisory service**

In the early phase of the project, the scope of the advisory activities was formulated. This includes designing the dairy welfare check lists, in close cooperation with the Agricultural University of Norway and the Danish Institute of Agricultural Sciences. These check lists will be one of the project's main products. Furthermore, a template for the welfare plan, which will be used to maintain or further improve a farm's animal health and welfare status, and the design of the group counselling, will be developed. Later on in the project, the advisory system will be tested, and the experience from these trials will be used to adjust the system's design, as the project progresses.

The development and testing of the advisory service is being conducted in an area in central Norway, where there already is a lot of professional activity. The project includes 10 organic dairy farms, receiving a total of four farm visits each from selected veterinarians and TINE advisers. The first visits were conducted in late November 2003. Emphasis will be placed on determining how to measure the actual effect of welfare measures on animal health and welfare. This process will finally lead to a recommendation for the design of the advisory services.

Based on the cooperation between the involved experts and farm advisers, course and information material will be developed, adapted to the needs of advisers working with issues related to animal health and welfare in organic dairy production.

### **Expected results**

The following results are expected from the project:

- Check list for the assessment of animal health and welfare in organic dairy production;
- Template for a health and welfare plan for organic dairy farms;
- Information material and design of group counselling meetings in the field of animal health and welfare in organic dairy production;
- Course and information material adapted to the needs of advisers working with issues related to animal health and welfare in organic dairy production; and
- Focus on animal health and welfare in publications and various press coverage.

### **How can we measure animal welfare?**

We have chosen to base our animal welfare project on a welfare assessment system which has been tested in Denmark (Rousing, 2003). The parameters they considered were housing construction and design, the interaction between animals and humans, cow behaviour during milking and clinical studies of the animals. The welfare assessment routine tested on Danish dairy farms took two days to complete. However, we wish to limit the visit to one round of milking, thus limiting the scope of tests and measurements we can use. The system in Denmark was developed and tested in loose housing systems. Many of the Norwegian stables for dairy cows have tethering systems. The typical Norwegian dairy herds are also smaller than the dairy herds in Denmark. We therefore had to change some of the tests and registrations. Currently, we are recording four different parameters: general impression of the herd, animal behaviour, interaction between animals and humans and farm management and operating systems.

#### ***1) General impression of the herd***

Animal health (or lack thereof) is considered to be an important welfare indicator. Often disease is linked with pain, discomfort and stress for the animals. Especially, acute painful diseases and long-term chronic ailments have an effect on animal welfare. We use data from The Norwegian Cattle Health Recording System in addition to a visual assessment during the farm visits. Such aspects as fatness, cleanliness, excrements, respiratory problems and various types of injuries are recorded.

#### ***2) Animal behaviour***

Normal and abnormal behaviour are recorded during the farm visits:

Milking is a daily, routine operation. Thus, it is important that milking routines are not a source of stress for the cows. Discomfort during milking can be seen in such behaviour as leg stamping, kicking, tail switching and attempts to remove the milking machine. Reasons for such behaviour include social stress associated with loose housing or while waiting outdoors to be milked, discomfort during milking or fear of the stockman.

Rising is a frequent behaviour in dairy cows. If the cows are prevented from rising, or have any difficulties in carrying out this activity, this may indicate that rising causes discomfort or may lead to injuries.

Excessive oral contact with other calves, themselves or housing installations indicate that calves have not become accustomed to their situation. This could be due to such factors as isolation in individual pens, pail feeding or early weaning. Well-being is indicated by playfulness, i.e., jumping, kicking and nudging other calves.

Stereotypic behaviour may indicate environmental stress and that the animal is, or has been frustrated and not in command of the situation. One example is tongue-rolling in cattle, which may be linked to tethering heifers in cubicles and feeding too little fibre. Social factors, such as being tethered next to a superior animal, can also lead to frustration and stereotypic behaviour.

### ***3) Interaction between animals and humans***

The relationship between herd members and the human(s) feeding, milking and caring for them is of major importance for the animals' behaviour, welfare and performance. This relationship can be affected by such factors as genetic disposition, housing design as well as the frequency and quality of animal-human interaction. If the relationship is characterised by stress, animals will feel discomfort or fear each time they interact with humans. Various types of tests have been developed to assess human-animal relationships. We are using tests which record the reaction of an animal to a person slowly approaching it in order to attempt to pat the animal.

### ***4) Farm management and operating systems***

Information about operating systems and farm management is important in order to find the causes of different types of behaviour and diseases. During the visits, the farmers are asked about their farm operations, the routines of the dairy workers, while we also have access to data from The Norwegian Dairy Herd Recording System and The Norwegian Cattle Health Recording System. Also, data on livestock housing, technical installations and cleaning routines are recorded. Animal welfare is not only affected by the farming system itself, but also by how the system is used. Therefore, farm management can have at least the same effect on animal welfare as the actual farming system and housing design.

### ***In the right direction***

Organic agriculture wishes to emphasise animal welfare, and aims to be at the forefront with regard to promoting the welfare of farm animals. It is therefore important to increase the expertise in the field of animal welfare in organic farming systems among veterinarians, advisers and farmers. An advisory service that includes on-farm assessment of animal welfare will contribute to securing a high level of animal welfare

in organic production. The project described here focuses on organic dairy farming. However, it is conceivable that this concept can be adapted to other organic and conventional livestock production systems.

### **Literature**

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