ANIPLAN – not just 'any plan'

Project presentation and report from the 1st workshop in the European CORE-Organic project 'Minimising medicine use in organic dairy herds through animal health and welfare planning'

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Introduction

Livestock farming is an important part of organic farming systems, and it is an explicit goal of organic farming to ensure high levels of animal health and welfare (AHW) through proactive and appropriate management of breeding, feeding, housing and species specific husbandry. A goal in organic livestock farming is to minimise the use of veterinary medicines to improve food quality and protect the environment, and to do this by improving livestock living conditions rather than using alternative medical treatments. Key values influencing organic livestock production are naturalness, harmony at all levels of production, use and recirculation of local resources and adoption of the precautionary principle. The concepts of "positive health and welfare" are incorporated in EU Regulation 2092/91 on organic production. The farmer must ensure that farm animals can perform natural behaviours and live natural lives, but at the same time he/she must intervene when necessary and at first signs of disharmony in the herd.

High levels of AHW are not guaranteed merely by farming to organic standards. This is a conclusion from two EU network projects, "Network for Animal Health and Welfare in Organic Agriculture (NAHWOA) and "Sustaining Animal Health and Welfare in Organic Farming" (SAFO). The principles and regulation of organic farming were shown not always to be well implemented in organic herds. This was associated with a lack of awareness and education among farmers and advisors, and in many cases concerns that regional and national conditions and traditions were compromising organic principles and regulations. Therefore, both networks recommended implementation of individual animal health plans to encourage organic farmers to work towards AHW promotion and disease prevention. The SAFO network also recommended a systematic evaluation of AHW in organic herds to ensure that not only minimum requirements are met but that positive health and welfare is practiced, thereby continuously increasing AHW levels in organic livestock systems.

Welfare assessment has been used to evaluate AHW in organic dairy herds in the UK, Austria, Germany, Switzerland, Norway and Denmark, *e.g.*, in research projects or through organic certification. One area often lacking in these assessment schemes is the use of animal based parameters to assess health and welfare. It is a basic premise in this paper that this requires greater emphasis. Recent knowledge developed through projects such as the EU-funded "Welfare Quality"is particularly relevant. Welfare assessment should include calves and young stock, and should also be better integrated with health planning. Animal health plans develop positive AHW through devising appropriate husbandry, if combined with continuous monitoring and assessment. They can also enable farmers to achieve disease reduction goals through the systematic setting of health targets and plans of how to reach these. In European countries, various animal health advisory service and animal health planning concepts have been developed, which can serve as a source of inspiration in the development of a set of principles for animal health and welfare planning.

If animal health plans are to gain widespread use among organic farmers, communication with the farming community is crucial. A creative dialogue with the individual farmer is also necessary when identifying goals and planning means to reach these goals. Communication regarding the role and benefits of AHW assessment systems, such as benchmarking, may be the catalyst needed to aid farmers to accept and use health and welfare planning. Such communication can take place as part of health advisory systems or within farmer groups. Current research and development activities in Denmark, Norway, Switzerland and the Netherlands show the benefits of such a dialogue.

Based on these various project experiences and results and research questions from different European countries, a research project entitled 'Minimising medicine use in organic dairy herds through animal health and welfare planning' was initiated in mid-2007 with the aim as indicated in the title. This paper introduces the project. The first project meeting and workshop was held in Hellevad in Denmark on the 9th-12th October 2007. A summary of the outputs from the workshop is provided here. The anticipated project activities are also outlined. The project will adopt the name ANIPLAN.

The project

Objectives

The main aim of the project is to investigate active and well planned animal health and welfare promotion and disease prevention as a means of minimising medicine use in organic dairy herds.

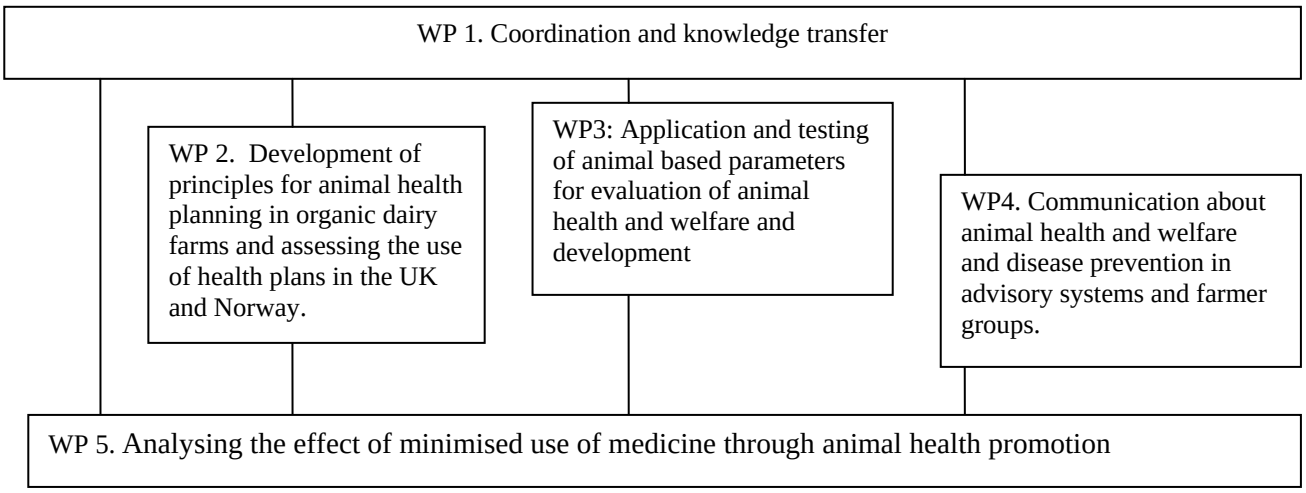
This aim will be met through the following intermediate objectives:

1) Develop animal health and welfare planning principles for organic dairy farms under diverse conditions based on an evaluation of current experiences.
2) Application of animal health and welfare assessment based on the WelfareQuality parameters in different types of organic dairy herds across Europe. This will result in an overview of the herds and allow for potential adaptations for the organic situation (e.g. pasture systems, longer cow/calf contact). For calves, a special system will be developed by the Norwegian partners, and combined and tested together with the WelfareQuality assessment system.
3) Develop guidelines for communication about animal health and welfare promotion in different settings, for example, as part of existing animal health advisory services or farmer groups such as the Danish Stable School system and the Dutch network programme.

Project structure

The project is divided into the following five work packages, four of which comprise research activities with the other focused on coordination and knowledge transfer, through meetings, workshops and publications.
WP1: Coordination and knowledge transfer
WP2: Development of principles for animal health and welfare planning in organic dairy farms
WP3: Application of animal based parameters for evaluation of animal health and welfare in dairy cattle and development of animal based parameters for calves, and the inclusion of these measures into animal health and welfare plans.
WP4: Communication about animal health and welfare and disease prevention in advisory systems and farmer groups
WP5: Analysing the effect of minimised use of medicine through animal health promotion

The relationship between these work packages is summarised below.



Expected focus and research activities within the five work packages

WP1: Coordination and knowledge transfer. Four project workshops are planned, the outputs from which will be published as proceedings. National stakeholder meetings will also be organised in all participating countries, involving CORE project group members where appropriate. Administration of the project, the production of newsletters and the design and maintenance of the website are all managed in this work package. N.B. individual country members will also administer and report activities in line with national funding agreements.

WP2: Development of principles for animal health and welfare planning in organic dairy farms. In the UK, animal health planning is being increasingly promoted and implemented in both the organic and conventional livestock sectors, and health planning is compulsory for organic certification. Very little is known as to how health and welfare plans actually work in practice, and therefore experiences have been collected and reported in a literature review (in these proceedings).

As part of this work package, a Danish-based Ph.D studentship will explore:

- the way animal health plans are used in advisory/veterinary service;
- the way animal health plans are used by organic farmers during and after conversion to organic production; and
- the way animal health plans are used in organic certification and inspection

The work package will be led by the University of Wales and will form the basis for the development of activities in work packages 2, 3 and 4. Key principles will be developed during the process and these will form a common platform for all participating countries, and potentially across Europe.

WP3: Development and testing of animal based parameters for evaluation of animal health and welfare. This work package will focus on existing identified animal-based health and welfare parameters, which will in turn be adapted to the various conditions in the participating countries. Animal health and welfare will be assessed using these parameters on farms in all the participating countries and will be linked to currently funded existing national projects where appropriate. A common methodology for this work will be developed. Training in order to ensure consistency and repeatability will be conducted. A calf welfare plan will be developed using animal based welfare assessments. The calf welfare work will be led by Norwegian participants and will also include training. to include training.

WP4: Communication about animal health and welfare and disease prevention in advisory systems and farmer groups. In this work package, an evaluation of existing advisory systems and farmer groups will be

conducted and will include evaluation of the potential development of these in situations where they do not currently exist. This will include an identification of the training needs of farmers, veterinarians and other animal health and welfare advisors. Based on this, communication principles for animal health and welfare promotion will be developed. Where appropriate, farmer groups based on the Danish Stable School principles for minimisation of medicine use through animal health and welfare promotion and disease prevention will be implemented. An evaluation of the effectiveness of communication with regard to the use of animal health and welfare plans will be included.

WP5: Analysing the effect of minimising the use of medicine through animal health promotion. Minimising antibiotic/medicine use through health promotion means promoting health and welfare through hygiene, outdoor access, etc. and not merely focusing on disease. Animal health planning in terms of setting goals, implementation, monitoring and evaluation is expected to lead to a minimisation of medicine use. This work package will focus on evaluating medicine use and the health and welfare status in case study herds.

Summary of the first workshop

Overview of the workshop

The primary aim of the first workshop was to develop firm working plans and to finding a common collaborative platform amongst the project participants. Presentations were aimed at creating a common understanding of the focus areas in the four research work packages and their relationship to each other and the main project objectives. These were supplemented with group work sessions and discussions. An invited speaker presented perspectives on animal health plans and animal health planning in the UK as part of Work Package 2. All participants presented details of national research and development projects relevant to the project aims and objectives and appropriate for linkages with the proposed project research activities. The workshop also involved a farm visit where some of the key principles and issues associated with animal-based welfare assessments were demonstrated by participants who were currently involved in research projects utilising this approach.

National projects and project activities supporting ANIPLAN

The national project activities are listed in Table 1.

Country	**National projects and research activities related to the focus areas of ANIPLAN**
Denmark	- Development of animal health advisory service. 1999-2002. - Phasing out of antibiotics in Danish organic dairy herds. 2004-2007. - ECOVIT. Sharing a Ph.D.student with ANIPLAN. 2007-2010. Http://www.ecovit.elr.dk (in Danish)
Germany	- Animal health situation in organic dairy farming - mastitis, lameness, metabolic disorders (02 OE 612). 2002-2004. www.bundesprogramm-oekolandbau.de/index.php?id=186&fkz=02OE612&pos=276 - Animal health in the food chain management in organic dairy farming - an intervention study on lameness (03 OE 406). 2004-2007. www.bundesprogramm-oekolandbau.de/index.php?id=186&fkz=03OE406&pos=281 - Animal health in the food chain management in organic dairy farming – a pilot-study on implementation of herd health plans (03 OE 406 +). 2006-2008. www.bundesprogramm-oekolandbau.de/index.php?id=186&fkz=03OE406&pos=281 - Minimising medicine use in organic dairy herds through animal health and welfare planning (CoreOrganic 1903/07 OE 003). 2007-2010. www.bundesprogramm-oekolandbau.de/index.php?id=186&fkz=07OE003&pos=271 - Health and performance of dairy cows in organic farming - an (intervention-) study on metabolic disorders and mastitis with regard to forage production, feeding management and husbandry practices (07 OE 013). 2007-2010. www.bundesprogramm-

	oekolandbau.de/index.php?id=186&fkz=07OE013&pos=258
Austria	- WelfareQuality. Development of animal based parameters in Austria as well as other EU countries. 2004-2009. Http://www. - Epidemiology of lameness in dairy cattle (also a part of WelfareQuality). - Implementation of health and welfare plans in organic pig farming. Federal Ministry of Agriculture. 200 … . Http://www. - CORE-Organic Pig: Prevention of selected diseases and parasites in sow herds by means of a HACCP based management and surveillance program. 2007-2010. Http://www.coreportal. … - Welfare assessment with focus on human-animal relationship. University of Veterinary Medicine in Vienna. 200 … Http://www. - Ruminant Health in Organic Agriculture. 2005-2007; extended to 2008. Http://www.
Switzerland	- ProQ. Regional research and development project involving more than 200 farms. 2003-2010. http://www.fibl.org/forschung/tiergesundheit/komplementaermedizin/pro-q.php. In English: http://www.fibl.org/english/research/animal-health/health.php
Norway	- Housing of calves in large groups. Norwegian Agricultural University. 2005-2008. (no homepage) - Loose housing systems for cattle. 2006-2010. Http://www.kubygg.no - Health in calves and young stock. 2004-2008. Http://storfehelse.tine.no - Stockmanship and the human-animal relationship: Its effect on the health and welfare of dairy calves and young stock. 2006-2008. (no homepage) - Organic Cow Comfort. 2003-2005. (http://ask.bibsys.no/ask/action/show?pid=p07000511&kid=forskpro) - Farm building in the Artic. 3 studies focused on welfare in cold housing. 2004-2005. Http://www.fylkesmannen.no/hoved.aspx?m=22544
The Netherlands	- Antibiotic free animal production. Includes in vitro testing of herbs. 2007 http://www.biokennis.nl/ (choose “Kennisbank”) - Animal welfare of organic dairy cows. Developed in collaboration with dairy company that has implemented welfare protocol. 2008. http://www.verantwoordeveehouderij.nl/Producten/Netwerken2007/13/CowCoach.pdf. - Resistance of organic dairy cows. 2007. http://www.biokennis.nl/ - Minimizing antibiotics on 8 dairy farms. 2007. ASG-report 49. http://www.asg.wur.nl/UK/ - Vision of organic farms about animal health and welfare. ASG Report 55 2007. http://www.asg.wur.nl/UK/
United Kingdom	- Bristol Welfare Assurance Programme http://www.vetschool.bris.ac.uk/animalwelfare - Funded by Defra: - Incorporation of conventional animal welfare assessment techniques into organic certification and farming - Compendium of Animal Health and Welfare in Organic Farming (www.organicvet.co.uk) - Welfare benchmarking and herd health plans on organic dairy farms - The welfare of dairy cows on organic milk production systems

Table 1. A list of previous and current research and development projects relevant to ANIPLAN.

The common platform of ANIPLAN

The common starting point of the participating institutions and researchers

The ANIPLAN project aims at minimising medicine use in organic dairy farming through animal health and welfare promotion. This requires an on-farm approach, and a strong collaboration with end-users. In this regard, the following points characterises the participating institutions/individual researchers:

- Strong on-farm research and development experience on private farms;
- Epidemiological research based on farm-data, qualitative research approaches and systemic thinking;
- A common understanding of the complexity of a farm, the need to focus at the individual farm level and an understanding of the diversity between farms;
- An organic farming research focus and an understanding of the wide diversity in the understanding of the organic farming concept;.
- Understanding of the importance of close contact with end-users and stakeholders (farmers, farmer groups and organisations).
- Understanding that the basic research approach will action-research oriented.

Recognising the challenge and advantage of diversity

In this project, very different farming conditions are represented – e.g. from mono-cultural intensive and high yield production in Danish, Dutch, German and British farms to alpine farming in Austria and Switzerland, and mountain farming in Norway. This requires the development of concepts that enable some commonality with regard to the research approach and the organic principles whilst also recognising the requirement to adjust to national, regional and local conditions. Each project participant will be responsible for creating the connection between national and regional organic dairy farming environments and the overall project aims and activities. This application across diverse conditions should be seen as advantageous with regard to the project outcome and lessons, since the commonly developed principles and outputs will be robustly tested across different conditions, with the necessary adaptations incorporated.

Linking the work packages

All research work packages are – as indicated in Figure 1 above – strongly interlinked. During the course of the first workshop it became apparent that work packages 2, 3 and 4 are also internally linked, since they need to develop through an iterative process, whereby the activities in each of the packages are adjusted to each other. This raises important and challenging issues regarding the collaboration between institutions, which all have their different strengths and responsibilities. This was a particularly strong focus of discussion at the workshop.

Synergy and added value to national projects

Much of the ANIPLAN project is based on the presumption and desire to link with national on-going activities, and is designed to transfer, jointly analyse and discuss the results in the context of the ANIPLAN objectives and those of individual projects. Adopting such an approach, whereby the methodology and interpretation are adaptable, provides a framework from which other research group and countries benefit from the joint analysis and adaptation to diverse conditions. It is the intention that national teams feed the acquired knowledge back to their national partners, and the European (and international) community benefit from the joint effort to develop practices which meet core areas of organic livestock production (animal health and welfare through a non-medical and positive health approach).

This workshop proceedings and future perspectives

The content of the workshop proceedings reflect the aim and starting points of all work packages, both in terms of analyses prior to the workshop, and developments during the workshop emanating from group work. In these proceedings, Christoph Winckler provides an overview of the use of animal based parameters based on the results of the WelfareQuality project. Christopher Atkinson and Madeleine Neale presented concepts, principles and the practicalities of Animal Health Planning and Animal Health Plans based on UK experiences. They raised an important point regarding the development of common principles across the participating countries i.e. there are two elements to the process: the ‘planning’ is the process, and the ‘plan’ provides documentation of the planning process. Pip Nicholas from The University of Wales, Aberystwyth produced a report reviewing the current use of animal health and welfare planning. The entire document is included in these workshop proceedings. This was supplemented through presentations from all countries

regarding animal health and welfare planning processes and research. These are summarised together with the concepts developed through dialogue at the workshop in the paper by Nicolas, Vaarst and Roderick. Finally, the Danish Stable School principles were presented by Mette Vaarst followed by discussion on different approaches of delivery to farmer groups and at the individual level. ????????The proceeding paper is relevantly extended to contain perspectives on other types of farmer developments than Stable Schools???????