



Improving animal health and welfare in organic cattle milk production through breeding and management

ORGANICDAIRYHEALTH



Aim of the project:

To improve animal health and welfare through breeding and management in organic dairy milk production

Introduction

The project will improve dairy health in organic dairy production through a combined improvement of management and breeding. Focusing on dairy cow health provides a unique opportunity for improving societal trust in organic milk production.

Research questions are specified which will contribute to immediate improvements of animal health and welfare through optimized farm management as well as long-term improvements through breeding in Europe.

Background

Pasture based systems often lead to better cow welfare. Nevertheless mastitis and metabolic diseases are major challenges. While local/native breeds produce less milk than modern breeds and therefore are less often used, they may be better adapted to local, especially organic conditions where farmers are more strongly depending on local fodder resources. However, we know very little about health status, medicine use and phenotypic functional characteristics of local/native breeds in organic dairy production in Europe.

Main activities

- ▶ Breeding strategies for organic dairy production in Europe will be enhanced by taking into account characteristics of commercial and local/native breeds and their ability to adapt to local environments including grazing and low concentrate feeding.
- ▶ Genomic selection and crossbreeding of local/native and commercial breeds are investigated for future organic dairy cow breeding.
- ▶ Risk factors for stress and udder infections will be identified.
- ▶ Systematic use of drying off quarters with mild mastitis will be analysed.
- ▶ Efficient preventive and handling strategies will be developed, improving udder health and reducing medication in organic dairy herds without negative effects on animal welfare.
- ▶ Pasture based feeding strategies is developed for reducing metabolic disease and mastitis risks. This effect can be increased by utilizing information concerning individual cow activity.



Expected societal benefits of the project

A major focus in the project is to reduce the application of medicines in organic livestock production and further to promote pasture based system for dairy production. This will increase societal trust in organic milk. It is further expected that the project will increase the competitiveness of organic milk compared to conventional milk.

A critical investigation targeting at fitting local/native breeds into an organic concept will give opportunities for a desired cultural and environmental development promoting breeding diversity. It is ethically and societally critical that reduced medication and production under organic production conditions will not compromise animal welfare. Animal welfare is therefore critically assessed in the development of all management strategies.

Expected results and impacts

New site and farm type specific breeding strategies is developed and will provide long-term health improvement for the benefit of animal welfare and the competitiveness and societal trust in European organic dairy production. By introducing management procedures for improved resilience towards mastitis and a drug free mild mastitis handling procedure, we expect a significant reduction in antibiotics used in organic dairy production. This will lead to an immediate and significant reduction of medicine application in the organic livestock sector.

The new management procedures will be developed in relation to real farm environments and will be accompanied by farm type specific economic consequence estimations. The breed aspects of production and health at grazing and at relatively low concentrate level is further investigated through characterisation of productivity and health of local/native breeds with reference to commercial breeds in organic and low-input environments. Implementation of the results from the project will increase demand for organic milk production and thereby increase transition from conventional to organic production. Due to the dominant role of dairy cattle in European organic livestock production these opportunities will benefit the organic livestock sector in general.



Polish Red cattle

Expected long-term impacts

New breeding strategies taking into account the potentials of local/native breeds will provide long-term health improvement for the benefit of animal welfare and the competitiveness and societal trust in European organic dairy production.

How to reach target groups

Information from the database will be available for future research and networks. Results on traits will be discussed with farmers and associations during workshops. The involvement of organic dairy farmers in the studies is a route for immediate dissemination



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Black and white native breed cattle from Lithuania

Further information

This project is funded via the ERA-net CORE Organic Plus, which is a network of 20 countries on initiating transnational research projects in the area of organic food and farming systems. In 2014, CORE Organic Plus selected ORGANICDAIRY-HEALTH and 10 other projects.

Read more at the CORE Organic website:

<http://www.coreorganic.org/> and find

publications from the project at:

<http://coreorganicplus.org/research-projects/organicdairyhealth/>

and at: <http://orgprints.org/view/projects/organicdairyhealth.html>