

AUSTRIA

Agri-food chain integration & quality

Location

Pinzgau-Pongau

Programming period

2014 – 2020

Priority

P3 – Food chain & risk
management

Measure

M16 – Cooperation

Funding (EUR)

Total budget 316 164.00
EAFRD 185 388.73
National/Region. 130 775.27

Project duration

2016 – 2018

Project promoter

ARGE Effizienz-Check, LEAD-
Partner Association of
Austrian Cattle Breeders
(ZAR)

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Website

<http://zar.at/Projekte/Effizienz-Check.html>

Developing a herd management tool to optimise efficiency and animal welfare on dairy farms.

Summary

Dairy farms are highly complex systems and farmers are confronted with many different facts and figures taken from varying information sources. Therefore, it is very difficult to optimize their toolchains and workflows for an optimal profitability in milk production.



In this context a project was set up in order to define dairy farmers' needs with regards to analytical tools; set up data interfaces for collecting the required information on-farm; and develop a model establishing linkages between management, animal housing conditions, animal health, and profitability. The project also included the development of a web application for dairy farmers to visualize this linkage by analysing their own herds and to find ways to improve health and efficiency on their farm.

Results

A web application allowing farmers to visualize the linkages between management, animal housing conditions, animal health, and profitability. The web application will be accessible for farmers and their vets and advisors free of charge.

Lessons & Recommendations

- ❑ It was vital that workshops were held and a survey was conducted together with farmers and staff members of provincial associations in order to understand their expectations regarding such an application.
- ❑ At the workshops, many of the ideas and wishes of farmers were collected. However, a subsequent deeper analysis into the possibilities of incorporating all of these suggestions into one app - given the complexity of all the dependencies on a farm - showed that it would be better to concentrate on the main topics. Attempting to estimate every single impact would likely result in inaccuracy and confusion.

Context

During the last decades, the otherwise stable milk market has become more and more volatile, so farmers have to learn how to deal with this new situation. Along the entire value chain of milk production many different types of data get collected and stored, but the number of practical tools to analyse this data and to extract recommendations for the farmers' daily work is extremely limited.

In practice, dairy farms are highly complex systems and farmers are confronted with many different facts and figures taken from varying information sources. Therefore, it is very difficult to optimize their toolchains and workflows for an optimal profitability in milk production.

Objectives

The main objectives of the project were to:

- Define farmers' needs with regards to analytical tools.
- Set up data interfaces for collecting the required information on-farm.
- Find ways to model the linkage between management, animal housing conditions, animal health, and profitability.
- Develop a web application for dairy farmers to visualize this linkage, by making analyses of their own herds, and find ways to improve health and efficiency on their farm.

Activities

The whole project is coordinated by the "National Consortium of Austrian Cattle Breeders" (Zentrale Arbeitsgemeinschaft österreichischer Rinderzüchter) and various partners who are closely linked to the Consortium, such as the "Upper Austrian Chamber of Agriculture" (Landwirtschaftskammer OÖ), "Styrian Animal Health Service" (Tiergesundheitsdienst Steiermark), farmers, veterinarians, and regional recording associations.

At the outset, workshops with farmers were held to define the farmers' needs with regards to analytical tools and to find the best way to incorporate such tools in their daily work.

Modelling the linkage between management, animal housing conditions, animal health, and profitability is highly complex, therefore many parameters and reference values are needed. This undertaking was primarily carried out within in the framework of a masters theses at the University of Natural Resources and Life Sciences, Vienna.

Based on the results of the workshops and analyses, pilot applications were developed and tested by 15 dairy farmers in Upper Austria, Lower Austria, and Styria.

The project's final goal is to develop a web application for dairy farmers to carry out economic analyses of their own herds and to find ways to improve animal health and efficiency on their farm. All dairy farmers with cows under milk performance control (21,000) will be able to use this application for free via the online portal "RDV".

At the end of the project, several information events for farmers, consultants and veterinarians in all federal states of Austria are planned.

Main results

The final aim is a web application to visualize the linkage between management, animal housing conditions, animal health, and profitability. It is hoped that increased awareness of the interconnectivity of these factors will enable farmers to pay closer attention to animal welfare and health. Only healthy cows, that feel comfortable within their housing, are able to use their full capability for milk production. The web application will be accessible for farmers and their vets and advisors free of charge.

The models for describing the linkage between management, animal housing conditions, animal health, and profitability are being developed and most of the masters theses has already been completed.

Key lessons

It was vital that workshops were held and a survey was conducted together with farmers and staff members of provincial associations in order to understand their expectations regarding such an application.

Modelling the impact that investments in better housing conditions and health monitoring tools have on the profitability of milk production is very difficult as this depends on the quality of their implementation.

At the workshops, many of the ideas and wishes of farmers were collected. However, a subsequent deeper analysis into the possibilities of incorporating all of these suggestions into one app - given the complexity of all the dependencies on a farm - showed that it would be better to concentrate on the main topics. Attempting to estimate every single impact would likely result in inaccuracy and confusion.

Time passes fast and projects can become delayed due to dependency on external service providers. This should already be considered at the project planning stage.

Additional sources of information

<https://ec.europa.eu/eip/agriculture/en/find-connect/projects/effizienz-check-herdenmanagementtool-zur>

Funded by the

