15. Management Tools to Support Circular Economy Practical Herd Applications

Title presentation

Efficiency-Check: WEB application to visualize linkage between management, housing conditions, animal health and profitability in dairy cattle

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Abstract

Dairy farms are very complex systems and their farmers are confronted with many different facts and figures on varying information sources. So it's very difficult to optimize processes and workflows and supportive herdmanagment tools for an optimal profitability in milk production.

The Association of Austrian Cattle Breeders (ZAR) started together with the Chamber of Agriculture in Upper Austria (LK OÃ–), Styrian Animal Health Service (TGD Stmk.), LKV Austria QualitÃ¤tsmanagement GmbH and ZuchtData EDV Dienstleistungen GmbH the EIP project "Effizienz-Check" (Efficiency Check) in 2016. In addition, farmers, veterinarians and provincial recording associations were closely involved in the project. As a result of the project, the web application Efficiency-Check went into operation as a new module of the RDV portal in Austria in early 2020. All Austrian dairy farmers under milk performance testing can use this application for free.

The project started with small workshop groups with practicing farmers and employees of the provincial recording associations in order to design the web application as closely as possible to their needs. Veterinarians contributed their expertise in respect to animal welfare and animal health.

The focus of the Efficiency-Check is the monetary valuation of the individual dairy cows on a farm. Especially the results of milk performance testing as well as the diagnoses and health observations recorded in the cattle database (RDV) serve as the basis for the calculations. In order to be able to evaluate the health observations in monetary terms, farmers and veterinarians were interviewed and for the entire diagnostic key default values for the average workload, treatment costs, waiting times and disease-related decline in milk production were agreed in expert discussions. The web application calculates an individual animal balance, taking into account the proceeds from milk, calves and animal sales, as well as the expenses for supplementation, feed, occupancy and health problems. All of this is calculated without the user having to enter additional data.

Within this application a tool is offered to visualize the farmer's loss of revenue based on his current udder health status.

The next development step is to supplement the evaluations offered with analyzes of the environmental impact of milk production on a farm. For this purpose, the usual production

conditions from the farm and the feed fed at the individual cow level are compared to the amount of milk and meat produced.