European Network for Rural Development

High Welfare Floor (HWF) – Construction of an innovative barn for dairy cows in Slovenia

EAFRD-funded projects

Slovenia

Farm's performance, restructuring & modernisation

Location
Žalec

Programming period
2014 – 2020

Priority
P2 - Competitiveness

Measure
M04 – Investments in physical assets

Funding
Total budget 997 923.18 (EUR)
EAFRD 347 618.43 (EUR)
National/Regional 115 872.43 (EUR)
Private 467 585.29 (EUR)
Other 66 847.03 (EUR)

Project duration
2019 – 2022

Project promoter
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Realisation of an innovative farm investment project to improve animal welfare conditions in the barn and secure economic and environmental benefits.

Summary

A young farmer used investment support from the Slovenian Rural Development Programme to install an innovative flooring system called High Welfare Floor (HWF), which is a multi-layered surface that provides dairy cows with dry and comfortable accommodation that resembles outdoor conditions.

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Project Results

The barn was the first in the world to use this latest version of HWF in real conditions.

Ammonia emissions have been reduced by up to 80% reducing the farm's carbon footprint.

Milk yield per cow has increased by almost 10 litres per day (to between 36 - 38 litres on average).

The need for manual work in the barn has reduced by half and has also reduced veterinary costs.

Lessons & Recommendations

- ❑ The project highlights an example of EAFRD supported innovation that promotes the wellbeing of dairy cows and reduces labour and veterinary costs.
- ❑ The farmer's own initiative investigating new technologies was a critical starting point.

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Context

In April 2016, after finishing his studies in animal husbandry at the Department of Animal Science of the Biotechnical Faculty in Ljubljana, Simon Čretnik became the owner of a farm. As a thoughtful young farmer who likes to stay informed about innovative agricultural practices, Simon was keen to install High Welfare Floors (HWF) in his cattle barn.

High Welfare Floors (HWF) are an innovative technology for free range barns, which provide dairy cows with dry and comfortable accommodation that allows them to move around freely, behave naturally, and lie down wherever they want. HWF has a three-layered composition that is always dry. This has a positive effect on the condition of the animals' hooves and thanks to the above-standard level of comfort that the system provides, the animals get more and better-quality rest time. The addition of cow brushes and fans provide plenty of fresh air and a lower temperature to keep the cows happy and content.

Objectives

The aim of this project was to improve animal welfare standards while reducing the farm's environmental impact.

Activities

Simon learned about HWF while visiting livestock farms in the Netherlands in search of good practice examples. With help from his contacts at the Biotechnical Faculty in Ljubljana and the Wageningen University and Research Institute, he contacted the developers of the HWF. They agreed that he could be the first person to test the latest version of the floor in real conditions. Multiple applications for support were carried out and almost the entire investment was covered by grants.

Funds from the Slovenian Rural Development Programme covered:

- the construction of a new barn with a capacity for 60 dairy cows and 29 calves
- a manure pit
- a slurry pit
- a machinery shed
- the purchase of a flexible slurry tank.

The stable's management is partly automated, which further improves conditions for the animals.

Main results

The cattle barn was the first in the world to use this latest version of HWF in real conditions.

Ammonia emissions are reduced by up to 80%, which contributes to a lower carbon footprint. There is a lower risk of bacteria entering the udders and causing mastitis; a condition that requires treatment with antibiotics.

The milk yield per cow has increased by almost 10 litres per day and currently averages 36 -38 litres.

The project has reduced the need for manual work in the barn by half, as robots now perform an increased number of tasks. In addition to the milking robot, which is in operation 24 hours a day, the milking pipeline is also operated automatically. In addition to a scraper and a manure elevator, the barn also features a robot for floor cleaning and a running surface for cows. This has all contributed to a reduction in labour and veterinary costs.

Another significant advantage is the immediate separation of urine and manure, which subsequently enables more specific and precise fertilisation.

Key lessons

The project highlights an example of EAFRD supported innovation that promotes the wellbeing of dairy cows and reduces labour and veterinary costs.

The farmer's own initiative investigating new technologies was a critical starting point.

Additional sources of information

www.youtube.com/watch?v=Q3PlHbqkWew

www.youtube.com/watch?v=6q5-oBrrddE

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