GenTORE

RAFT Solutions Ltd
research | advanced breeding | food futures | training

Optimizing Herd Level Resilience & Efficiency
Dissemination via Champion Farm Events

Problem

The prediction of resilience and efficiency has several uses on farm, ranging from support for culling and advanced breeding decisions to population-wide precision phenotyping.

Currently there are few farms that actively consider resilience & efficiency (R&E) when making management decisions and commercially available software packages tend not to calculate or display herd level resilience and efficiency values effectively on farm. There is thus a need to raise awareness of the potential importance of assessing R&E.

Solution

Using commercial farm settings, GenTORE has delivered Champion Farm Events in various countries to show farmers that resilience and efficiency could be characterized and predicted using currently available sensor technologies.

Outcome

Dissemination to farmers and veterinarians was achieved through training workshops and guided farm walks which highlighted the use of current on-farm Precision Livestock Farming (PLF) technologies and sustainable farming practices.

This training showed how new sensor-based proxies for resilience & efficiency can assist in making evidence-based decisions for both breeding and culling, but also the importance of linking to climate change and sustainable food production.

This was also demonstrated at a recent PLF Conference held in York in November 2021 where delegates were invited to attend workshops, training sessions and practical farm visits which were accompanied by presentations and discussions from international leaders in the field of precision livestock farming.

Results

From the Champion Farm Events, delegates understood the definition of Precision Livestock Farming and how data from commercially available sensors can be used to predict herd level Resilience & Efficiency.

The importance of the need for an evidence base for making herd breeding and culling decisions was stressed and how the quality and availability of data is of high importance when ranking cows in a herd to utilise PLF opportunities for sustainable production.

Ranking cows on Resilience & Efficiency using commercially available PLF sensor data can offer new and effective insights to inform herd level as well as individual animal management changes.

Author(s)

Angela Lockwood, Jonathan Statham (RAFT)

Keywords

Resilience, Efficiency, Sensor Technologies, Precision Livestock Farming (PLF), Champion Farm Events (CFE)

Illustrations

Figure 1: Calf rearing discussion

Figure 2: Sensors in milking parlour

*"**GEN**omic management **T**ools to **O**ptimize **R**esilience and **E**fficiency - GenTORE"* is an H2020 project which aims to develop innovative genome-enabled selecton and management tools to empower farmers to optimize cattle resilience and efficiency in different and changing environments.
www.gentore.eu