

RAG Status

■ Red: Behind with target ■ Amber: Nearly achieved target ■ Green: Target on track



Knowledge Exchange (KE) Hub ■

Key outputs during the quarter:

5 Technical Articles

Technical articles published:

-  GENOMIC SELECTION OF DAIRY HEIFERS
-  VERTICAL FARMING: A NEW FUTURE FOR FOOD PRODUCTION?
-  POULTRY MANURE MANAGEMENT
-  BETTER SOIL MANAGEMENT: REDUCING OR STOPPING SOIL TILLAGE
-  PREVENTING INJURIOUS PECKING IN LAYING HENS: PROVIDING A WELFARE ORIENTATED ENVIRONMENT

Factsheets produced:

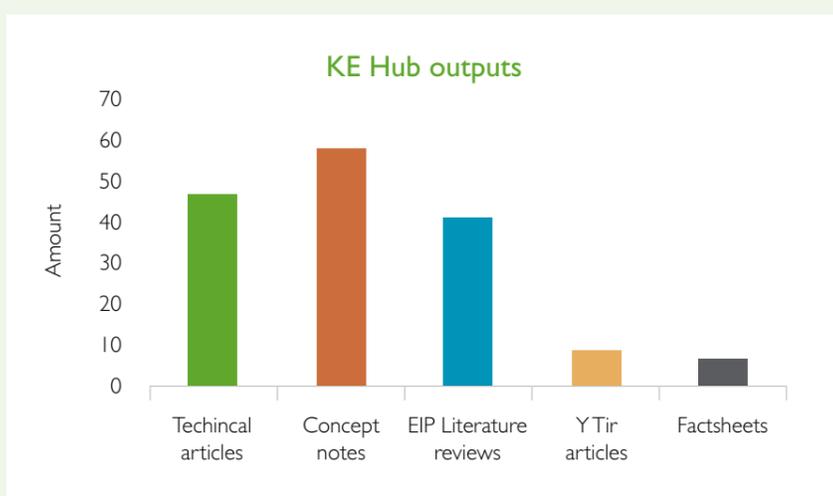
-  SILAGE AND SLURRY STORAGE REQUIREMENTS
-  GET SMART WITH GRASS

KE Hub outputs since October 2015

The KE Hub aims to bridge the gap between research and practice through a variety of mechanisms including;

- Literature reviews to support EIP proposals
- Project development support for FC Technical Officers and EIP Groups
- Contributions to Farming Connect technical publication

The graph below illustrates outputs to date:

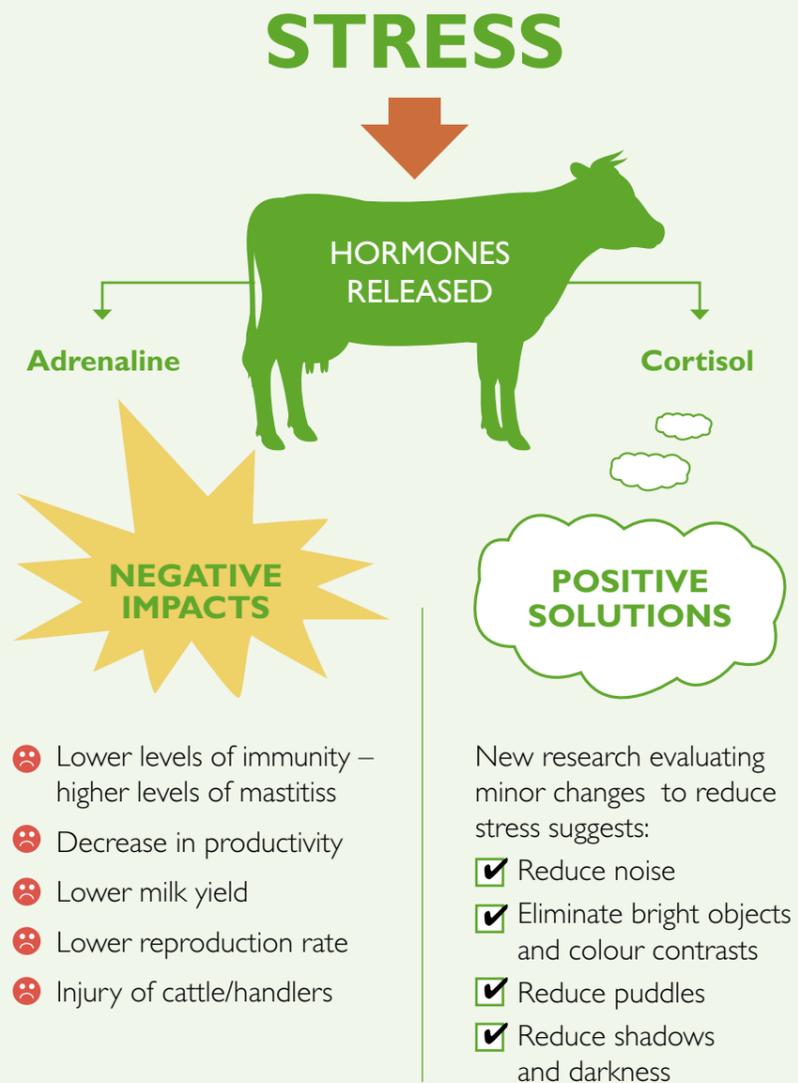


New ideas from the KE Hub

- The KE Hub will be creating short video clips to complement the technical articles – these will be showcased on the Farming Connect website.

Reducing Stress Levels in Cattle – Designing an Effective Handling System

Reducing stress levels in cattle;
Designing an effective handling system.



Considerations for an effectively designed handling system:

- ✓ **The system** – Animals response to their surroundings has considerable effects on their overall performance. Considering implementing minor changes to promote a positive experience is crucial for effective livestock handling.
- ✓ **Handlers** – The influence of handlers on cattle behaviour has a significant effect, therefore it is important that the handler is confident and quiet to ensure a calm environment is maintained.
- ✓ **Developing Facilities** – The design of facilities should consider the direction of flow, the inclusion of non-slip flooring, the layout of the design to ensure the smooth movement of the animals; for example the use of curved race systems and the inclusion of solid sides.

Adapted from: Lima, M.L.P, Negrão J.A, de Paz, C.C.P, Grandin, T. 2017. Minor corral changes and adoption of good handling practices can improve the behavior and reduce cortisol release in Nelore cows.

Miriam Parker – Director of Livestockwise Ltd.

European Innovation Partnership ■



EIP Wales Project Target 2022	45
Projects at Application Stage	12
Projects Approved	8

Potato blight control using components of indigenous non-food waste plants



The Potato Blight project will apply current research to develop a preventative measure to potato blight using saponin sourced from common ivy. The project will run for 18 months, covering two growing seasons at two farm sites.

Late blight of potato is a disease of the foliage and tubers which can result in crop failure. Its control has recently been estimated as £70 m across the UK in a bad blight year.

The natural fungicide will potentially provide an effective, natural and potentially low-cost, alternative fungicide for potato blight. Organic growers urgently need a replacement for copper-based fungicides.

Assessing the potential of genomic testing dairy heifers to increase genetic gains and financial returns

Through EIP Wales, eight North Wales farmers are aiming to maximise farm profits by accelerating the breeding progress of their dairy herds.

The reliability of traits being inherited from the traditional pedigree index is 35%. By using genomic testing to measure DNA for production, type, fertility and health traits this can increase the reliability to **70%**.



“Bringing this modern innovation to farm scale will be very valuable to the industry by accelerating herd progression, boosting farm competitiveness and sustainability”

The project will fund the genomic testing of 410 predominantly Holstein-Friesian heifers to assess their genetic potential. The eight farms have listed the traits they're aiming to improve within their herd and progress towards these will be assessed over 3 lactation periods.

The aims of the project:

- Produce a decision tree for using genomics
- Determine the correlation between genomic PTA's and actual performance
- Gain a better understanding of the herd's genetic profile, direction of travel and impact of breeding decisions for each participating farm
- Produce a cost benefit analysis of genomic testing for each farm scenario.

“Through the small investment of a genomic testing, breeding plans can be restructured to get the best output from the most valuable resource on the dairy farm, the herd.”

The first task for the farmers will be to select the youngstock to include in the test. Within the next weeks DNA samples will be taken from the heifers before sending off for a genetic profiling in time for first breeding at 12-13 months of age.

Study Visits



In September the **AHDB Udder Group** visited progressive dairy farms in Gloucester & Dorset. Key topics included dairy farming systems, staff management and communication.

The **Future Farmers of Wales Group** visited three productive farms in North Wales in September. The visit gave members the confidence to invest in their businesses and in the quality of both livestock and land.

The **Lampeter Women in Agriculture Group** travelled to London to attend the Meat Women in Business Event in October.

The **Carmarthenshire YFC Agricultural Forum** visited numerous farms and businesses in Kent and Sussex focusing on diversification and how to be self-sufficient.

The **Merlin Discussion Group** visited farms in North Wales to observe their farming systems. The visit focused on the unique problems facing Welsh dairy farmers and the strategies implemented to overcome them.

Wales YFC visited a number of successful farms in Scotland to see how farms in other areas of the UK operate. Members were inspired by how the businesses had developed from being small family farms to being some of Scotland's most well-known farms.

In November the **Blaenbwch Discussion Group** visited three farms in Scotland to see how traditional beef and sheep farms outside of Wales have adapted to change by developing and diversifying their businesses.

