INFORMATION FOR DAIRY FARMERS INTERESTED IN PARTICIPATING IN ROBOTIC MILKING RESEARCH

Background

The overall objective of this research project is to improve the efficiency of N.I. dairy farms by providing key performance indicators and new information to optimise management of robotic milking systems.

Increasing herd sizes and a reduction in the agricultural workforce has led to increasing pressure on labour on UK dairy farms. During 2005 and 2014, average labour hours per cow fell by 22% on UK dairy farms to 39 hours per annum (Eurostat, 2016). Creating a labour efficient working environment is essential to building sustainable farm businesses and ensuring an attractive industry for new entrants. Robotic milking technology is attracting increased interest within the N.I. dairy sector, in part driven by the perceived labour replacement value this technology offers. Industry estimates indicate that there are now over 500 robotic milking machines present in N.I., suggesting approximately 10% of the national herd is currently milked by robotic technology (Robot manufacturers, personal communication, 2018). In line with other European countries (e.g. Denmark, Netherlands, UK), installation of robotic equipment is expected to continue to increase in coming years.

Despite the recent uptake of robotic milking systems within N.I., little independent information is currently available on the management of these systems. Unlike standard milking machine replacements, conversion to robotics requires: a paradigm shift in both cow behaviour and farmer management, the identification and use of new metrics and practices to aid cow management, and advancements in on-farm and supporting industry skill sets. Failure to fully achieve this marked change of practice could result in sub-optimal physical and economic performance of robotic milking systems.

The project, funded by DAERA and AgriSearch will include a number of research trials, undertaken at AFBI Hillsborough to optimise the efficiency of housed robotic systems and investigate how grazing and robotic could integrate on N.I. farms.

The project also seeks to capture information on the management and performance of robotic milking systems on commercial farms. To achieve this, cow and robot performance data will be collected from farms on a monthly basis. From this dataset, the key metrics influencing system efficiency and performance will be identified for each farm. Data will be collected for a two-year period. After the first year, farms may be asked to alter management practices to test their effect on overall system performance.

What we are looking for?

AgriSearch (in partnership with AFBI and CAFRE) are seeking to recruit 25 dairy farmers from across Northern Ireland who are currently operating robotic milking systems to participate in a robotic milking research project.

The farmers recruited will allow AFBI access to their robot and cow performance data (which will be extracted from the robot software). Farmers will also be asked to record labour input information as well as information about the cows diet and animal health. Benchmarking information may also be requested. This information will be taken over a period of 24 month from 1st June 2020 to 30th May 2022.

The performance of the farms against identified metrics and strategies for improvement will be discussed and implemented.

Farmers will be asked to participate in discussion group meetings twice a year (5 in total) were results of the on-farm and parallel studies at AFBI, Hillsborough will be discussed. Future research requirements for robotic milking will also be discussed.

Four of the twenty-five farmers will be asked to host a Farm Walk (2 in 2021 and 2 in 2022/23).

Farmers will be paid a total of £1,000 over the course of the project for their participation. Mileage will also be paid to attend the discussion group meetings. Farmers who host farm walks will be paid an additional £500.

We will give preference to farmers who are in a CAFRE Business Development Group and would encourage pilot farms to host a meeting of their business development group during the project.

Next Steps
If you wish to apply, download an application form from the AgriSearch website and return via email to jason@agrisearch.org or by post to:

AgriSearch
Innovation Centre
Large Park
Hillsborough
County Down
BT26 6DR

Deadline
Applications forms must arrive no later than noon on Monday 2nd March 2020.

Further Information
If you have any specific queries, then contact either Jason Rankin (AgriSearch) on 028 9268 1613 or Debbie McConnell (AFBI) on 028 92681530