AUTOMATION OPPORTUNITIES ON DAIRY FARMS

Automation solutions are already having a big impact on many Australian dairy farms and there are options on the horizon.

FutureDairy project leader, Associate Professor Kendra Kerrisk believes the greatest opportunities lie with technologies that save labour by automating repeated tasks, collect and report data to help decision making or collect new data that hasn't been able to be recorded in the past.

"Robotic milking offers all three benefits but of course it involves a major capital outlay and a period of 6-12 months to adapt the farming system to realise these benefits. There are now four brands on the market giving more options with single box, multi-box and the robotic rotary," she said.

Other repetitive tasks that can currently be automated in the dairy include yard washing, drafting and weighing cows, individualised feeding, milk sampling and testing for composition, oestrus detection aids and mastitis indicators.

"There are numerous robotic arms available overseas for pre-milking teat preparation and post milking teat sanitation, although they are not available here yet. These are mostly compatible with the manufacturers' own milk harvesting installations."

The FutureDairy team is quite excited about new technologies that allow dairy farmers to collect animal performance information.

"This is an example of products that allow automatic collection of information that we haven't been able to record in the past."

"For example, the combined use of activity monitors and rumination sensors is looking very promising for automatic heat detection, early diagnosis of illnesses and possibly to provide an automatic alert at the onset of calving. This technology is commercially available in Australia," she said.

In 2014 the FutureDairy team will be conducting trials to better understand the value of the data provided and how to interpret the results.

Technology has also been developed to automatically sample milk from individual cows and analyse it for automatic detection of animal performance, particularly oestrus, mastitis and ketosis.

"The technology is sold overseas but it is unknown if, or when it might become available in Australia," she said.

Robots beyond the dairy

FutureDairy has conducted some initial trials on the potential to use a robot to herd dairy cows from the paddock to the dairy.

"The results were very promising; we were amazed at how calm the cows were in the presence of a robot."

FutureDairy will be continuing work in this area using a custom-built prototype, in association with the Australian Centre for Field Robotics at the University of Sydney, who are pioneering the use of robots in a range of agricultural settings.

For more information, contact Associate Professor Kendra Kerrisk, FutureDairy project leader ph 0428 101 372, email kendra.kerrisk@sydney.edu.au or www.futuredairy.com.au

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Media contact: This media has been released by Monks Communication on behalf of the FutureDairy project.
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