

AUTO FETCHING ON THE HORIZON

Automatic fetching technologies on the horizon may allow farmers with automatic milking systems (AMS) to increase the number of milkings that occur overnight.

FutureDairy Project Leader, Associate Professor Kendra Kerrisk, said that Australia's grazing based AMS, usually saw a dip in the number of milkings that occur between 2am and 5am, a time when grazing cows typically rest.

Post graduate student, Ashleigh Wildridge, simulated auto fetching to determine the likely impact on overnight milkings and therefore the potential value of automatic fetching technologies for AMS farms.

The study was conducted on Grant and Leesa Williams' automatic milking farm at Hallora in West Gippsland, Victoria where four AMS box units milk 250 cows.

Conducted over three weeks, the study involved two different fetching times: 11pm and 1am. Ashleigh visited a paddock of cows due for milking, quietly moved them into the laneway and shut the gate. She was then able to track their milking times through data recorded by the AMS.

"I wanted to find out whether the cows would take themselves up to the dairy to be milked or if they'd just hang around in the laneway; and if the time of fetching made any difference," Ms Wildridge said.

"Most of the cows did in fact continue from the laneway up to the dairy to be milked. And the time of fetching didn't make much difference."

The trial showed a 4-fold decrease in the number of cows with a milking interval of more than 16 hours (from 4.6% of the herd to 1.7%). This has two benefits: it reduces the risk of udder health issues such as mastitis and increases the potential number of cows milked per robot.

Ashleigh said that accurate pasture allocation was still the most important tool for encouraging voluntary cow movement in a grazing based AMS.

"Autofetching technology may be an additional tool to enhance voluntary cow movement but accurate pasture allocation will continue to be critical," she said.

"For example, if too much pasture were allocated, the cows' response to auto fetching would differ; we'd expect them to be more likely to loiter or rest in the laneway."

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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Caption: FutureDairy postgraduate student, Ashleigh Wildridge is investigating the potential value of autofetching for robotic milking farms.

Optional extra: Autofetching products on the horizon (190 words)

FutureDairy post graduate student, Ashleigh Wildridge, said she was aware of three products that could potentially be used to automatically fetch dairy cows from a paddock. While Ashleigh's research is focussed on their application for automatic milking systems, the technologies have potential uses for conventional milking dairy systems and other livestock farms.

Fence walker: Launched by Lely in 2014 this product is designed for strip grazing. An electrified wire moves forward over time but can be set to move backwards and drive the cows back into the laneway; controlled by two robots; one at each side of the paddock.

Virtual fencing: under development by CSIRO. Cows wear collars fitted with GPS receivers programmed to know where the virtual fence is located. Collars emit a noise warning when cattle approach the boundary line. If they continue they receive a mild electric shock similar to an electric fence. The potential may exist in the future to change the co-ordinates at a certain time at night to send cows out of the paddock.

Robotic herder: Dairy Unmanned Ground vehicle (DUGV). Can be set to calmly move behind cattle and herd them out of the paddock. Currently under development at the University of Sydney. Initial results are encouraging.



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Caption: A prototype of the robotic herder being developed at the University of Sydney.