

# Remote alert device brings solution to labour-loss one step closer

**New research to develop a remote calving alert device could have major management, economic and animal welfare implications for the Australian beef industry.**

Meat & Livestock Australia (MLA) is funding a project to determine the logistics of developing a calf-alert system to use as a research tool in investigating causes of calf loss.

Dr Scott Norman is a Senior Lecturer in Veterinary Reproduction at the School of Animal and Veterinary Sciences at the Charles Stuart University and began working on the project in June this year.

## KEY POINTS

- > MLA is funding a project to develop a remote calving-alert system.
- > The system could help scientists investigate causes of calf loss due to dystocia.
- > Dystocia costs the Australian beef industry up to \$200 million annually.\*
- > It has been traditionally difficult to research due to the remoteness of many beef cattle enterprises.

Dr Norman said the true cost of calf and breeder loss due to dystocia (abnormal or difficult labour) was difficult to quantify due to the remoteness of many beef cattle enterprises in Australia.

He said a telemetric calf-alert device with the capacity to identify the time and location of a calving event under commercial grazing conditions would assist researchers in their attempts to identify the causes of dystocia in Australia.

"From the limited data we have, which is based on figures from the mid 1990s, it is estimated that approximately 10% of calves from first calf heifers die between birth

and weaning with between 75% and 90% of these deaths occurring in the first week after birth," he said.

"A number of independent estimates of the cost of dystocia to the Australian national herd include \$30 million, \$48 million and \$200 million annually."

"The largest of these figures takes into account the opportunity and social costs associated with dystocia but even the smallest of these figures represents a significant loss for the industry."

## The research

Due for completion in January 2011, the initial phase of the project involves a comprehensive review of literature, products and patents, preliminary investigations and desk-top evaluation to develop a range of candidate prototype calf alert design options for further development and testing.

This will involve working closely with the team from Taggle Systems Pty Ltd who have already developed a cost effective, wireless, cattle tracking system.

Taggle CEO Chris Andrews said Taggle technology has already been used in specially developed ear tags to track and record the grazing patterns of cattle.

He said the technology could be used to track cows in a range of approximately 7km with an accuracy of plus or minus 15m.

"This is emerging technology but it is low cost and long range and we think it could be very useful in the development a remote calving alert device," he said.

Dr Norman said the challenge for his team was to develop a trigger for the detection of calving to use in conjunction with the Taggle technology.

"We will undertake a review of the literature to identify a number of calving parameters that will be suitable for biodetection," he said.

"Once these have been identified, mechanisms will be investigated for developing a 'switch' to trigger the Taggle location detection technology."

"We anticipate that the devices will be at a cost that will enable them to be used on a large number of animals and that they will enable data to be collected on the prevalence of dystocia and the losses associated with it in northern herds."

## Animal welfare benefits

Dr Norman believes the benefits of this project in terms of animal welfare shouldn't be underestimated.



*Grazier Dugall McDougal and Taggle founder Gordon Foyster inspect the Taggle technology expected to be incorporated into the remote calving alert device.*

He said most cattle producers are understandably upset at the prospect of breeders and calves enduring prolonged dystocia and would welcome the development of a device that reduced the impact of dystocia in their herds.

"A device such as a remote calf alert system could assist with epidemiological studies aimed at identifying genetic, seasonal and physical influences on dystocia and therefore aid the development of management and breeding programs to reduce the risks," he said.

"It may also aid the provision of timely assistance in circumstances where this is practical."

## Benefits to producers

The development of a remote calving alert device could also have major management benefits for producers.

A survey in southern Queensland found that producers checked calving heifers on average seven to eight times a week, with a mean of about hour spent per visit.

Dr Norman said removing dystocia from a herd could deliver some major time savings for producers.

"Eight hours a week is a significant amount of time for producers to be away from either work or lifestyle pursuits so it would be terrific to think we could provide some time savings there," he said.

## MORE INFORMATION

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