

MINIMISING CALF LOSS IN NORTHERN BEEF HERDS

How technology can help to better understand the causes of calf mortality

The CalfAlive project is using precision livestock sensors to monitor cows before and after calving to help understand how behaviour impacts calf survival in northern Australia.

GPS devices inserted into collars that can be worn by cattle are being used to track distance travelled, while accelerometer sensors are being used to measure activity levels and thermometers to detect heat stress.

The on-animal sensors have been deployed on animals at 12 different properties across Northern Australia.

The information gathered from these devices will allow researchers to understand how environmental factors like shade, wild dogs and water availability impact cow behaviour and in turn what that means for calf survival.

This research is part of a wider collaboration between University of Queensland, Queensland Alliance for Agriculture and Food Innovation, Northern Territory Department of Industry, Tourism and Trade, Queensland Department of Agriculture and Fisheries and more than a dozen producer partners across Northern Australia.

The CalfAlive partners are investigating the impacts of a range of other factors, such as maternal nutrition, environmental extremes, and cow-calf behaviours have on calf survival in Australia's northern beef herds.



Figure 1: CQUniversity Researcher Thomas Williams will be investigating how technology can help to improve calf survival in northern Australian beef herds.

Significance to industry

Calf loss costs the northern Australian beef industry more than \$53 million a year.

Reducing calf loss is therefore an essential step in improving animal wellbeing and achieving long-term sustainability for northern breeding businesses.

Technology overcomes the tyranny of distance

Most cattle breeding properties in northern Australia are in remote locations and cover large areas, limiting the interaction between animals and humans. This makes it difficult for producers to closely monitor their animals at critical times, like calving.

Remote and on-animal sensors offer researchers and producers the opportunity to monitor the behaviour of animals, which can provide valuable insights into the events surrounding calf loss.

The CalfAlive project will run over three years. The first year will trial both commercial and research grade precision livestock monitoring devices on a small selection of the participating northern beef properties.

A preferred technology will then be deployed on a much larger scale across cow herds on all 12 cattle properties located across Central and North Queensland and the Northern Territory.

For more information contact Dr Thomas Williams: t.m.williams@cqu.edu.au or 0429 224 096