Stories

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Innovation put to the test on Queensland smart farms

> We're introducing people to what's possible and showing them that the beef industry is cutting edge and innovative, not traditional 'old school' anymore.
>
> **John McLaughlin, Rangelands officer, Northern Gulf NRM**

On a remote property outside Georgetown in far north Queensland, 100 young cattle are grazing with high-vis orange collars fastened loosely around their necks.

It's a scene more suited to the mountain slopes of Switzerland, but this is a trial of virtual fencing, and the collars combine with sensors and wireless technology to enable graziers to move or confine livestock without using traditional fences.

If successful, it would be a major breakthrough in a region where the average paddock can cover 8,000 hectares, and fences are regularly washed away by floods or sometimes burnt by bushfires.

Virtual fencing is one of the innovative technologies being put to the test in the NRM project 'E-Beef Smart Farming in northern Queensland', designed to encourage the uptake of new products that will help small to medium beef producers improve productivity and profitability.

SMART FARMS AND INNOVATION HUBS SHOW TECHNOLOGY IN ACTION

Producers have been encouraged to form Innovation Hubs and test the technology themselves, and six Smart Farm demonstration sites have been set up on working properties across the north and west of the state to showcase trials.

At a Smart Farm field day in Chillagoe in March, 75% of participants said they found the project helped to improve skills and/or knowledge; 67% said they would investigate using new technology; and

77% confirmed that the biggest barriers to adopting technology were the cost and poor connectivity.

Time-poor graziers have appreciated the role of NRM project officers in resolving glitches and acting as a filter between what's promised and what's promoted by tech developers.

WOW UNITS ENCOURAGE SUSTAINABLE GRAZING

Despite devastating floods in 2019 followed by the 2020 COVID-19 pandemic, producers have enthusiastically attended online webinars and driven for up to two hours to Smart Farm field days to see products such as GPS animal tracking, water tank sensors, and drones and satellites that monitor pasture.

There's keen interest in walk over weigh (WOW) units, set up at a watering point in a paddock to regularly weigh cattle as the animal walks over them. The combination of liveweight with satellite information on ground cover means producers can make more informed and timely decisions about sustainable grazing.

The challenges of cost and connectivity in isolated areas are key to the uptake of technology. Satellite water sensors for remote troughs and dams upload information daily, whereas those on the 3G network upload more often but cost more. The GPS ear tags being trialled require the producer to

pay for and install a livestock management software program.

At home, they can input data through business analysis software to see the impact on their own operations. The field days also cover related issues such as cattle genomics, preventing calf loss and the importance of maintaining good mental health.

And the learning won't stop with the end of the project. The three partners — Southern Gulf NRM, Northern Gulf Resource Management Group and Desert Channels Queensland — are compiling their experiences and feedback from tech developers, producers and stakeholders into a legacy document to be used as a guideline for future projects.

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➜ https://desertchannels.com.au/projects/

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