

FROM SATELLITES TO STOCK

How virtual fencing is revolutionising grazing management



Virtual fencing systems are changing the way graziers across Southern Queensland manage stock.

Healthy waterways are the cornerstone of productive and resilient farms across Southern Queensland but managing grazing pressure around them can come at a cost. Fencing off riparian zones has long been the go-to solution, but sometimes this approach can come at costs in time, labour and material expenses. With the advent of new ag technology, Southern Queensland land managers are now looking to virtual fencing to explore how it can integrate with commercial grazing and mixed farming enterprises for more flexible stock control across their grazing country and around their waterways.

Southern Queensland Landscapes' Protecting Southern Qld Waterways Through Grazing Management project is exploring grazing management strategies to relieve grazing pressure on riparian zones. The project partners with significant grazing operations in priority areas and supports the installation of fencing and off-stream watering points, improving land management across more than 124,500 hectares of land adjacent to waterways.

Alongside static fencing, some producers raised the question, can virtual fencing be deployed to support grazing management along waterways and reduce stock pressure in an efficient, flexible and cost-effective way?

Image below: easy installation of virtual fencing system on farm



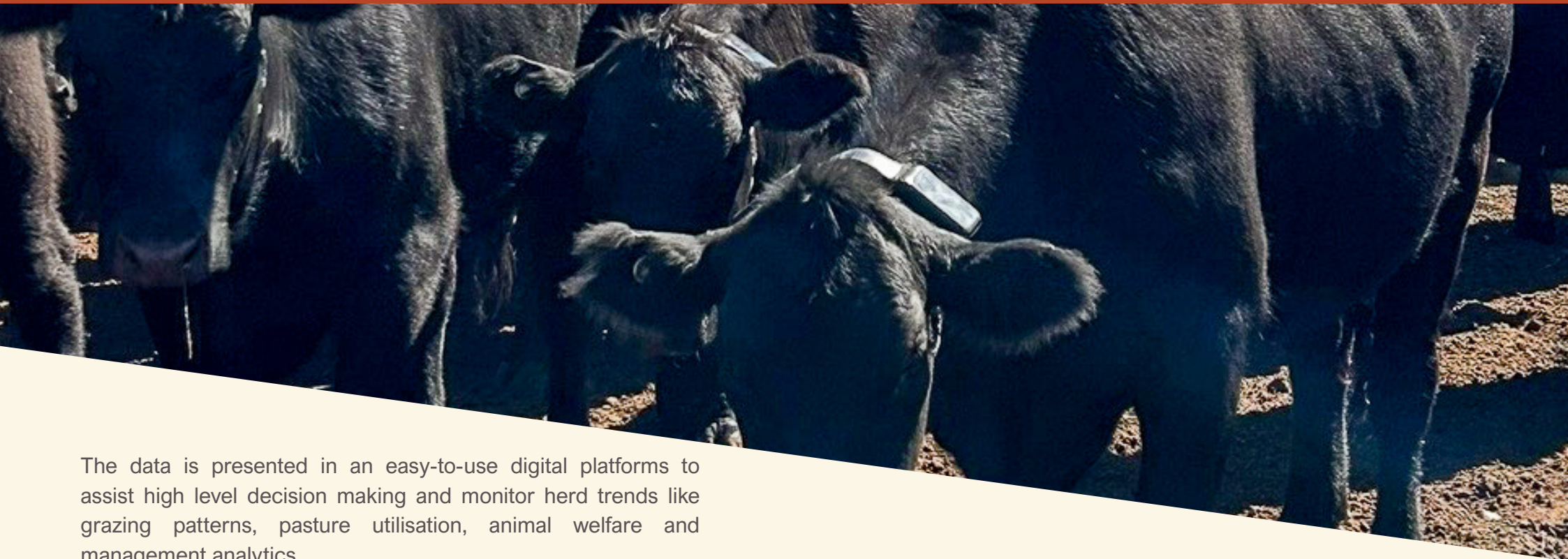
Virtual fencing uses GPS-enabled collars to establish movable boundaries without the need for physical fences. Fence lines can be adjusted remotely from a mobile device, allowing grazing pressure to be managed and altered at the push of a button.

A grazier in the Balonne-Condamine basin is implementing a virtual fencing system across his herd of 300 head to strategically graze 8km of frontage to the Condamine River on his property. The virtual fencing system will be paired with additional water points to assist in alleviating grazing pressure on the riparian zone.

As a keen fisherman the land manager values the biodiversity supported by the healthy waterways on his property. He's seen firsthand the success of riparian fencing systems implemented on neighbouring properties where the waterway condition and riparian vegetation thrived. Now, the land manager has seized the opportunity to work alongside Southern Queensland Landscapes, utilising funding opportunities made available through the Queensland Government's Natural Resource Management Expansions Program, to take riparian fencing to the next level, through a virtual fencing system.

Previous grazing systems allowed cattle broad paddock access or relied heavily on temporary fencing options to facilitate rotational grazing through the riparian zone and manage grazing pressures. This is costly in time and labour on top of the cost of materials for temporary fencing. Virtual fencing allows paddocks to be subdivided digitally, enabling tighter, quicker rotations and more consistent groundcover management. All managed through a mobile device, saving time in labour to move temporary fencing or implement a more permanent fencing solution along the waterway.

In a virtual fencing system, each animal is fitted with a solar-powered collar, capable of operating for several days without direct sunlight. The system allows the herd to be monitored in real time, with fence positions and stock movements managed remotely. Virtual fencing systems gather a suite of additional data to assist decision making capacity in addition to GPS location and movement data for stock management. This data can include behavioural, health, and fence interaction events (e.g. warnings and pulses deployed against escape rate), while also tracking device status like battery and connectivity.



The data is presented in an easy-to-use digital platforms to assist high level decision making and monitor herd trends like grazing patterns, pasture utilisation, animal welfare and management analytics.

From the point of installation, cattle typically adapt to the functions of the new system within one to two weeks, learning to respond to an audio cue before reaching the boundary. Once trained, stock rarely challenge the fence line, with most suppliers advertising strong containment rates typically operating at 98% to 99%.

By managing when and how long stock graze sensitive areas, such as riparian zones, land managers can reduce pressure on native vegetation, support pasture recovery and improve groundcover. In turn, this reduces erosion risk and helps maintain water quality across Queensland’s waterways. Southern Queensland Landscapes are looking to ag tech innovations to support advancement in land management practices across the Natural Resource Management sector, delivering productive and environmental benefits to Queensland farms.

While the technology has clear benefits for commercial grazing enterprises, it is also attracting interest from mixed-enterprise operations, where the flexibility to move stock without physical barriers is conducive to productive farming practices.

Importantly, virtual fencing is not a replacement for conventional infrastructure. Physical fencing and watering points remain central to productive and practical grazing management. The technology provides an opportunity to explore how it can fit within grazing operations to support productive, sustainably and financially viable land management practices which, in turn, support better ground cover, limit erosion risks and are conducive to healthier waterways across Southern Queensland.

For Southern Queensland Landscapes, virtual fencing technology offers another avenue to support landholders to improve land condition, protect waterways and strengthen the long-term resilience of both farms and the landscapes.



Image above: demo virtual fencing device
Image below: virtual fencing collar in situ on angus cow



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