



Our country, Our future.



National Impact

Students share water quality project lessons

When Emerald Agricultural College livestock manager Andrew Lewis approached CHRRUP and Fitzroy Basin Association Inc. (FBA) to apply for funding through the Australian Government's Reef Programme, he knew the small project had the potential to influence a new generation of graziers across Australia.

"I saw it as a really good fit between the college, being a training place, and also as an example to industry—of what's possible between landholders and CHRRUP and FBA," he said.

Emerald Agricultural College has been in operation since 1968, providing specialist training to upcoming cattle producers and farmers and attracting students from across Australia. Its main campus is located on the Nogoa River in Emerald, and offers training in a mix of enterprises across working paddocks and pastures. It also has two working properties: Berrigurra, near Blackwater, and Narayen, near Mundubbera.

Starting with Grazing BMP

A Grazing BMP training day for college staff and students, held at Berrigurra in August 2015, was the starting point for the partnership between the college and CHRRUP.

It was particularly beneficial for the students. "They really fitted in with what we were doing, particularly the whole farm plan," Andrew said. "They thought it was pretty good."

Since that first Grazing BMP training event, Andrew has been investigating the viability of projects that improve the college's water quality outcomes while teaching students the importance of riparian areas and how to strategically manage their condition.

First project begins

With the support of FBA through funding from the Australian Government's Reef Programme, the college's first project began in October 2015. A riparian zone on the Emerald



Students help install a fence in the project area.

campus was being over-grazed, contributing to erosion and poor water quality. In addition, adjacent to the project area is Belmah Regional Park, a protected estate managed by Queensland Parks and Wildlife Service that encompasses endangered brigalow forest.

"Our run-off goes into their country. We can't have a national park with sediment issues from a neighbour," he said.

Over time, preferential grazing has resulted in poor groundcover, and padding in waterholes along the waterway is causing erosion. The thickening of current bush and reduction of palatable pasture species is evidence of long-term decline. However, the larger paddocks are under-grazed and have a good body of feed.



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Excluding stock from the riparian area by installing fencing, along with establishing three new off-stream watering points will reduce stream bank erosion and sediment movement, as well as improve the riparian vegetation's condition. The new infrastructure coincides with a change in grazing management from an unplanned grazing regime to a scheduled rotational grazing system. This will further promote improvements in land condition and water quality. Furthermore, a biodiversity corridor will be created, linking the college's remnant brigalow forest with the larger Belmah Regional Park.

Education leads to wider industry changes

The project has been a valuable educational experience for the college's students, who have learnt how to measure land condition, and the importance of water quality. Their involvement has had some unexpected outcomes, and some students have experienced a complete change in their perspective.

"One of my students was strongly against the project and could not understand the benefits of the proposed outcomes," Andrew said. "He was quite negative towards the whole thing, like, 'You don't need to do that. There's water in the paddock. You don't need to fence it this way.'

"By the end of it, he started to understand it. After a little bit of time thinking about it, he actually came back to me with a plan for his own family property. He had it all costed out, ready to go.

"He completed his whole farm plan on his family's property, which is situated in the Roma area. This student went on to convince his father of the benefits of his proposed works, and the projects listed in his whole farm plan will be completed on his family's property in the near future."

Future collaborations

This project is just one of many examples of how the collaboration between CHRRUP, FBA and Emerald Agricultural College can have a local and national impact, along with influencing the minds of the next generation of landholders. Andrew is hopeful that this current project will lead to others, particularly on Berrigurra.

"It's just such a good fit, because it gets that knowledge out there," he said. "Whether the project is funded or not, I can show them by spending the money on this project, the dollar return on any grazing enterprise would pay for itself in 12 months.

"The benefits environmentally, as well as financially, are very good. It helps you to improve your infrastructure, which leads to better management. It ultimately creates healthier animals, which leads to better food."



As part of the project, students are learning to manage water quality and impacts beyond their grazing properties.

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