Less fertiliser brings rewards for Innisfail's Spina family



Sugarcane grower **Sam Spina** says using less fertiliser has led to financial and environmental wins almost as sweet as his sugarcane crop.

The third-generation cane grower, who farms with his brother **Michael**, has made changes ranging from planting fallow crops and varying fertiliser application rates across paddocks to laser-levelling cane land and installing spoon drains.

As a result, the pair have reduced the farm's nitrogen or fertiliser use from 160 to 124kg per hectare – and their fertiliser costs by 20%.

The brothers started planting bean fallow crops two years ago with the help of a new tractor partly financed through the Reef Trust IV tender program delivered by the Wet Tropics Sugar Industry Partnership.

"As a small farm we couldn't have afforded it otherwise," Sam said. "We re-plant cane on four to five hectares and plant beans on the same number of hectares each season to increase the nitrogen in our soil in a more natural way."

He said an all-of-farm nutrient management plan, which was developed by a Wet Tropics Sugar Industry Partnership extension officer last year as part of a free service to growers, had also helped.

"We had a really good look at the soil tests and matched the fertiliser blend to those tests," Sam said. "We changed fertiliser and reduced it, and experienced no productivity losses. We're still up around 90 tonnes per hectare, depending on the weather and the season.

"We saw in the soil tests that some paddocks needed more super phosphate in the ratoons so we also changed that. Our fertiliser box is on GPS now so we can automatically adjust the rate as we

The family's Innisfail farm is about 1.5km from the Johnstone River and 8km from the ocean.

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They have laser-levelled their land and re-shaped deep drains into grassed spoon drains.

"Laser levelling helps to produce a more even crop and it's also helping with water quality," Sam said. "With the grassed headlands and drains as well, when the water runs off the paddock it moves slowly and goes into the spoon drains first so any sediment can settle."

He said changes that began as cost-saving initiatives had become much more

"Over the years cane growers have become a lot more aware environmentally – we're grassing our headlands, trash-blanketing, applying fertiliser underground, getting water samples... If there is fertiliser coming off our paddocks, we want to know about it so we can fix it."

Sam is one of 39 Wet Tropics growers to receive tenders to reduce fertiliser use on their farms. Wet Tropics Sugar Industry Partnership and CANEGROWERS Innisfail Chairman Joe Marano said one of the main benefits of the tender system was that growers could choose the practice changes they believed would be most effective on their farm

"They've been trialling a range of different ways to reduce nitrogen - from using controlled-release fertilisers or applying mill mud to growing legumes as a source of nitrogen and buying specialised equipment," Mr Marano said.

"These growers have been able to reduce their use of nitrogen fertiliser without affecting their yields - a good result for profitability and for water quality."





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