Project Catalyst

Grower story

Tony Bugeja - Innovation improves outcomes in real time for Project Catalyst grower

Mill region: Racecourse Mill Property size: 360 ha Catchment: McLennan/Bakers Creek Project Catalyst member since 2008 - one of 19 original members

In 2007, following a conference in Cairns, Tony heard a statement made that "canefarmers are environmental vandals". Proud of his practices and determined to do something, he joined 18 other growers from the Mackay Whitsunday regions, to form Project Catalyst in partnership with Reef Catchments, Coca Cola and WWF.

"That p____d me off and I wanted to prove that statement wrong, but I could see that Project Catalyst was a vehicle to showcase, validate and promote our good farming practices – something I believe was missing from our industry in the past."

Farming on the property his father bought in 1953, Tony identified the family were doing things the hard way and it was beginning to affect the Bugejas financially.

"2005 was a turning point to get us where we are today. We were struggling financially, but to get ahead we had to spend money to get efficient – we were not efficient. We were working hard 24/7 and basically treading water."

Purchasing a new tractor, the addition of GPS required a significant investment (\$47,000), but Tony knew it was necessary to improve efficiency and ultimately productivity. Challenged by compaction, soil fertility and rising input costs, identifying the growth zone and applying nutrients directly to that zone changed everything. But, it was private agronomy



Tony Bugeja in one of his paddocks services the Bugejas credit for their ongoing success.

"We're using Farmacist's agronomy expertise to better our business and the better they do it, the better we do and the more we can engage with them. We've changed our irrigation practices and increased productivity as well as sugar (content) just through changing our irrigation management."

Watering more often in the period from 'cut (harvest) to Christmas' has proven beneficial, with plants utilising nutrients more quickly during the growth period and putting that energy into sucrose content.

What it's about

Project Catalyst is a grower-led innovation project in sugar cane that was formed to explore and validate farm management practice change leading to improved water quality for the Great Barrier Reef.



"It's simple really, but it's just a matter of tweaking it. We've gone into centre pivots, we've got five now and we can definitely see the efficiency just in the centre pivots – less water, more often."

Whilst the adoption of technology has allowed the Bugejas to operate more efficiently through the use of variable rate applications, soil mapping and nutrient programs, there's no replacement for experience and knowledge. Preparing for a nitrogen trial at dawn with agronomists recently, Tony noticed something unusual as he looked over the paddock.

"I looked across where this harvester was cutting in the morning and I could see 'blue top' in first ratoons and that's not a good sign. I quickly went over to see what the hell was going on and I could see that the stool structure was not normal for first ratoons – it was a weak structure, hadn't got the width it should have, smaller, shorter and the 'blue top', it comes into cane when you've got sun hitting the ground. I knew it was crap and it would not utilise the fertiliser we had planned to put on it the very next day."

With the agronomist, a new variable rate map was drawn up for the GPS assisted dunder applicator, to further reduce the rate applied to the 3 ha portion of a block, as it would not utilise the nutrients (according to the way the cane looked). GPS plotted soil tests were taken.

"It's something that we'll have to look at in the fallow and treat this area. Find out why this area has become like this, I believe we can fix it, so we'll just have to wait and see."

This reduction in application rates of nutrient to a less productive block not only provided a saving to the business with input costs but just as importantly will provide a benefit to the environment.

Tony believes that proper yield mapping in the harvester will be able to pick up on issues like that in the future. It's something that is also detectable through satellite imagery, however grower experience is something Tony hopes will never be replaced.

"Technology can't smell soil. I might be old school, when I get a handful of soil and smell it, you can tell if it's a musty, sour smell the ground is wet – not aerated, it's too wet to work in other words. Whereas if you can get soil and run it through your hands, it just smells right – it's right to work."



Ratoon row



Irrigation system



Tony Bugeja with a soil map

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