

# Project Catalyst

## Grower story



### Andrew & Melissa Deguara - Mentoring influence a powerful motivator for young growers.

**Mill Region:** Racecourse

**Property Size:** 840ha - 340 cultivation (sugar and soybean) with remaining grazing cattle - 140 breeders (Droughtmaster 200lsu)

Living in the picturesque Pioneer Valley, surrounded by mountains and bathed in sunshine for most of the year, Melissa and Andrew Deguara are living a lifestyle envied by many. Farming the land Andrew grew up on together since 2009, the couple who've adopted improved practices like wider rows on controlled beds and set depth, credit the innovative Project Catalyst grower's trial outcomes for inspiration. The Deguaras combine proven practices with their early adoption of GPS and soybean fallow crops, to increase the life of their cane stools.

Situated on the banks of Blacks Creek, which runs through the farms centre and bordered by Stockyard Creek on the eastern boundary, Andrew and Melissa inherited some familiar challenges. "These creeks join at the northern end of our farm and become the Pioneer River, with this much river frontage we are, like many, concerned about runoff. Our farm consists of mainly lighter alluvial soils, with a small percentage of heavy black clays. In the 90's it was common practice with any poor cane due to grubs, harvesting damaged blocks or old ratoons to be ploughed out and replanted the same year with very little areas planted to Lablab, which occurred only if we had time."

Members of Project Catalyst, the pair have followed innovative growers like foundation member and uncle, Gerry Deguara, Wet Tropics grower Ray Zamora and Nuffield Scholars Joe Muscat and Simon Mattsson. Realising the advances being made by Gerry, adopting practice change to include dual rows and pre-formed beds, they purchased a disc opener planter, which enables them to also cut



**Andrew & Melissa Deguara**

through multi-species crops and high residue stubble for their plant cane.

Andrew recalls that his father influenced his ability to seek new ideas. "We certainly weren't conventional, we've been on controlled traffic since 2003 and early adopters of soybean crops, as well as GPS. Way back dad and I saw a yield decline and knew we had to do something - I began experimenting with fallow cropping with the help of John Hughes (DAF), the initial conversion from 100% cane plough out/plant practice to 16% fallow was at first daunting, with lower yields on poor soil and less area under production. Seventeen years on we are pleased to have made that change."

With the introduction of controlled traffic and 1.86m row about the same time, the soil health benefits were soon realised and later the financial benefits of soybean when harvesting the grain. Growing crops along a river provides consistent irrigation but,

protecting water quality and the Great Barrier Reef saw Andrew and Melissa install a 200 megalitre recycle pit in 2016, which allows water to be captured and pumped back on to the crop. Investing in new infrastructure and equipment is part of change and when Andrew recently decided to purchase a new planter, he opted to switch to dual row planting after speaking with Gerry about his practice, allowing them to plant through crop residue and minimise chemical use.

"That's one of the main reasons we grow rotational crops is to gain organic matter to reduce N and chemical inputs. Moving to dual row means more coverage to control grass without chemicals and provided the benefit of two narrow chutes, which makes it easier to pull through."

Melissa's passion for business and the animals, led her to develop the grazing component that existed a decade ago when they took on the family farm. "The cattle weren't a focus they

### 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. For more information on Project Catalyst please visit our website <https://www.projectcatalyst.net.au/> or phone Catchment Solutions on 07 4968 4216.



weren't making any money and for a while Andrew considered getting rid of them. I attended a Grazing Forum in Mackay a few years ago and with Andrew decided to try and integrate the two."

Having pasture and cultivated crops has meant that even in the driest times the cattle have fodder. Learning to manage the herd through planned mating and pasture through rotational grazing has allowed better management of their 140 Droughtmaster breeders and unexpected benefits to the cane paddocks.

"I always liked business, from when I was at school and doing the books, I love reviewing and analysing figures to make improvements, which is why I love the farm. Three years ago, we wanted to improve the profitability of the cattle and through what we've learned it's extended to adopting new practices in the cane that has improved soil health."

Together, they're quickly recognising diversification of cultivated crops provides financial and soil health improvements. Taking soybean to seed, provides a cash crop and fixes nitrogen, "Continuing the allocated 16% of land to soy break crops at fourth ratoon, we are now a little bit more flexible if a crop is performing, we'll take it to a fifth ratoon and rest a block longer, (up to two years). Working with Terry McCosker at Resource Consulting Services (RCS) we've also realised the benefits of grazing cattle on cultivated area, they seemed like a burden in the past."

Happy to learn, Melissa and Andrew have attended many more field days and workshops, even hosting one on their farm. Utilising multi-species is something they're considering after hearing about the results from Ray Zamora and Simon Mattsson, then combined with cattle integration to harvest, providing nutrition and fertiliser. Corn and rice crops are also being grown by Joe, Simon



**Dual row planting provides more coverage and requires less chemical weed control**

and Gerry. The benefits of networking with other growers is not lost on Andrew "It's very important, it keeps you motivated and gives you a benchmark for your business." Melissa thrives on learning, "Whether it's talking to family or other growers, you can always share knowledge. Project Catalyst is great for that."

Both are keen to progress the business utilising consultants, continuing to adopt proven methods that achieve runoff reduction, improve soil health and overall productivity as Andrew explains, "We need to go from crop to crop, to cattle to cane easier", Melissa is quick to add, "Without too much soil disturbance or overuse of chemicals." Andrew agrees, "Yeah, keeping the ground covered and productive, we are progressing to dual row double disc on preformed beds and liquid fertiliser at plant. The formed beds are not new to the industry but new to us and we hope it will reduce our preparation costs when going from crop to crop and also improve soil health with less tillage."

#### Practice adoption by the Deguaras includes:

- Green cut harvest/GPS
- Cover crops – soy
- Recycle pit installed
- Dual row planting
- Minimal/zonal till with disc opener for plant cane
- Rotational grazing of cultivated crops
- Solar panels for pumping water to storage

#### Irrigation

200 hectares under 7 centre pivots, 100 hectares of soft hose and 30 hectares under flood irrigation



**"Blacks Creek" runs through the property**

**"You can get poor soil health no matter how much Nitrogen you apply, we saw that time and time again. We were putting zero N under plant crops until yield dropped and we applied 50 units." Andrew Deguara**



**Double disc open planter**



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