



Trials and practice change help find the sweet spot

HARVEST OPTIMISATION TRIALS HAVE HELPED GIVE THE DEGUARA FAMILY IMPORTANT INFORMATION TO SET HARVEST PARAMETERS AND DRIVE EFFICIENCY FOR THEIR CENTRAL REGION FARMING BUSINESS.

When the Deguara family from North Eton started cutting cane in 2017, they began with a blank slate.

They had just bought a Case 8800 for their own cane, which totals in the range of 22,000 to 25,000 tonnes each year. Having already seen some of the information on harvest optimisation, their first step was with a copy of the SRA Harvesting Best Practice manual and they then decided to take part in field trials with SRA.

This led to several modifications and adjustment to their operating parameters.

"For our first year, we were dealing with a machine that we didn't have experience with, so we found the trial really useful in giving us an idea on our losses and how our practices stack up," explained Phil Deguara, who runs the property with his father John and brother Murray. "We wanted to know how our practices compare to best practice, and more generally to the area as well."

Modifications included the installation of after-market chopper drums and optimising the roller train.

"We see that these changes have helped with our billet quality. Cutting our own cane, we also wanted to use the same machine for cutting, so that also prompted these changes. For less than 25,000 tonnes per year, we saw no use having two harvesters."

The Deguaras took part in trials in 2017 and 2018. There have now been 95 trials similar to this one across the industry over the last two seasons, where the team uses two methods to measure harvest losses: mass balance trials; and the in-field sucrose loss measurement system.

Each trial runs over a day across about 500 tonnes, with one of the main objectives being to assess the standard practice of the machine compared to recommended practice. The trial also includes a control treatment of low loss

and an aggressive treatment, to provide a more complete picture.

For the Deguara family, having already learnt information from 2017 and then making improvements to their machine, their standard practice was fairly similar to the best practice recommendation for the 2018 trial.

Their normal practice is for groundspeed at 4km/hour, primary fan speed at 750RPM, with the secondary fan on, topper on, and elevator pour rate of about 68 tonnes per hour. The HBP recommendation was the same, but with the primary fan back to 700RPM.

The 2018 trial indicated that the Deguaras have minimised sugar loss to about 280kg per hectare by operating at their standard practice, with about 7.7 tonnes of trash per hectare (PRS of 14.8 percent). By comparison, the industry is losing 690kg sugar per hectare at current practice (based on statistical means for 2017 trials).



Billet quality was good. The trial indicated they had 74 percent sound billets, 17 percent damaged, and 9 percent mutilated.

Phil Deguara said that he felt they were now close to the sweet spot with harvesting, but added that they needed to continue to improve with estimating yield.

"We have it pretty good, but the estimate is the first thing you need when you go into a block, so that we can make the right decisions on ground speed and fan speed."

Overall, he said that the less that was left in the paddock, the better it is for everyone.

"Across the industry, we also need to weigh up the economics and the time

and all the other factors that come into play. At the end of the day, the idea is to get as much sugar out the end as we can – that's what we get paid on."

He added that learning more about harvest optimisation, and seeing the cane from the cab of the harvester, had lessons right across the farm.

He said this visual view would continue to inform existing information through yield maps, EM maps, and help with variable rate application of inputs.

"It helps to ground truth those maps and really helps us understand the farm better." ■

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For more information on harvest best practice or to receive a hard copy of the harvesting best practice manual, contact Carol Norris on E cnorris@sugarresearch.com.au T 07 4963 6824.

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PHIL DEGUARA



Australian Government

(Over page) Phil Deguara and family have implemented a range of changes to help optimise harvesting efficiency. (Above) Garry Landers from SRA talking through trial results from 2018.