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SOIL

ENGINEERING SOLUTIONS IMPROVE FARMING SYSTEM

MICK CAMILLERI SAYS THAT INNOVATION IS THE KEY TO MOVING FORWARD IN THE SUGAR INDUSTRY, AND HE IS BEING HELPED ON THIS JOURNEY THROUGH HIS INVOLVEMENT IN THE PROJECT UPLIFT INITIATIVE RUN BY MSF SUGAR. BY BRAD PFEFFER

Innisfail district cane grower Mick Camilleri reckons that challenging situations are a good breeding ground for innovation.

Since the 1930s, the Camilleri family have farmed the hilly country near the South Johnstone Mill, and he says the challenges have changed over the years, but the family has always sought out innovative farm practices and technology to make things easier or more profitable.

In some cases, if there wasn't a solution already out there, they've created their own from scratch.

For example, the Camilleris were early adopters of the mechanised cane harvesters in the 1960s, but as a young man Mick saw that these machines weren't always getting the job done properly.

"Around that time we bought a metal lathe and I was the youngest in the family so I had the most time to play with it," Mick said.

The experiments with the metal lathe have transformed from that initial "play" to a significant engineering business

called Maalacan Engineering that has a throughput between \$500,000 to \$800,000 each year, building not just agricultural gear but a range of other equipment and components.

Mick, with his brother Joe, have gone from making their own machinery, to producing significant amounts of gear for other farmers.

In recent years, Mick has designed innovative gear such as haulouts and fertiliser boxes that are fully adjustable and suitable for road transport.

He says one of the current challenges – although it is far from a new challenge – that he faces is around the farming system and soil health, especially around compaction.

He has modified farm gear to three metre wheel tracks, but he still sees the harvester as a critical part of the farming system that is holding them back. After all, he says, it is the heaviest piece of equipment to enter the paddock and responsible for most of their compaction.

This is why he is in the early phases of designing a two-row harvester on the

same wheel centres (three metres), which would allow everything to match the system. At this stage, it is still a concept, but one he is enthusiastic to get off the ground, and is exploring a range of funding opportunities to propel it forward.

"I hate compacted soil, and I want to do everything I can to move away from it," he said. "We either keep changing and moving, or otherwise we get stagnant and fall out."

He is already making a range of changes thanks to help from MSF Sugar's Project Uplift, which is helping farmers adopt farming systems first identified in the Sugar Yield Decline Joint Venture.

One of the first steps to come will be a complete minimum till system where they will spray out the cane, and direct drill soybeans, which is a system that he said would suit his wet environment and hilly country. "That will be a big change here and will have positive environmental impact as well."

He said having seen his neighbour adopt the no till system helped convince him that it would work for him, especially on the hilly country.

Mick said the Project Uplift Farming Systems initiative, which is supported by the Australian Government Reef Trust program, was a great initiative for driving productivity and sustainability outcomes for the industry.

Project Uplift works with growers to adopt an improved farming system – sometimes known as the SRA Farming System – based around controlled traffic, minimum tillage, break crops, and green cane harvesting and maintaining the trash blanket.

According to MSF Sugar agronomist Noel Wright, it is helping growers improve soil health and reduce variable costs, while also delivering tangible outcomes for the Great Barrier Reef through reducing sediment and chemical runoff and improving nitrogen use efficiency. ■

(Top left) The engineering business has grown from modest beginnings tinkering with a metal lathe, to creating serious implements and machinery for agriculture and other sectors. (Top right) Noel Wright (MSF Sugar), Mick Camilleri and Nigel Young (MSF Sugar) discussing Project Uplift on Mick's farm earlier this year.