

CASE STUDY

JULY 2023

Changing Fertiliser Application

Background

Steve & Toni Comelli farm 176 ha of sugarcane in the Wagoora/ Pindi Pindi area in Mackay, Qld. Steve traditionally used liquid fertiliser products (Bio Dunder™) for his plant and ratoon cane; this was applied by a contractor on the surface over the row. Although this practice freed up Steve to do other work on the farm, there were also disadvantages:

- Not being able to incorporate the liquid products with irrigation in reasonable time or not at all (Farm 1286A dry land); this is the recommended practice.
- Being at the “call” of the contractor when the fertiliser would be applied. Straight after harvest is not ideal as the ratoon crop has not yet put out sufficient roots to take up the fertiliser. Conversely, at the end of the crushing season, there can be a delay in application due to increased demand from other customers.
- The risk of loss of nutrients through volatilisation or run off if the product had not been incorporated.
- In some instance, compaction of sugarcane rows occurred when liquid fertiliser was applied, either because of untimely weather events or operator error. This would affect both the present and following ratoons.

QUICK FACTS

- **Grower:**
Steve Comelli
- **Project Focus:**
Nutrient Management
- **Project:**
\$20,000 incentive contributed to the purchase of a 3-row trailed stool splitter, a 3-tonne bin and solid press wheels.
- **Case Study:**
Reductions in fertiliser application due to the higher accuracy and subsurface placement combined with availability of having his own equipment on farm.

In some years, particularly wet ones, Steve felt his crop was lacking in vigour and growth and was not reaching its full potential. He wondered if the crop had enough nutrients or if there had been some leaching or loss of product through runoff.



This case study was developed by Mackay Area Productivity Services as a delivery partner for Reef Catchment's Reef Trust VII Project.



Activity

In 2021, Steve became aware of the project and the funding available. He felt as though it was the perfect time to invest in better farm practices by purchasing a 3-row trailed stool splitter with double discs openers, a 3-tonne bin and solid press wheels through Donnelly's Engineering in Mackay. Without the availability of incentive grants, Steve would continue to contract out.

The total cost of the project was \$66,000, so after the Grant of \$20,000, Steve only paid \$44,000. The equipment was completed towards the end of 2021, so the late cut ratoons were fertilised with the new equipment. The 2022 season's crop turned out to be a record yield and although a lot of this was due to the weather, he feels the change from surface to subsurface also contributed.

Outcome

Steve is very happy with his new fertiliser equipment and has continued to use it to fertilise his 2022-23 crop even though granular fertiliser was more expensive than the liquid products. In some blocks he used a combination of



Figure 1: Stool splitter fabricated by Donnelly's Welding

both products, liquid and granular. Where he has a cane grub problem, granular products were applied together with insecticide control.

"I feel fertilising my crop is one of the most important operations on the farm and I only get one chance at it. I don't want to apply more than is recommended because of the cost but want to make sure the product is applied correctly and is safe as possible from any major rain events. I am also happy to reduce my fertiliser in older ratoons if I feels there will be sufficient for the crop and less chance of losses".

- Steve Comelli

The Targeted support to maximise soil, biodiversity and vegetation outcomes in the O'Connell and Proserpine basins of the Mackay Whitsunday NRM region Project is funded by the Australian Government's Reef Trust.

