

CASE STUDY

JUNE 2023

Advantages to Planting a Legume Crop

Background

Geoff & Deb Hall farm 253 ha of predominately sugarcane, in the Wagoora region of Mackay's North Coast. Although Geoff believes that a fallow break with a legume crop is essential after a cane crop cycle of 6-7 years, he has not always been able to achieve this. In the past, he has had to work the ground to ensure there was a reasonable seed bed for the legumes to be planted into. In some years this can be a real problem with either the harvest finishing late (Dec/Jan), or the weather not playing its part.

The legume fallow crop improves soil health by increasing the organic matter, which in turn improves soil moisture retention, reduces grass weed seed carry over, and supplies organic Nitrogen for the next crop. Geoff does all his own fertilising and spraying which does not leave him much time to prepare ground for planting legume crops.

Activity

When Geoff heard of the Proserpine O'Connell Basins Water Quality Project, he applied for funding through MAPS to purchase some legume planting equipment. Geoff received \$20,000 from the Project towards the cost.

His initial thoughts were to buy a conventional seed drill capable of planting through the cane trash. Eventually, he

decided to purchase an air seeder mounted on a 5 metre speed tiller, which would cover three of his 1.8 metre sugarcane rows in one pass.

After a few initial passes with only the speed tiller working, the trash and cane stool are sufficiently worked in, and there is a reasonable tilth for the air seeder to plant the legume seed.

QUICK FACTS

- **Grower:**
Geoff Hall
- **Project Focus:**
Nutrient Management
- **Project:**
\$20,000 incentive contributed to the purchase of an air seeder mounted on a 5 metre speed tiller.
- **Outcomes:**
Reductions in future fertiliser input due to the nitrogen stored by the legume crop.

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



Outcome

Geoff has successfully planted the legume, Sunn Hemp, in 21 ha of fallow ground in Dec 2022 - Jan 2023 with the new equipment.

Despite the heavy rainfall of over 800mm in 5 days in mid January, the crop survived as it was “high and dry” on the worked up old stool bed. In previous years, the legume crop would have drowned if it had been planted in conventionally worked ground.

“I can’t believe how much quicker it was planting the Sunn Hemp, three rows at a time. I am sure I will be able to plant all my fallow to legumes in the future”

- Geoff Hall



Figure 1: Air seeder mounted on a speed tiller



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.

