



Case Study

Exploring Cropping Options for an 18 Month Sugarcane Fallow Period



LANDHOLDER	Greg Macelroy
LOCATION	Burdekin
CATCHMENT	Lower Burdekin
RAINFALL	984mm (2019)
PROPERTY SIZE	200ha
ON-GROUND PROVIDER	Farmacist-Burdekin

Project Catalyst is a grower led, sugar cane innovation and adoption project that explores, develops and validates farm management practice change to improve the enduring water quality of the Great Barrier Reef.

BROADER ADOPTION VALIDATION & GROWER SUPPORT

Founded in 2009, the project operates in the Mackay Whitsunday, Burdekin and Wet Tropic regions to deliver valued practice change outcomes and develop methods for industry adoption. Under the Broader Adoption and Grower Support program, professional on-ground service providers assist selected growers to adopt and validate appropriate change practices. Service providers continue to monitor implementation benefits and derived environmental performance improvements. Through targeted extension activities, the program seeks to accelerate the uptake and broader adoption of improved farming practices at local, regional and industry levels.



Great Barrier
Reef Foundation



●●●● Goal

To explore different cropping options for an 18 month fallow after a sugarcane crop cycle.



●●●● Overview

A number of project Catalyst growers have experimented with an 18 month fallow over the past 10 years, with some adopting it as their regular practice. Providing the ground with a fallow period can increase soil mineralisation, break disease cycles and provide significantly higher yields in the subsequent cane crop. Over the next 18 months cropping options for the Burdekin region will be explored for those wishing to move to extended fallow periods between their sugarcane crops.



●●●● Action

In 2019, Block 6-1 was ploughed out following its final sugarcane harvested and planted with Hayman soybeans. However, the seed quality was sub-optimal and so the resulting plant stand was quite inferior. As a result the soybeans were sprayed out and replanted to Jade mungbeans in early February 2020. This crop produced 1.6t/ha harvested on 12th May 2020. The block was then rebedformed, fertilised and pre-watered in preparation for gritting corn. The Pioneer variety 1756 was planted on the 5th June 2020 and yielded 12.5t/ha harvested mid November.

Kuranda soybeans were then planted into moisture and irrigated following planting.

It is anticipated that sugarcane will be planted following harvest of the soybeans in late May 2021.

The grower has been receiving regular farm visits to check the health and progress of each of the crops.

●●●● Outcome

The trial block (6-1) as at the end of February 2021, has a well grown crop of Kuranda soybeans at early pod fill. This crop should be harvested by early May and the block replanted to sugarcane. To date the economic returns from the 3 break crops are as follows;

- Jade mungbeans \$1350/ha
- gritting corn \$2580/ha
- Kuranda soybeans are yet to be harvested, however, a gross margin of \$1100/ha would be expected given a likely yield of 4.5t/ha.