



Case Study

Exploring Cropping Options for an 18 Month Fallow



LANDHOLDER	Wayne Dalsanto
LOCATION	Clare
CATCHMENT	Burdekin
RAINFALL	984mm (Ayr)
PROPERTY SIZE	770ha
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 cropping options for an 18 month fallow rotation after a sugarcane crop cycle

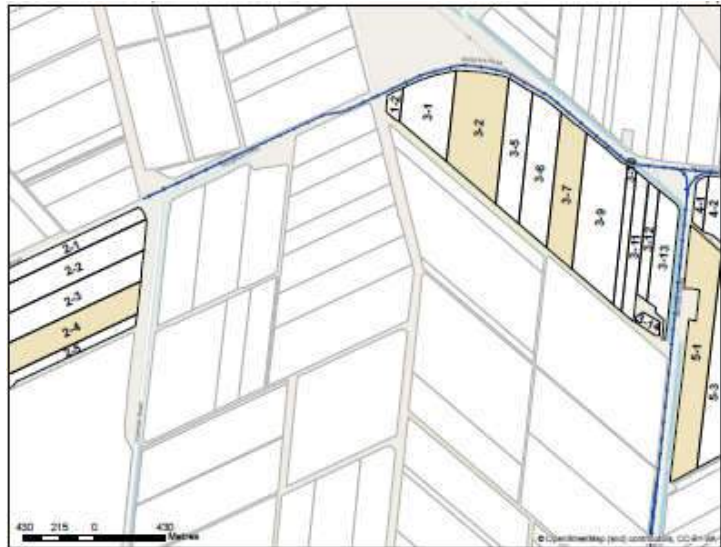


Figure1: The test blocks 3-6, 3-7 for the 6 month and 18 month fallows, respectively

●●●● 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 with a view to incorporating extended fallows into the sugarcane farming system.



●●●● Action

Dal Santo Farming Co have decided to compare subsequent sugarcane profitability under a regime of a 6 month fallow or an 18 month fallow between sugarcane crops. The 6 month fallow was soybeans (Dec 2019 - May 2020) and then back to cane, whilst the 18 month fallow was soybeans (Nov 2018 - April 2019) gritting corn (June 2019 - Nov 2019), soybeans (Dec 2019-May 2020) and then back to cane (May 2020) Block 3-7 (13.9ha) on Farm 0327A was the 18 month fallow example, whilst the adjacent block 3-6 (15.31ha) was the 6 month fallow test block (Fig 1). The soil types on both blocks were very similar, and comprised self mulching black earths locally known as 2Ugh.

●●●● Outcome

Block 3-7 yielded 3.5 t/ha of soybeans (var A6785) harvested in April 2019 and then 11 t/ha of gritting corn (var 1756) harvested in November 2019. Both 3-6 and 3-7 were planted to soybeans (var A6785) in mid December 2019. These soybean crops were severely impacted by foliar diseases (Anthracnose, Corynspora sp) and then rain (19th April 2020) just prior to harvest. The grain yield off these blocks was only 2 t/ha due to the disease impacts and pod shattering. Blocks 3-6 and 3-7 have now been amalgamated and planted to Q240 on the 17-18th May 2020. This block will be separated at harvest in June 2021 to determine the yield differences between the 6 month and 18 month fallow sections of the block.