



Case Study

Bare Fallow to Legume Fallow



LANDHOLDER	PCCCF2020BAV10
LOCATION	Cowley Beach
CATCHMENT	Johnstone
RAINFALL	3283 mm
PROPERTY SIZE	200.2 ha
ON-GROUND PROVIDER	CANEGROWERS Innisfail

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.



Spreading Cover Crop Seeds



2021 Fallow Block



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●●●● Goal

To move from spray out fallows to legume fallow, with the aim to improve soil health and improve production in the following cane crop.



Cover Crop One and a Half Months After Planting

●●●● Overview

The grower is interested in growing legume cover crops on his fallow blocks. Currently his standard practice is to spray out the ratooning cane at the end of the crop cycle and any weeds are managed throughout the fallow period with broad spectrum herbicides as required. The grower hopes that the legume cover crop will provide good ground cover reducing erosion risk, suppress weeds and improve soil health through crop rotation. The trial is being carried out on a Coom-Tully soil series which is predominantly a poorly drained alluvial.



Coom Soil Profile

●●●● Action

The grower planned to plant the fallow block by discing out the old cane stool, spread the cover crop seeds using a seed box and then incorporate the seeds with another shallow pass with the discs. However due to seed supply shortages and planting delays due to wet weather, the grower was not able to plant any cover crops in the 2020/21 fallow and managed the fallow as spray out. More favorable weather in the 2021/22 fallow period allowed for the planting of a cover crop. The cover crop was broadcast over the cultivated fallow blocks and seed incorporated with a roller in late December 2021. The growth of the cover crop is being monitored with biomass sampling planned.

●●●● Outcome

At this stage the grower is happy with the progress of the cover crops and intends to continue to plant fallow cover crops in the future. The concern that the grower has with this cover crop is it is starting to yellow which may be caused by excessive soil moisture but may also be a result of calcium deficiency as the block was not soil tested or ameliorated prior to planting the cover crop. The grower realises the value of soil testing and in future intends to take his samples prior to planting cover crops so that the required amelioration can be applied resulting in the maximum benefit from the planting of the cover crops.



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