



# Case Study

## Reducing Nitrogen Application on Incoming Season by Planting Legume Crops to Fallow Blocks



<b>LANDHOLDER</b>	PCCCF2021BAV33
<b>LOCATION</b>	Bloomsbury
<b>CATCHMENT</b>	O'Connell
<b>RAINFALL</b>	1705 mm
<b>PROPERTY SIZE</b>	113.42 ha
<b>ON-GROUND PROVIDER</b>	Nutrien Ag Solution

**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.



Practice Change - Cover Crop (LabLab) planted to fallow blocks



Great Barrier  
Reef Foundation



●●●● Goal

Based on a complete review and update of the grower's nutrient management plan, identify whether reductions in fertiliser application rates could be made without productivity penalties, thereby saving on fertiliser cost and reduce off-farm environmental effect.



Practice Change Blocks - Legume cover cover (Lab Lab)

●●●● Overview

By planting legumes to bare fallow blocks, to reduce N requirements for 2022 plant cane, while maintaining soil health and weed control.

The Practice Change Block area is approx 8.4ha.

The blocks are of Proserpine Soil Profile which occur on channel benches and active levee systems which experience flooding frequently on the O'Connell River. These soils were formed by the accumulation of fine and courser sands from flood events.



Proserpine Soil Profile

●●●● Action

The grower completed the P2R 21 Question survey and provided property information to set a baseline of their current farming practices.

With this information, the grower's nutrient management plan was revised and updated in comparison to their current practices. With this done, the grower could see where N application savings could be made simply and safely.

Manage legume crops to yield the production of a healthy and beneficial crop. Follow 6 easy steps fertiliser recommendations for 2022 plant sugarcane after legume crop and apply fertiliser as per soil test results recommendations.

●●●● Outcome

The crushing completed 30/12/21 and soil sampling remains in progress.

When soil sample collection is completed the grower will be provided with the latest advice that allow them to efficiently manage nutrients in response to their own on-farm conditions, crop requirements and farming practices.

The practice change is now part of the farm management system going forward and implementation each season.

The growth of the planted legume cover crops will be managed to yield the production of a healthy and beneficial crop to reduce Nitrogen inputs in plant cane crops and reduce DIN and overall input costs.