



# Case Study

## Reducing Nitrogen Application on Ratoon Blocks and Planting of Legume Crops to Fallow Blocks



<b>LANDHOLDER</b>	PCCCF2021BAV37
<b>LOCATION</b>	Pindi Pindi
<b>CATCHMENT</b>	O'Connell
<b>RAINFALL</b>	1705 mm
<b>PROPERTY SIZE</b>	315.82 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.



N Reduction - Soy Bean Cover Crop and Ratoons



N Reduction - Soy Bean Cover Crop



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 effects.

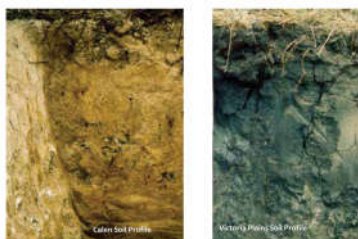


●●●● Overview

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

and;  
By reducing Nitrogen on ratoon blocks across the farm should reduce DIN and farm operation costs without impacting yield.

There are two soil profiles across the farms. 1.Calen (light soils) which occur on slightly elevated areas on alluvial plains and 2.Victoria Plains (heavier soils) which occur on backplains of the Pioneer River floodplain and also on creek flats where silt and clay have been deposited.



Calen and Victoria Plains Soil Profile

Practice Change - Soybean Cover Crop and Ratoons

●●●● 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 is being 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.

The benefit to the grower in being able to reduce N without impacting crop yield is to create immediate cost savings and therefore higher value in the least productive blocks.

A 25-35 kg/ha of Nitrogen reduction was implemented on all ratoons. and

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 2021 crushing ended 30/12/21 and soil sampling remains in progress.

When soil sample collection is complete the grower will be provided with the latest advice that will 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.



Great Barrier Reef Foundation

