



# Case Study

## Reducing Nitrogen Application on Older Ratoons



<b>LANDHOLDER</b>	PCCCF2021BAV27
<b>LOCATION</b>	Wagoora
<b>CATCHMENT</b>	O'Connell
<b>RAINFALL</b>	1705 mm
<b>PROPERTY SIZE</b>	185.3 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.



Reduced N Application - Block 6-2



Reduced N Application - Block 24-1



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●●●●● 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 penalising crop yields, thereby saving fertiliser costs and reduce off-farm environmental effects.



Practice Change Block

●●●●● Overview

This farm has limited irrigation and is reliant on rainfall to grow their annual sugarcane crop. By reducing Nitrogen on an older or less productive block should reduce DIN and farm operation costs without impacting yields.

The Practice Change Blocks area total approx 10ha with variety Q240.

The soil series of these blocks are Cameron and Wollingford. Cameron soils are found adjacent to the major streams, they occur with Murray and St Helens soils on river banks and terraces. Wollingford soils occur on upper slopes of which Whiptail soils are closely associated. Wollingford soils are developed on weathered acid volcanic rocks.



Cameron and Wollingford Soil Series

●●●●● 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 applied N without impacting crop yield is to create immediate cost savings and therefore higher value in the least productive blocks.

The grower's plans are to reduce N in older ratoon blocks from 150 to 140 kg/ha at the end of 2021 season.

●●●●● Outcome

The 2021 crushing ended 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 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.

Reduced N on two older ratoon blocks on two Farms from:  
Farm 1: 150kgN/ha to 120kgN/ha  
Farm 2: 150kgN/ha to 135kgN/ha



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