



Case Study

Reducing Nitrogen Application on Older Ratoons



LANDHOLDER	PCCCF2021BAV31
LOCATION	Kelsey Creek
CATCHMENT	Proserpine
RAINFALL	1474 mm
PROPERTY SIZE	309.75ha
ON-GROUND PROVIDER	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.



Old Ratoon Block 9-1 - Reduce N application after harvest



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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 productivity penalties, thereby saving on fertiliser cost and reduce off-farm environmental effect.

●●●● Overview

The grower is a good cooperater and is very interested in trialing new farming initiatives.

By selecting an older ratoon block to reduce Nitrogen rate that would not benefit from a full fertiliser application. This practice change would reduce DIN and farm operation costs without largely impacting the yield. The Practice Change Block area is approx 7ha with variety Q240.

Assist Project Catalyst by agreeing to install their water samplers to collect rainfall event runoff samples.

The Marian soil series in the area of the Proserpine district, found in the Up River and O'Connell River areas. Marian soils occur on old levee systems associated with larger rivers (Fine sands and Silts).



Marian Soil Series



Water Sampler Installed in field

●●●● 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.

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 least productive blocks.

Reduction of 10kgN/ha was made to 7ha on an old ratoon block.

Water samplers were installed to collect rainfall event runoff samples.

●●●● 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 ratoon crop on the Practice Change Block will be observed through the crop cycle and compared to an adjacent ratoon block.



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