



# Case Study

## Reduce Nitrogen Application on Older/Late-cut Sugarcane Ratoons while Maintaining the Farms Productivity



<b>LANDHOLDER</b>	CSMW010031
<b>LOCATION</b>	Carmilla
<b>CATCHMENT</b>	Plane Creek
<b>RAINFALL</b>	1500 mm
<b>PROPERTY SIZE</b>	237.07 ha
<b>ON-GROUND PROVIDER</b>	Nutrien Ag Solutions

**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 Nitrogen Application on Older/Late-cut Sugarcane Ratoons



Reduced Nitrogen Application on Older/Late-cut Sugarcane Ratoons



Great Barrier Reef Foundation



●●●● Goal

To investigate the opportunity to conduct a complete review and update of the Farms Nutrient Management Plan. To identify whether reductions in fertiliser application rates could be made without productivity penalties, thereby saving on fertiliser costs and reducing off-farm environmental effects.



Reduce Nitrogen Application on Old/Late Cut Sugarcane Ratoons

●●●● Overview

The farm has no irrigation and relies 100 per cent on annual rainfall. The farm is located at Orkobie south of Koumala and is situated in the Plane Creek Catchment Area. The majority of the farm is planted with Q240 due to its versatility and performance as a fast and reliable germinator at planting and post harvest. The grower plans to adopt a practice change by reducing Nitrogen fertiliser application to older/late-cut ratoons while maintaining the farms productivity.

The main soil type is sand or loam over sodic clay, named Freddy or Koumala soil profile. The topsoil of this duplex soil is brown loamy sand to sandy loam with a massive structure, overlying strong brown sandy clay loam.



Soil Type: Sand or loam over sodic clay - Freddy

●●●● Action

The grower completed the P2R 21-Question survey and provided farm 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 completed, the grower could see where Nitrogen application savings could be made simply and safely without impacting the farm's productivity.

The benefit to the grower in being able to reduce Nitrogen fertiliser application to older/late-cut ratoons without impacting crop yield is immediate cost savings. Reducing the Nitrogen application rate was conducted by advising the contractor of the adjusted application rate. This was a simple and an effective operation for the grower to coordinate with his fertiliser contractor.

A 12kg/ha of Nitrogen reduction was implemented on older/late-cut ratoon sugarcane blocks across the farms.

●●●● Outcome

With the support of Project Catalyst and Nutrien Ag Solutions the grower has adopted a beneficial and sustainable farming practice change across his farms. The main focus has been on improving the quality of water leaving the paddock and reducing the impact on the Great Barrier Reef. A DIN saving of 5.0kg is projected.

The Grower has been provided with a current Nutrient Management Plan which extends a revitalised Best Management Practice approach to farming and the environment, whilst delivering cost savings without compromising yield.

The grower now has the latest advice that helps to efficiently manage nutrients in response to their on-farm conditions and farming practices.

The grower has now implemented his nominated practice change and meets the projects practice change pathway goal of one new practice change being adopted each season.



Great Barrier Reef Foundation

