



Case Study

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



LANDHOLDER	CSMW010032
LOCATION	Carmilla
CATCHMENT	Plane Creek
RAINFALL	1500 mm
PROPERTY SIZE	41.22 ha
ON-GROUND PROVIDER	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.



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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.

Overview

The sugarcane farm is a run by a young sugarcane family farming business located at Orkatie, a small country township south of Koumala. The farm is situated in the Plane Creek Catchment Area. The farm has no irrigation and relies 100 per cent on rainfall. The two main sugarcane varieties are Q183 and Q208 because of their suitability to the farm. The grower aims is to decrease Nitrogen application to older/late-cut ratoons while maintaining the farms productivity. The main soil types across the farm are Hannan of Alluvial Soil Group occurring sporadically throughout the area on river floodplains and Ilbilbie of Soloth Soil Group which occur on gently sloping, older river terraces south of Koumala.



Soil Types: Hannan- Red, yellow or grey loam & Freddy/Ilbilbie- Sand or loam over sodic clay



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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 has been 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 farm.

Outcome

With the support of Project Catalyst and Nutrien Ag Solutions the grower has adopted a beneficial and sustainable farming practice change across his farm. 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 0.854kg is projected.

The Grower has been provided with a current Nutrient Management Plan which extends a revitalised Best Management Practice (BMP) 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.