



# Case Study

## Reduce Nitrogen Application on Ratoon Sugarcane Blocks while Maintaining the Farms Productivity



<b>LANDHOLDER</b>	CSMW010035
<b>LOCATION</b>	Koumala
<b>CATCHMENT</b>	Plane Creek
<b>RAINFALL</b>	1500 mm
<b>PROPERTY SIZE</b>	111.93 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 Sugarcane Ratoons



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●●●● 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.



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●●●● Overview

The farm is located at Koumala south of Mackay and is situated in the Plane Creek Catchment Area. The farm has no irrigation and relies 100 per cent on annual rainfall. The farm is planted with a selection of varieties for specific sugar maturity profiles, yielding returns from their optimal performance at harvest time. The grower plans to adopt a practice change by reducing Nitrogen fertiliser application across ratoon sugarcane crops including old ratoons while maintaining the farms productivity. The majority of the farm soil type is Yellow Podzolic - sand or loam over sodic clay. The topsoil being a brown loamy sand to sandy loam with a massive structure. This overlies strong brown sandy clay loam.



Soil Profile - Yellow Podzolic

●●●● 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 is being 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 across ratoons without impacting crop yield will deliver immediate cost savings.

With current fertiliser pricing it was an easy decision to adopt reduced Nitrogen application rates across ratoon crops. Reducing the Nitrogen application rate was achieved by changing cogs on the fertiliser box and advising the contractor of the adjusted application rate. Nitrogen reductions were implemented on all 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 145kg 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 own on-farm conditions and farming practices.

The grower has implemented 2 recommended practice changes and meets the projects practice change pathway goal of one new practice change being adopted each season.



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