



Case Study

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



LANDHOLDER	CSMW010038
LOCATION	Pleystowe
CATCHMENT	Pioneer
RAINFALL	1541 mm
PROPERTY SIZE	27.56 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 incurring productivity penalties, thereby saving on fertiliser costs and reducing off-farm environmental effects.

Overview

The farm is located at Pleystowe west of Mackay and is situated in the Pioneer Catchment Area. The farm has irrigation utilising a low pressure overhead system but relying on supplementary annual rainfall. The sugarcane variety SRA9 is planted to the majority of the farm due to its good performance and reliability.

The grower's aim is to maintain the farms productivity while adopting a practice change to reduce Nitrogen fertiliser application to sugarcane ratoon blocks across the farm, reducing costs and commit to improving the quality of water leaving the paddock.

The main soil type across the farm is Podzolic - Marian Soil Profile.



Soil Type: Podzolic



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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 fertiliser 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 this new practice change. Reducing the Nitrogen fertiliser 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 10kg/ha of Nitrogen reduction was implemented on sugarcane ratoon 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.

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 sugarcane 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 implement 3 recommended practice changes with exceeds the projects practice change pathway goal of one new practice change being adopted each season.