PROJECT CATALYST

Case Study

Reducing Nitrogen Application on Poor Varietal Performance Blocks

LANDHOLDER	PCCCF2021BAV29
LOCATION	Mt Pelion
CATCHMENT	O'Connell
RAINFALL	1705 mm
PROPERTY SIZE	259.81 ha
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.

Poor Varietal Performance Block - Lower N application

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2021

Reducing Nitrogen Application on Poor Varietal Performance Blocks

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 effects.

Practice Change Block

Overview

This farm has limited irrigation and is reliant on rainfall to grow their annual sugarcane crop. By reducing Nitrogen on an older or less productive block should reduce DIN and farm operation costs without impacting yields.

The Practice Change Block area total approx 3ha with variety Q242 which has performed poorly.

The soil series of this block is Calen which occur on slightly elevated areas on alluvial plains and are usually found some distance from the nearest creek or river. Calen soils have formed from floods depositing sands, silt and clay over a long period of time.

Calen Soil Series

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 is being 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 N without impacting crop yield is to create immediate cost savings and therefore higher value in the least productive blocks.

A considerable reduction of nitrogen from 153N kg/ha down to 100N kg/ha was applied.

Outcome

The 2021 crushing ended 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 will 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.

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