2021

PROJECT CATALYST

Case Study

Whole Farm Nutrient Planning

LANDHOLDER	Jim and Alan Richardson
LOCATION	McDesme
CATCHMENT	Burdekin
RAINFALL	984mm
PROPERTY SIZE	75ha
ON-GROUND PROVIDER	Farmacist-Burdekin

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 bene its 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.

Australian Government | REEF TRUST | Great Barrier Reef Foundation | THE Coca-Cola FOUNDATION | WWF

Goal

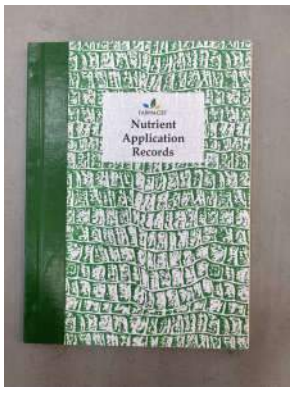
To develop and refine the grower's whole farm nutrient management plan, considering irrigation nitrates, NUE varieties, and older ratoons. The goal is to produce a plan that meets crop requirements, is practical and easy to use, whilst improving probability and water quality.

Overview

Through Project Catalyst, nitrogen rate trials have been conducted on NUE varieties, older ratoons and farms with nitrates in their irrigation water to determine if N rates can be adjusted to increase CCS and improve profitability. This has proved successful and now forms a valuable component of a whole farm nutrient planning process.

Action

A Whole Farm Nutrient Plan has been developed for this grower for the 2020 cropping season taking into account NUE varieties, old ratoons and nitrates in irrigation water. Fertiliser application data, harvest yield and CCS has been collected over the last several years to determine appropriate rates and give confidence to the grower.
Water samples have also been collected from the grower's irrigation sources where nitrates have been detected. This will be continually monitored.



Outcome

Taking into account the nitrates in the applied irrigation water, fertiliser N rates were reduced withs aims to improve CCS, profitability and water quality. The fertilised crop will be harvested in 2021.

The grower is now also making fertiliser records using the provided Farmacist books so we can make more accurate decisions regarding N rates in the future. This also meets the grower's regulatory requirements.

The process of collecting irrigation water samples and monitoring the N levels has sparked interested from neighbours who are now taking regular water tests to make more informed decisions reagrding reducing N fertiliser rates.