



# Case Study

## Whole Farm Nutrient Planning



<b>LANDHOLDER</b>	John Quagliata
<b>LOCATION</b>	Airville
<b>CATCHMENT</b>	Burdekin
<b>RAINFALL</b>	984mm
<b>PROPERTY SIZE</b>	66ha
<b>ON-GROUND PROVIDER</b>	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 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.

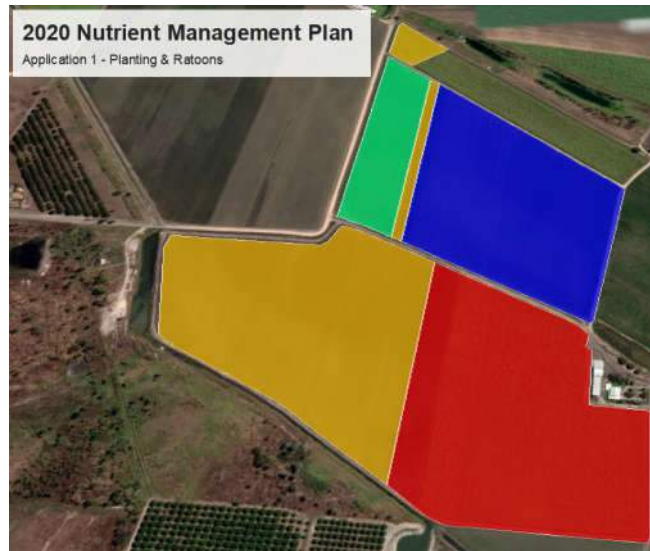


Great Barrier Reef Foundation



●●●● Goal

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



●●●● Overview

Through Project Catalyst, nitrogen rate trials have been conducted on NUE varieties and older ratoons 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 the whole farm nutrient planning process.

By considering NUE varieties and the lower yield potential of older ratoons, fertiliser can be moved between blocks in accordance to the new N & P budget method. This can help growers become more profitable and improve water quality.

●●●● Action

A Whole Farm Nutrient Plan has been developed for this grower for the 2020 cropping season taking into account NUE varieties and old ratoons.

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. Multiple soil samples have also been taken in varying soil types to get a better understanding of the nutrient profile of the soil.

EC mapping and variable rate gypsum applications have also been used on the sodic areas of this farm and has returned great results whilst improving the yield potential and NUE in these areas.

●●●● Outcome

Taking into account all the data layers and past trial results, fertiliser N rates were reduced on older NUE varieties blocks with aims to improve CCS, profitability and water quality. The fertilised crop will be harvested in 2021.

The grower is also accurately recording his fertiliser applications with his GPS system so we can make more informed decisions regarding N rates in the future. This also meets the grower's regulatory requirements.

