



Case Study

Lower Rates of N Fertiliser in Old/Late Ratoons



LANDHOLDER	CSLH010028
LOCATION	Trebonne
CATCHMENT	Lower Herbert
RAINFALL	2512mm
PROPERTY SIZE	40ha
ON-GROUND PROVIDER	HCPSL

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 apply reduced N rates in older or late ratoons where possible with the intention to see if cost savings are possible while still maintaining yield.



Fertilising a block based on nutrient management plan recommendations

●●●● Overview

This farm is located across two zones of Trebonne, one of which is characterised by silty clays to poorly drained clay loams, and the other by well draining sandy to silty clay loams.

In addition to addressing these management zones differently in their nutrient management plan, the grower may also save in their fertiliser output costs by reducing N in their older/late ratoons as studies suggest older crops do not have the ability to use nutrients as efficiently as younger ratoons of cane.

●●●● Action

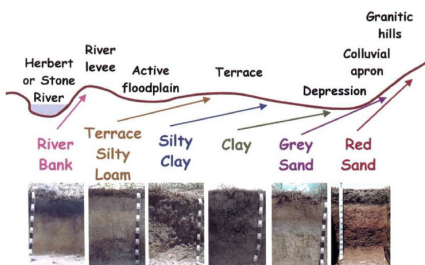
The grower will receive a Nutrient Management Plan which will include a management zone for the older ratoons with an adjusted lower rate of N to suit the nutrient requirements for the crop, improving nutrient use efficiency and reducing costs.

The grower has also been considering incorporating mixed legumes into their fallow system as a green cover to retain topsoil, improve soil structure and enhance microbial interactions and soil health generally.

●●●● Outcome

In 2023 the grower received a Nutrient Management Plan which defined existing management zones with more clarity and provided an evidence-based, best management practice approach to nutrient applications. The grower implemented the plan over the growing season, including the recommendation to reduce nitrogen rates in their late ratoons by 20kg, a significant reduction from previous practice.

The grower intends to try a mixed legume crop in coming season fallow to supply organic carbon and improve soil health for the following crop.



Trebonne soil series with silty clays & loams (Wood et al. 2003)

