



# Case Study

## Lower or Zonal Rates of Mill Mud at 75T/ha Banded and Lower N Fertiliser Rates in Older Ratoons



<b>LANDHOLDER</b>	CSLH010020
<b>LOCATION</b>	Stone River
<b>CATCHMENT</b>	Lower Herbert
<b>RAINFALL</b>	2022 - 1440mm 2023 - 1162mm
<b>PROPERTY SIZE</b>	155ha
<b>ON-GROUND PROVIDER</b>	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.



Collecting soil samples



Service Provider collecting soil samples for NMP



Great Barrier Reef Foundation



## ●●●● Goal

To try either lower rates of mud at 75T/ha banded or try applying the mud zonally in poor areas at 75T/ha banded.

To lower N rates in older ratoons to see if there is potential to save money in fertiliser outputs without losing yield.

## ●●●● Overview

By lower the application rates of mud to 75T/ha the grower can spread the benefits of mud further around his farms. EM mapping and district soil maps also have the potential to show where zonal applications of mud could help with soil constraints or poorer areas of growing land. This allows the grower to keep cost down while still improving soil conditions across his farm area.

By lowering nitrogen rates in his older ratoons the grower can save in output cost of fertiliser without risking yield losses, as studies suggest that older crops will not have the ability to utilise the nitrogen as efficiently as a younger crops of cane.

## ●●●● Action

- Older blocks of cane will be zones separately at a lower rate of N when a nutrient management plan is being prepared.
- Once selected blocks have been harvested, EM mapping will commence and blocks for zonal mud application can be chosen based of EM mapping results.

## ●●●● Outcome

- Grower applied a lower rate of nitrogen to his older ratoons to save in chemical fertiliser cost. This was managed by using a Nutrient Management Plan which was handed over at the beginning of the harvest season 2022. In 2023 the grower maintained the reduced rate zone across older ratoons as a strategy for improving nutrient use efficiency over the crop.
- Due to extended wet weather late in the harvest season unfortunately mud was not able to be applied as originally planned. The grower will intends to use lower rates or zonal mud application where relevant after harvest.