



Case Study

Low Rates of Banded Mill Mud & Zonal Planting of Mixed Legumes

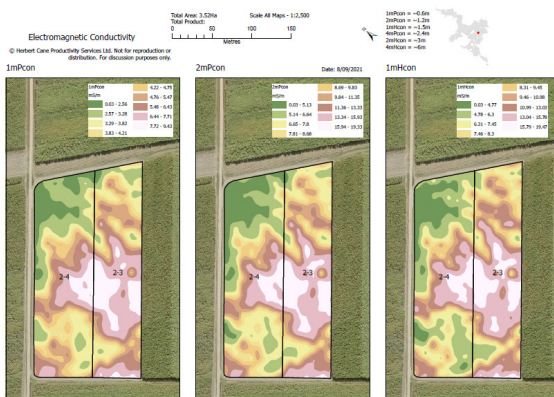


LANDHOLDER	CSLH010003
LOCATION	Victoria Estate
CATCHMENT	Lower Herbert
RAINFALL	2022 - 1804mm 2023 - 1695mm
PROPERTY SIZE	150ha
ON-GROUND PROVIDER	HCPSSL

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.



EM map

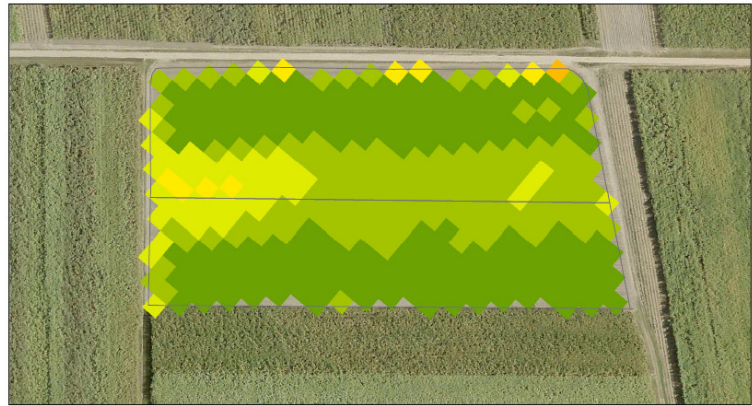


Drone image of the trial area



●●●● Goal

- The grower is interested in trying lower rates of banded mud on poor growth sections of his farm.
- Currently the grower is cultivating and broadcasting his legume seed across the entire block, but would like to try zonal planting of beans through a controlled traffic system that only cultivates the mound and leaves the inter-row spacing alone.



MILL MUD TRIAL Scale 1:1,500
 NDVI / GNDVI © Harvest Cane Productivity Services Ltd. Not for reproduction or distribution. For discussion purposes only.
 GNDVI 03 January 2022
 Legend: -1 to 0.4, 0.4 to 0.65, 0.65 to 0.7, 0.7 to 0.75, 0.75 to 0.8, 0.8 to 1.0
 HPCPSL
 The Harvest Cane Productivity Services Ltd.

NDVI map which show plant health stasis

●●●● Overview

The grower hopes by using the lower rates of mud banded on the row, he will be able to utilize more mud in his farming practices by keeping cost of mud down without reducing yield & CCS.

The grower also wants to try zonal tillage and planting of mixed legumes. This will allow him to implement a controlled traffic system, which has many benefits, as well as minimize soil erosion and loss of legume crops during the wet season.

●●●● Action

- After harvest, blocks will be chosen to try lower rates (75T/ha) of banded mud
- Chosen blocks will be EM mapped and soil tested according to poor EM map zones.
- Drone flights will be done regularly throughout the years to monitor plant growth
- Next year at harvest (2022) the results will be taken to the mill for CCS, cane and sugar yield.

As a 2nd practice change.
 - The grower will be planting the mixed legume fallow sites zonally using the HPCPSL legume mound planter.

●●●● Outcome

The grower had a couple of blocks side by side that had poor patches in the middle. He has applied 75T/ha of banded mud on the row as a way to hopefully improve these parts of the block.

The blocks were EM mapped and soil tested. The mud was then applied zonally to the poorer middle section of the blocks. A drone flight to monitor plant growth was done on the 7/10/2021. And again on the 5/01/2022. Harvest results taken in 2022 were promising with a small yield increase in areas where mud had been applied compared to the previous year. Monitoring of the block has continued through NDVI mapping.

The grower had success with planting the beans on mounds using his neighbors bean planter. and is currently developing his own bean planter.



Service provider taking site specific soil samples

