2024

PROJECT CATALYST

Case Study

Growing Legume Fallows and EM Mapping to Target Soil Constraints Through Ameliorates

LANDHOLDER	CSLH010017
LOCATION	Stone River
CATCHMENT	Lower Herbert
RAINFALL	2022 -1441mm 2023 - 1175mm
PROPERTY SIZE	146ha
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 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.

Soybean planted November 2022

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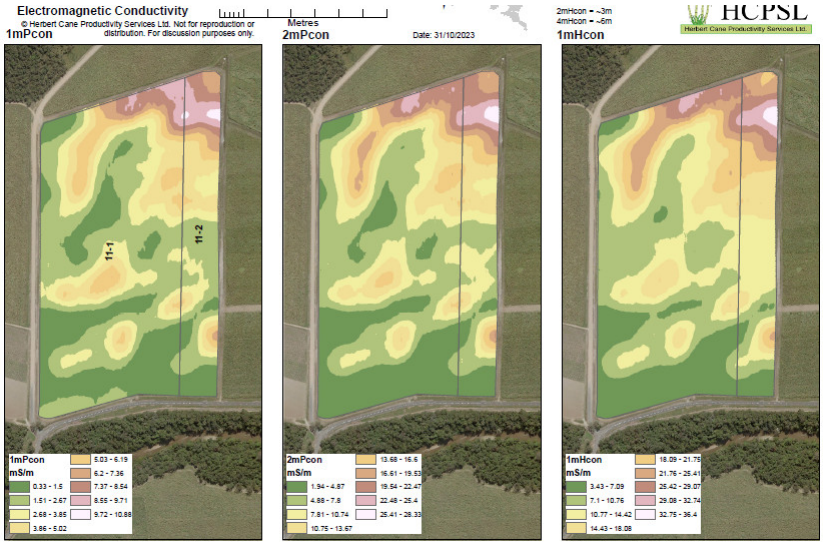
Goal

To grow a legume fallow crop on fallow blocks where possible to improve soil structure and health. EM mapping to target soil constraints through amelioration.



EM map to help identify soil constraints

Overview

The grower would like to grow legume fallow crops on his fallow land where possible to help improve soil structure and soil health. He has heard through neighboring growers how a legume fallow block can quickly improve soil structure for plant cane.
The grower would like to look into the benefits of EM mapping and more precisely applying amendments to his cane blocks.

Action

-Grow legume cover crop come fallow season 2022/2023
- EM map blocks
- Soil test according to maps
- Make management decisions based on soil test results.

Outcome

- A number of blocks were planted to legumes. The weather in the 22-23 season delayed some fallow planting. In general the grower plants his cane a bit later in the season and feels that legumes are a good fit for his system. He intends to continue using more legumes on fallow blocks in the future for their nutrient and soil health benefits.

- With the help of their on-ground service provider the grower has EM mapped some blocks he believes are limited by soil constraints. Blocks were EM mapped after harvest in the 2023 season. Soil samples were be taken from identified zones within the EM map to better understand soil constraints the grower will address prior to planting the next crop.

Preparing EM rig for mapping process

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