



Case Study

Mixed Legume Species and Lower Rates of N Fertiliser in Plant Cane



LANDHOLDER	CSLH010014
LOCATION	Abergowrie
CATCHMENT	Lower Herbert
RAINFALL	2022 - 1959mm 2023 - 1134mm
PROPERTY SIZE	50ha
ON-GROUND PROVIDER	Megan Zahmel

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.



Mixed legume crop germinating



mature mixed legume fallow crop



Great Barrier Reef Foundation



●●●● Goal

To try mixed legume species fallow crops for soil health and weed suppression and to reduce N in plant cane after a good legume crop to increase CCS value.



Plant Cane after mixed legume crop

●●●● Overview

The grower would like to try planting a mixed species legume crop to help improve his soil health and structure as well as reduce weed pressure during the fallow stage. He believe that a good cover crop could potentially reduce his weed pressure and therefore reduce herbicide cost in plant cane. He would also like to try reducing his N rate in plant cane after a good fallow cover crop as the grower believes he can keep his plant cane CCS stabilised and fertilizer cost down by reducing the amount of N he applies.

●●●● Action

- Plant mixed legume species into fallow block for the summer fallow season.
- Compare herbicide cost to other fallow blocks that have not had a cover crop.
- Reduce N rates at plant cane application.

●●●● Outcome

- The grower started with planting mixed legume fallow crop in the summer season of 2021/2022. Termination and incorporation of first legume crop progressed smoothly and he has since continued to incorporate legumes into his fallow.
- Plant cane has been planted with 40kg/ha nitrogen. This is the total amount of N the grower will apply to his plant cane following legumes which will enable savings from fertiliser application, improving productivity and profitability of the plant crop.



Grower receiving NMP

