![Project Catalyst logo]

Case Study

Adopting a Practice Change on Farm to Plant Fallow Blocks to a Legume Cover Crop - Sunn Hemp

LANDHOLDER	CSMW010025
LOCATION	Sandiford
CATCHMENT	Plane Creek
RAINFALL	1500 mm
PROPERTY SIZE	239.81 ha
ON-GROUND PROVIDER	Nutrien Ag Solutions

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.

Fallow Blocks planted to Legume Cover Crop - Sunn Hemp

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Australian Government | Reef Trust | Great Barrier Reef Foundation | The Coca-Cola Foundation | WWF

Goal

To improve farming practices by conducting a review of the farms nutrient management plan and plant fallow blocks to legume cover crops that would improve soil structure, boost soil organic Nitrogen, decrease weed pressure and potential erosion.

All contributing to improving the quality of water leaving the paddock.

Overview

The farm is located in Sandiford and is situated in the Plane Creek Catchment Area. The farm has limited irrigation and relies on supplementary annual rainfall. The three main varieties grown across all farm are Q138, Q183 and SP80-1816 being strong ratooners and resistant to Pachymetra.

The grower planted legume cover crops - Sunn Hemp to fallow blocks to improve soil structure, boost soil organic Nitrogen, decrease weed pressure and potential erosion.
The two main soil profile across the farms are Podzolic and Soloth. Podzolic topsoils are weakly structured, greyish sandy loams to sandy clay loams. Soloth topsoils are massive grey-brown sandy clay loams.

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Podzolic and Soloth Soil Profiles

Action

Prior to planting the legume cover crop old ratoons and weeds were cultivated out using the growers offset discs and ripper. Following these management practices the block continued to maintain good organic matter and soil moisture in preparation for planting the legume cover crop.

The Grower decided to plant fallow blocks using Sunn Hemp as it could be farmed using his existing equipment and did not require a specialist seeder.

The Sunn Hemp was late planted being March 2023 and germinated quickly with the combination of the hot summer days, soil moisture and the follow up showers and rainfall making conditions ideal for establishment.

It was at this point that the grower started to see the real benefits of incorporating improved farming practices into his farming operation that are not disruptive to his established way of farming.

Outcome

With the support of Project Catalyst and Nutrien Ag Solutions the grower has adopted beneficial and sustainable farming practice changes across his farms. The main focus on improving the quality of water leaving the paddock and reducing the impact on the Great Barrier Reef. The grower has made a projected DIN saving 432kg.

The grower has been provided with a Compliant Nutrient Management Plan which extends a revitalised Best Management Practice (BMP) approach to farming and the environment. The grower has received advice that will help to efficiently manage nutrients in response to their own on-farm conditions, crop requirements and farming practices.

The grower has now implemented 5 practice changes in fallow and fertiliser management which exceeds the project practice change pathway goal of 2 new practice changes being adopted.