



Case Study

Matching Nitrogen (N) Rates to the Requirements of Vigorous Crop Varieties



LANDHOLDER	Rodney Hindle
LOCATION	West Hill
CATCHMENT	Marion Creek
RAINFALL	1800mm
PROPERTY SIZE	296ha
ON-GROUND PROVIDER	Farmacist Pty Ltd Author: Laura Sluggett

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.



Fig.1 Rodney believes on-farm trials provide grower confidence



Fig.2 Previously lodged cane on Rodney's farm



●●●● Goal

To improve synchronism between N application rates and crop uptake demand in more vigorous cane varieties to avoid yield impacts.

●●●● Overview

Different cane varieties can exhibit a wide range of responses to N including lodging, suckering and low CCS that result in lower yields.

Rodney Hindle wanted to reduce N rates on those varieties exhibiting these characteristics to determine whether overall yield performance could be improved.



Fig.3 Rodney received 3 district PCPSL awards for all 3 farms in 2020

●●●● Action

Farmacist staff consulted with Rodney to determine the varieties on his farm that potentially displayed impacts of inadequate N management and could be more appropriately managed with reduced N inputs.

Selected varieties chosen included Q138, Q242 and Q232.

A variable N application rate plan was determined based upon soil type and crop variety.

●●●● Outcome

Rodney reduced his N rate on paddocks containing the targeted varieties by a minimum of 10 kg/ha.

A reduction in the instance of lodging and suckering was observed, whilst CCS increased.

An additional benefit was an improved crop presentation to the harvester. It is expected this will opportunistically improve future yield results.

For further information contact Laura Sluggett (Farmacist) Mb. 0429 474 698.



Fig.4 Rodney adjacent previous Farmacist trial site

