



Case Study

Benefits Associated with Applying Variable Rates of Fertiliser



LANDHOLDER	Serg Berardi
LOCATION	Koumala
CATCHMENT	Rocky Dam Creek
RAINFALL	1800mm
PROPERTY SIZE	167ha
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 Serg Berardi adjusting the Dosatron for his Confidor applicator



Fig.2 Serg checking the flow view meters on his Confidor applicator



●●●● Goal

To improve nutrient uptake by better matching fertiliser application to crop growing conditions and yield potential.

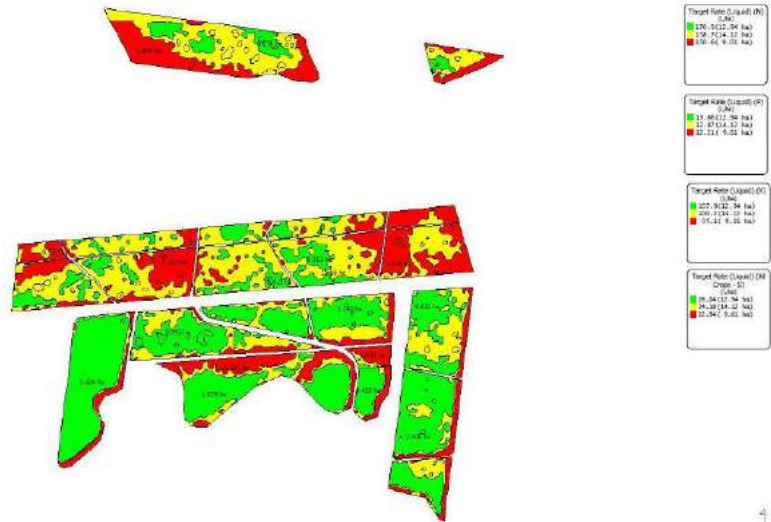


Fig.3 Farmacist produced variable rate fertiliser map

●●●● Overview

Variability in topography, soil type, soil moisture and soil health characteristics can be significant within a paddock. This is most often reflective in yield outcomes. Lower yield performance can be due to factors such as soil sodicity, acidity and poor drainage.

Applying fertiliser at a set rate across the entire paddock means valuable profit and nutrients are wasted on poor performing areas.

Responding to the variation in potential yield performance of a paddock, by tailoring fertiliser and soil ameliorants, will save input costs, increase farm profit and reduce loss to the environment.



Fig.4 Serg displaying his Bayer Confidor ruler for correct placement of Confidor

●●●● Action

Serg Berardi has often experienced yield performance variation across several paddocks of his farm. His usual practice was to apply a standard application of fertiliser.

Farmacist agronomists consulted with Serg to develop a suitable variable rate application map to account for the variability within paddocks.

Farmacist determined this by providing services to conduct an Electromagnetic (EM) survey across his paddocks. This technology maps changes in soil type and soil moisture by measuring electro-conductivity (EC). They then interpreted the results for Serg to prepare the variable rate fertiliser recommendations.

●●●● Outcome

Serg applied variable rate nutrients in accordance with the plan. He is pleased with the results achieved from the changed practice of varying application rates across each paddock. He has experienced no yield loss whilst reducing input costs.

He will continue to apply variable rate fertiliser across this non-uniform ratoon paddocks.

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