



Case Study

EM Mapping to Support Implementing Precision Farm Management



LANDHOLDER	Chad Mann
LOCATION	Leichhardt
CATCHMENT	Burdekin
RAINFALL	984mm
PROPERTY SIZE	270ha
ON-GROUND PROVIDER	Farmacist-Burdekin

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.



Great Barrier Reef Foundation



●●●● Goal

To use EM Mapping tools and respective data, to develop detailed on-farm management zones that may be treated differently in relation to fertiliser, pesticide use, ameliorates, and irrigation.



●●●● Overview

EM Mapping is a reliable option for soil condition assessment and paddock zoning according to soil type. It is an effective way of measuring soil texture, moisture, and salinity to enable growers to manage certain areas of their paddocks in accordance with the soil types. This information is important for the application of ameliorates (lime/gypsum, mill mud/ash), fertiliser, irrigation, and other inputs. When the map is ground truthed with soil samples, it provides growers with an accurate representation of what is happening in the soil profile as opposed to just the soil surface.

●●●● Action

Chad is vigilant in getting soil samples taken across the entirety of his farm but would also like it to be EM mapped to gather a much information about his soil and to enable him to manage his farm more efficiently. Chad has recently cut several blocks first round which will go into ratoons; Farmacist will map and soil sample these paddocks in order to start developing his management zones.

●●●● Outcome

Chad was able to use the EM maps to gain a better understanding of the soil types and variation within individual paddocks across the whole of his farm. Chad was able to then GPS reference soil sample locations based off the EC zones as well as monitor ESP in the years to follow.

The EM maps enabled Chad to adopt variable rate gypsum maps and apply it strategically throughout his paddock at various rates according to the soil zones and ESP readings.

Chad will be able to refer to the EM maps for years to come and believes they are a great management tool for efficient and productive farm management.

