



Case Study

Precision Weed Mapping Using Drones



LANDHOLDER	Mario Porta
LOCATION	Abergowrei and Helens Hill
CATCHMENT	Lower Herbert
RAINFALL	Abergowrie - 2020 - 1463mm
PROPERTY SIZE	1384 ha
ON-GROUND PROVIDER	HCPSL

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.



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●●●● Goal

To precisely map weeds using drone imagery and then using that map to precisely spray weeds with the block by tractor prescription.



●●●● Overview

Being able to map the weed infestations in cane blocks by using drone imagery, Mario will be able to precisely know where and what weed problems he needs to address. This then allows him reduce his herbicide use and save money. The drone imagery can also be used as a historic tool for mapping and knowing where his major weed problems will be in the future, allowing him to better manage weed control on his farms.

●●●● Action

- Work with HCPSL to map farms for weed infestations using drone imagery.
- Mosaic imagery
- Determine where and what weeds to be addressed
- HCPSL to create prescription for tractor to precisely target weeds when spraying herbicide within the block.

●●●● Outcome

Mario has had the majority of his farms flown with the drone to capture imagery.

Mario's staff which have use the imagery to search for and identify weed infestations within his blocks.

At this stage HCPSL doesn't has the staff capacity to take on the whole farm weed mapping prescriptions.

HCPSL would be able to work on a block by block basis at present which is why Abergowrie Sugar staff have taken on certain aspects of this work.

This project is still in a trial stage with more work needed to perfect imagery and mosaicing issues. There is a lot of potential for this technique to be used on a large farm scale in the future but at this stage can only be thoroughly examined on a block by block basis.



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