

Project Catalyst

Grower story



PROJECT
CATALYST

Walter Giordani, Helens Hills/Yuruga - Inspired by neighbouring innovative growers

Grower Name: Walter Giordani

Mill Area: Victoria

Total Farm Area: 178 ha

Area under Cane: 175.53 ha

No. Years Farming: 15 years

Trial Subdistrict: Helens Hills/Yuruga

As roads wind in and out of heritage rainforest and tourist hotspots like Josephine Falls, the drive through North Queensland is one of the most picturesque in Australia. Dominating jade green mountains rise out of emerald green sugarcane fields, maintained due to an average annual rainfall of 1992mm, with the majority of the region's rain falling during summer, between January and March.

For Project Catalyst sugar cane growers like Walter Giovanni that presents unique challenges when improving water quality from his farm to catchments that flow to the Great Barrier Reef. As a first-generation farmer he chose sugarcane in the Herbert district in 2009 and found himself surrounded by innovative growers. Purchasing more land with underproducing crops in 2013, Walter was inspired to follow their lead and proceeded to investigate how he could be involved. "I've got quite a few neighbours in Project Catalyst. This region is pretty innovative and it's something that I've always had an interest in. The first trials I saw were legume trials in the fallow and thought, that's got to be better than leaving the ground bare in the wet season."

In 2018 Walter trialled 'variable rate gypsum' within a sodic block, to compare his conventional practice of 3t/ha across the block. Applying more gypsum to the higher sodic patches within the block by using EM mapping and variable prescriptions, he hoped to see an improvement in sodic levels, sugarcane yield and ratooning ability.



Walter Giovanni

By improving the soil and increasing plant nutrient uptake and efficiency, Walter would be reducing nutrient runoff and erosion effects.

"EM Mapping provides a soil profile that is supported by a soil test to verify any imbalance, in our case it was sodic issues, which required heavier gypsum application in certain rows than the rest of the paddock."



Walter reviews the EM Mapping and variable rate prescriptions

Any practice change for growers has to have business benefits, as well as environmental benefits. Anecdotally, Walter knew he wasn't getting results from conventional application rates, wasting time and money. Using prescription rates and concentrating gypsum in the sodic patches via GPS technology, he could see the cane improving, "Visually the cane looked the same from one end to the other, which it never had before. But I need to see my yield going up, that's one thing we've focused on is production. Harvesting confirmed what I could see in the first year - an increase in yield."

Walter has been adopting Precision Agriculture (PA) methods since 2012, Applying mud and ash zonally, using variable rate amendment, then in 2017 widening the row space to 1.8m. Perhaps the most significant change to date may be soil testing, to identify any deficiencies or requirements following his transition to BMP (Best Management

What it's about

Project Catalyst is a grower-led innovation project in sugar cane that was formed to explore and validate farm management practice change leading to improved water quality for the Great Barrier Reef. For more information on Project Catalyst please visit our website <https://www.projectcatalyst.net.au/> or phone Catchment Solutions on 07 4968 4216.



Applying variable rate gypsum to amend sodic soil

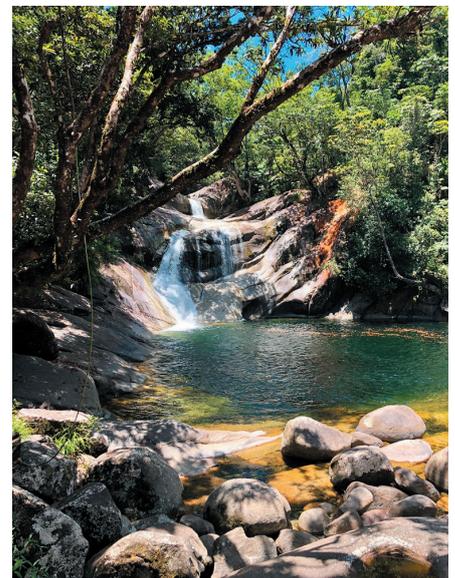
Practice) accreditation from 2010. Walter observed yield improvements after laser levelling areas that were waterlogged, before analysing soil health and that success led him to adopt other practices like legume fallow cropping, GPS technology, wider row spacing, minimum tillage and more recently mound planting.

According to the Department of Agriculture and Fisheries (2017), these changes have provided an economic improvement of \$429/ha (\$37,834.00 annually) based on cost savings and productivity increases. The investment in modifications, machinery and GPS of \$151,500.00, to implement the practice change, will be returned within 5 years.

As technology improves and the agricultural industry adopts further integration of data management, the future looks bright for those who understand their business from the ground up. “We’ve still got a long way to go and I’m interested in yield monitoring through the harvest system, getting all that information back to us as growers and then using it in variable rate fertiliser application. Instead of putting on so many bags to the acre, you can then just put it where it’s needed.”

Block History:

- Wal Giordani bought the farm in 2012
- Zonal mud & ash since 2012
- Variable rate amendment since 2012
- Change row spacing to 1.8m in 2017



Popular and pristine Josephine Falls is popular with tourists

Variable prescription map:



Applying variable rate gypsum to amend sodic soil

“For us to be viable and remain viable into the future, we need to take advantage of every opportunity available to us.”

Walter Giordani

