

Norm Reid

Evaluating methods of preparing existing 1.9m controlled traffic beds for planting, using double disc opener.

REGION: Wet Tropics | Pinnacle Hill

Norm, Linda and Peter Reid farm 210 ha at Pinnacle Hill, which is part of the Cattle and Trebonne Creek sub-catchments, south of Ingham.

The farm was originally a cattle property and changed to cane in 1995. The soils on Norm's farm vary from nutrient-rich heavy clay, to nearly pure sand with very low nutrient value. Norm is very interested in soil health and soil biology as he feels that improving both of these soil traits will improve his poorer soils' fertility, moisture holding capacity and yield.

In 1999 Norm moved out to 1.85m row spacings, but in 2001 decided to change again to his current 1.9m dual row controlled traffic system that he plants with a GPS controlled minimum tillage double disc opener planter.

Norm likes to have a legume crop during his fallow to help break the monoculture of cane and to provide nitrogen to the following plant cane crop. Norm has also received funding to improve his farming practices through the federal government's Reef Programme (formerly Reef Rescue) program.

For nutrient management, Norm has a regular soil sampling strategy and uses 6 Easy Steps (latest industry recommendation) to determine his application rate and uses a 3-row stool splitter to apply.

Issues being addressed

With his new system, Norm has seen positive changes but would still like to be able to improve his economic performance through reduced input costs and possible yield gains. With the whole farm now converted to the 1.9m controlled traffic, dual row bed system, the Reid's are keen to identify the most efficient way to re-plant as the farm passes into the second crop cycle of permanent beds.

Solutions being tested

Norm, Linda and Peter Reid have opted to trial various tillage methods on their farm to determine the most efficient means of working up for planting, as part of Project Catalyst.

The tillage trial was undertaken with replicated strips of the following variations:

1. Disc bedformer with ripper, and rotary hoeing
2. Disc bedformer with ripper, no rotary hoeing
3. Wavy disc cultivator, no rippper, no rotary hoeing

Where cultivation method 1 is currently used by Norm methods 2 & 3 are alternate tillage options being investigated.

During the fallow, Norm utilises a legume crop to help break the monoculture of cane and to provide nitrogen to the following plant cane crop.

Below: Utilising a legume fallow at Norm's farm to help improve soil health and provide nitrogen.

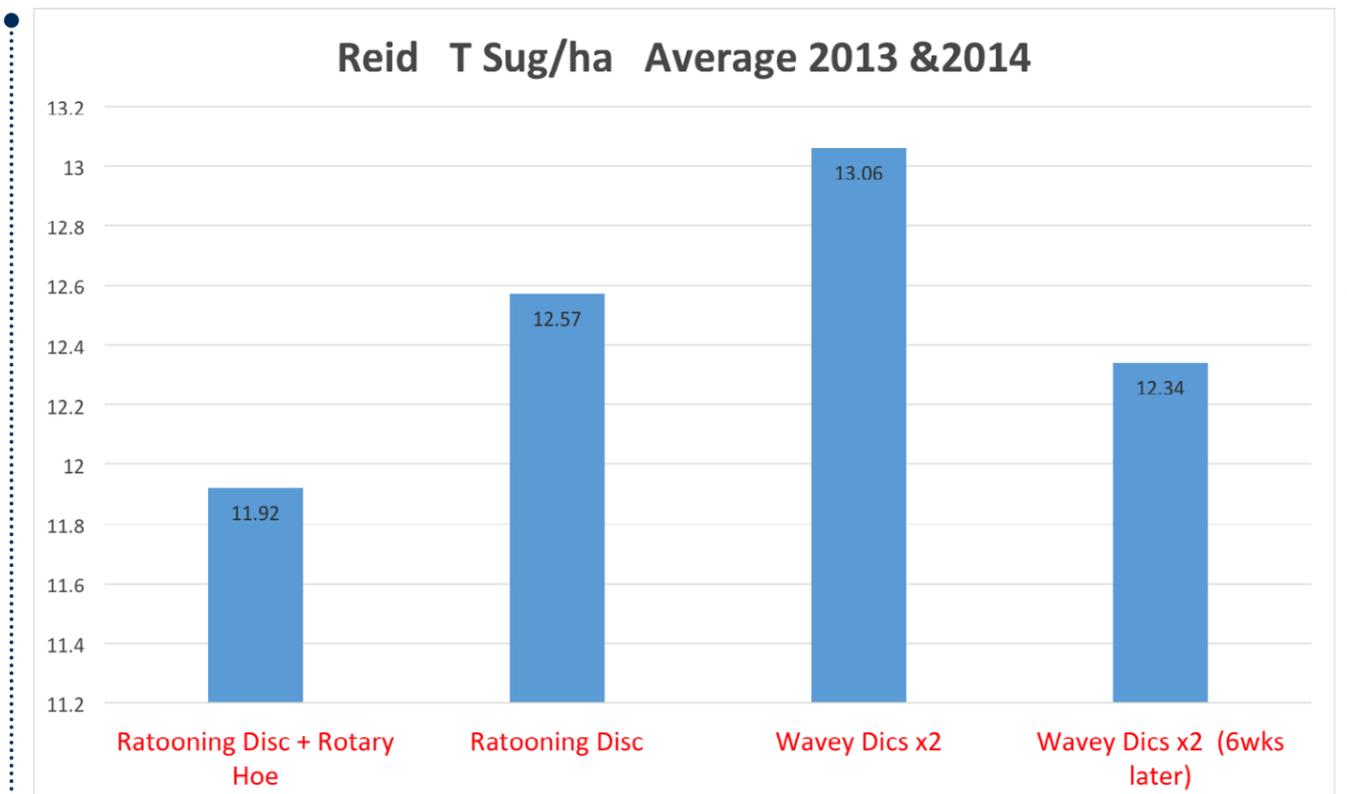


Below: A 3-row wavy disc cultivator that will be used as part of Norm's trial.



Above: The Reid property at Pinnacle Hill, south of Ingham. Trial site not long after planting.

Below: Reid Trial Results - Graph





> Agriculture and Innovation in the Wet Tropics



NATURAL RESOURCE MANAGEMENT

Digging Deeper – linking healthy soils with healthy water

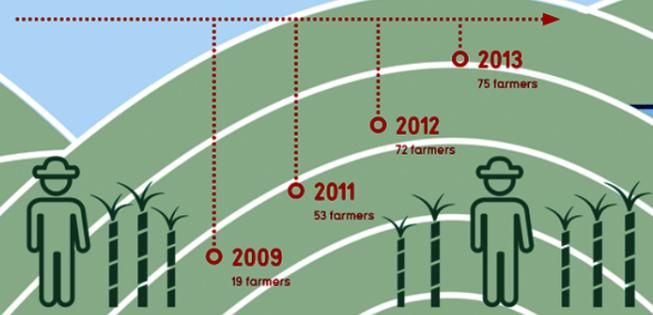
Funded through the Queensland government's regional NRM Program, Terrain NRM has launched its second year of Digging Deeper, a five-month extension program of intensive practical on-farm workshops focusing on soil health and its relationship with water quality. The program helps farmers to explore soil issues through promoting a much greater understanding of the physical, chemical and biological aspects of the soil and how they influence each other and contribute to the quality of the water that flows to the Great Barrier Reef.

For more visit www.terrain.org.au

Investing in Project Catalyst

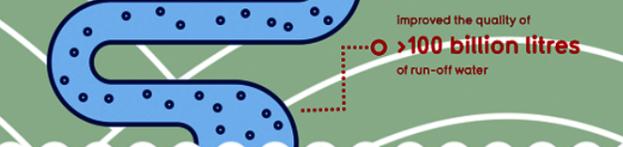
The Coca-Cola Foundation is proud to provide financial support to ensure the continuation and success of the project. Funding is directly used to develop trials and engage in new technologies to implement improved farming practices.

Total investment of AU\$3.25 million over the past six years



Estimated total reductions 2014

- 72 tonne/year for particulate nitrogen
- 34 tonne/year for particulate phosphorus
- 64 tonne/year for dissolved inorganic nitrogen
- 3 tonne/year for filterable reactive phosphorus
- 551 kg/year for pesticide
- >100 billion litres of run-off water



This February the Coca-Cola Foundation announced a further \$500,000 grant to Project Catalyst Australia, which will bring their total investment into the Project to \$3.25 million over the past six years.

The Project aims to reduce the environmental impacts of sugarcane production on the Great Barrier Reef by providing funding for technical expertise, economic analysis and opportunities for learning and networking to innovative farmers in the Queensland region.

To date, Coca-Cola Foundation investments in Project Catalyst have enabled farmers to significantly improve the quality of more than 100 billion litres of water, reducing the level of sediment and chemical run-off from their farms into river catchments that connect to the Great Barrier Reef.

Reef Catchments CEO Robert Cocco said, "Project Catalyst growers actively seek to do things differently they are constantly coming to us with innovative ideas. It's our local farmers who are championing this sustainability initiative - investing their time and efforts in finding new ways to improve water quality and preserve the Great Barrier Reef while making their own business more profitable through innovation."

WWF-Australia CEO Dermot O'Gorman said, "Containing more than 10 per cent of the world's total fish species, over 600 species of hard and soft corals, and attracting over 2 million visitors per year, the Reef is an Australian and global treasure which needs to be protected."

"What we are seeing with Project Catalyst is cutting edge innovation. It is a model for working together that we hope to replicate in other place and with other commodities. Project Catalyst is having an impact not only in Australia, but around the world."

The grant also comes at a time when the Australian Government has released its Reef 2050 plan, further emphasising the importance of protecting the Reef.

The Hon Greg Hunt MP, Minister for the Environment, said, "Nitrogen runoff from farms is a major factor affecting the health of the Great Barrier Reef and is linked to outbreaks of the

damaging crown-of-thorns starfish. The important work as part of Project Catalyst complements the work being undertaken by the Government to support improvements to farming practices."

Since the Project's inception in 2009, the number of sugarcane producers involved has increased to more than 75 growers, managing over 40,000 hectares of farmland.

"The rise in the number of growers involved is a testament to the passion and commitment of our farmers. The Project started in the Mackay region and now includes farms all the way to Mossman in the Wet Tropics. This means new innovations are being implemented across catchments that cover almost the entire length of the Great Barrier Reef," Mr O'Gorman added.

Michelle Allen, Coca-Cola South Pacific said The Coca-Cola Foundation was proud to be working with Project Catalyst farmers.

"Australian sugarcane growers involved in the Project Catalyst are leading the industry through their innovation. This new grant will not only ensure the continuation of the Project, but also help put our Australian growers on the world map," Ms Allen said.

"Project Catalyst is one of many water projects supported globally by The Coca-Cola Foundation; and we are really proud of what our local farmers have achieved."

"Project Catalyst marked the first extension of The Coca-Cola Foundation's global partnership with WWF into the South-Pacific, and an example of the Foundation displaying leadership through innovation in the key environmental impact area of sustainable agriculture."



The Coca-Cola Foundation

Program	Summary
Reef Water Quality Grants (Reef Programme) (Funded by Australian Government)	To help farmers improve land management practices and contribute to the reduction of nutrients, sediments and pesticides running into the Great Barrier Reef lagoon. The grants also include innovative projects for trialling and testing processes and practices that have the potential to significantly improve water quality for the long term. The programme is now in its eighth year. Partners: Industry bodies
Paddock to Reef Integrated Monitoring, Modelling and Reporting Program (Funded by Australian and Queensland Governments)	To integrate data and information on management practices, catchment indicators, catchment loads and the health of the Great Barrier Reef to model pollutant load outcomes using a highly innovative approach. Partners: Governments, industry bodies, regional natural resource management bodies, landholders and research organisations
Reef Trust Tender – Wet Tropics (Funded by Australian Government)	To help improve Nitrogen Use Efficiency (NUE) on cane farms in the Wet Tropics natural resource management region. It is a four year programme based on a tender process that offers financial incentives to farmers to improve their NUE and farm sustainability. Partners: Australian Government and Industry
Project Catalyst (Funded by the Coca-Cola Foundation in partnership with WWF)	To reduce the environmental footprint that sugarcane production has on freshwater quality and the Great Barrier Reef. Partners: Sugar Cane growers, Reef Catchments, Terrain Natural Resource Management, NQ Dry Tropics, the Australian Government, WWF and The Coca-Cola Foundation
Game Changer (Funded by Australian Government)	To support sugarcane farmers across three regions (Wet Tropics, Burdekin and Mackay/Whitsunday) to develop and test 'next generation' practices to reduce residual nutrient and herbicide loads running off farm. These practices aim to meet Reef Plan targets that affect water quality flowing into the Great Barrier Reef, while improving economic outcomes to growers.
James Cook University (JCU) Combi Van Project (Funded by Australian Government)	To investigate the impact on nitrous oxide emissions through utilization of bio-char in combination with compost. Terrain has an additional partnership with Griffith University who are sampling to look at phosphorus cycling and availability. Partners: James Cook University
Variable rate technology (Funded by QDAFF)	To trial variable rate technology to evaluate in-paddock spatial variability in vegetable production systems. Partners: Queensland Government
Regional Funding (Funded by Australian and Queensland Governments)	To provide technical advice, capacity building and incentives support to farmers to improve practice and trial innovation, as well as build region-wide partnerships for progressing innovation in the region. Partners: Australian and Queensland Governments

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