

# REEF RESCUE

2010

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David Hunter

## UNDER-CANOPY IRRIGATION SYSTEM

**Reef Rescue has helped David Hunter implement big changes on his organic banana farm. With the Reef Rescue funding, David was able to put a stop to run-off caused by irrigation, by implementing an under-canopy micro sprinkler irrigation system with fertigation capabilities.**

In 2000, David Hunter became interested in becoming a certified organic farmer and so began the first steps towards changing his farm.

In 2003, David became certified A-grade organic. Since then, he has been busy doing significant revegetation of native species across his farm.

This has included major efforts in planting up bare hill slopes and putting in wind-breaks for crop protection.

To be certified organic means that David is not allowed to use chemicals to control pests such as weeds, rats and insects on his farm. Dave says all of the weed control is currently done mechanically, by slashing and brush cutting.

He has also tried to encourage biological control of rats, by placing owl boxes throughout his farm.

During his fallow, David also utilises brassica crops that can help

provide a natural control for soil pests such as nematodes.

For nutrients, David says he is only allowed to use certified organic fertilisers.

“We make our own compost on-site from a range of organic sources such as chook manure, and this is spread out under the bananas.”

David also uses a legume crop called Pinto Peanuts in his crop and inter-row to help provide some nitrogen and ground-cover leaving no soil exposed.

One area of the farm that Dave was keen to improve, was his irrigation system.

He currently uses a high pressure overhead sprinkler system and was noticing some issues.

“In the Mackay region, we need to have a lower planting density than up north, to let sun into the crop during our colder winter.”



### About the farm...

David Hunter owns and manages an organic banana farm at Cameron's Pocket, near Calen, 55km north west of Mackay. The beautiful St Helens Creek an Eungella National Park border the 50 hectare property, which has nine hectares under banana production. When David moved to the property in 1989, banana crops were already established. The photo above, taken in March 2010, shows damage the property sustained during Tropical Cyclone Ului.

Also, with the decreased canopy cover, some run-off was caused by irrigation.

Dave was keen to prevent this run-off, and was successful in getting Reef Rescue funding to implement an under-canopy micro-sprinkler irrigation system with fertigation capabilities.

This means he will change the entire set-up of his farm to suit the new system and obtain the most benefits.

“We will be going into a double row of bananas so as to maximise the three metre diameter of the micro-sprinklers and get the best root growth from the crop,” David says.

There will be reduced losses from evaporation, and David can use this as a fertigation system for applying fertilisers like fish emulsion and trace elements such as Boron and Zinc.

“This means we can apply the right amount at the right time and have confidence in the equipment we are using.”

Reef Rescue has helped David start to implement the big changes on his farm. He was always keen to look at adopting an improved irrigation/fertigation system, but the cost was

going to make it a long-term project.

David says he can now speed up the process and complete it within just a couple of years, rather than five to 10 years.

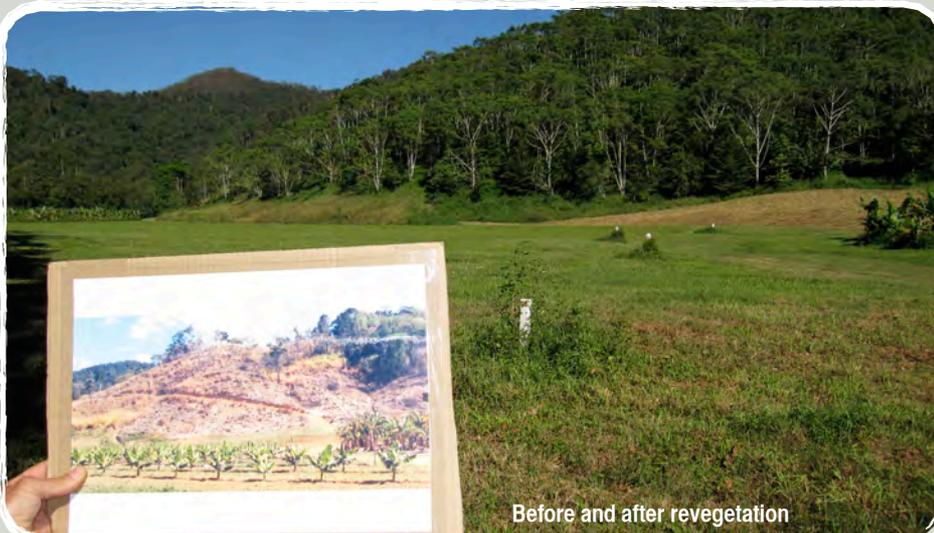
The work David is doing through Reef Rescue towards improving water quality include reducing the

risk of sediment and particulate nutrient losses from maintaining a good inter-row ground cover and implementation of an irrigation system that will not cause any run-off.

David is also reducing the risk of dissolved nutrient losses with accurate-targeted nutrient applications through a fertigation system and nutrient rate based on crop requirements.

***“We make our own compost on-site from a range of organic sources such as chook manure, and this is spread out under the bananas.”***

Biological control of rats with owl boxes



Before and after revegetation

## OUTCOMES



Preventing run-off caused by irrigation



Reduced losses from evaporation and best root growth possible



Protecting riparian areas



Increasing water quality by reduced risk of sediment and particulate nutrient losses from good inter-row ground cover. Reduced risk from dissolved nutrient losses