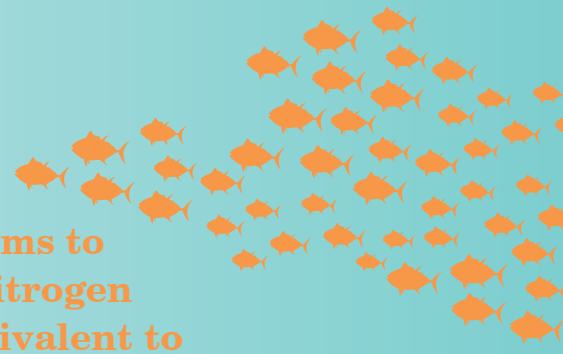


# MACKAY WHITSUNDAY WATER QUALITY PROGRAM



The Mackay Whitsunday Water Quality Program aims to prevent at least 26 tonnes of dissolved inorganic nitrogen and over three million risk units of pesticides (equivalent to 215 kg) from entering the Reef's waters every year

Sugarcane farming in the Mackay Whitsunday region has a long, rich history that is central to the identity and prosperity of the local community. Sugarcane farmers in the Mackay Whitsunday region grow roughly 26% of all sugar produced in Australia which is crushed in five local sugar mills. The region's first sugar mill was established in the Pioneer basin in 1888, and today roughly 18% of the region is devoted to sugarcane production making it the largest area of sugarcane production in Australia.

Farmers in the region, supported by industry services, continue to seek the latest in innovative farming methods that improve the productivity, profitability and sustainability of their farms to benefit farmers and the environment

The four-year, \$22.2 million program is managed by Central Resource Services and coordinated by Reef Catchments Ltd. This program is focussed on improving nutrient and pesticide management practices to reduce losses through runoff and improve the quality of water leaving sugarcane farms within the Pioneer, Plane Creek, O'Connell, and Proserpine catchments.

## Mackay Irrigation Project



Canegrowers Mackay supports sugarcane farmers to optimise water use efficiency, improve irrigation efficiencies, mitigate nutrient losses and provides management strategies to increase productivity and profitability.

## Reef Credits



The Program is committed to purchase Reef Credits from GreenCollar. Farmers in the Mackay Whitsunday region will generate and sell Reef Credits through validated and audited activities that go above and beyond regulations creating impact to endure far beyond the initial investment term.

## Major Grants Project



Reef Catchments is administering the Major Grants Project which provides financial incentives to farmers to upgrade or purchase equipment known to reduce nutrient and pesticides runoff losses. Incentive grants are available to growers in the region who are involved in the program or meet the eligibility requirements.

## PROJECTS

### Nutrient Management Plans and Agtrix Support



Mackay Area Productivity Services works one-on-one with sugarcane farmers to implement Agtrix Farming software and develop property-specific nutrient management plans to manage nutrient applications for crops more efficiently.

### Point of Difference: Refining Farm Nutrient Management



Farmacist works with sugarcane farmers to map soil variability and develop tailored nutrient management plans that reduce the amount of nutrients running off the farm.

### Local Area Nutrient Datahub



LiquaForce's LAND uses data such as crop history, land structure, and soil composition to produce an optimised Six Easy Steps nutrient management plan that reduces the amount of excess nutrients flowing into local water ways.

### Project Catalyst Broader Adoption



Building on positive networks and practice change results since 2009, this project promotes the uptake of tested methodologies to improve on-farm management practices and significantly reduce pollutant loads that impact the Great Barrier Reef.

### Project Bluewater 2

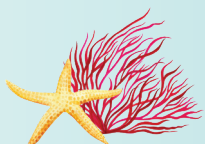


Farmacist works with farmers to improve pesticide management practices to achieve a reduction in the risk of pesticides (measured in Risk Units) entering the Great Barrier Reef.

### Cane to Creek



Sugarcane farmers directly participate in evaluating alternative management strategies related to pesticide and nitrogen management to develop a better understanding of how different management decisions change water quality.



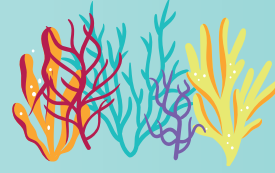
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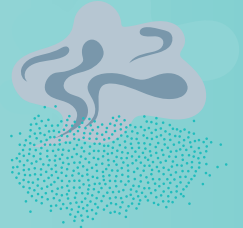
Improved nitrogen management practices can reduce DIN runoff while maintaining productivity



Wetlands used to act like a sponge for nutrients, but more than 80% have been lost in the Pioneer and Plane basins



Pollutants reduce the Great Barrier Reef's ability to recover from catastrophic events such as tropical cyclones and mass coral bleaching

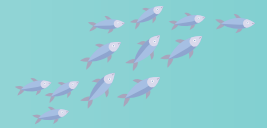
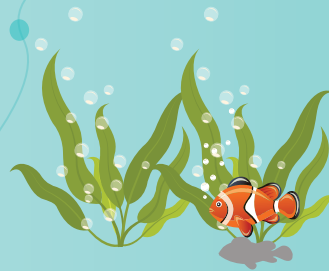


Dissolved inorganic nitrogen (DIN) is a nutrient that is immediately available for uptake by plants and can cause algal blooms

Algal blooms can compete for space, affect coral metabolism, reduce coral settlement and increase susceptibility to coral disease



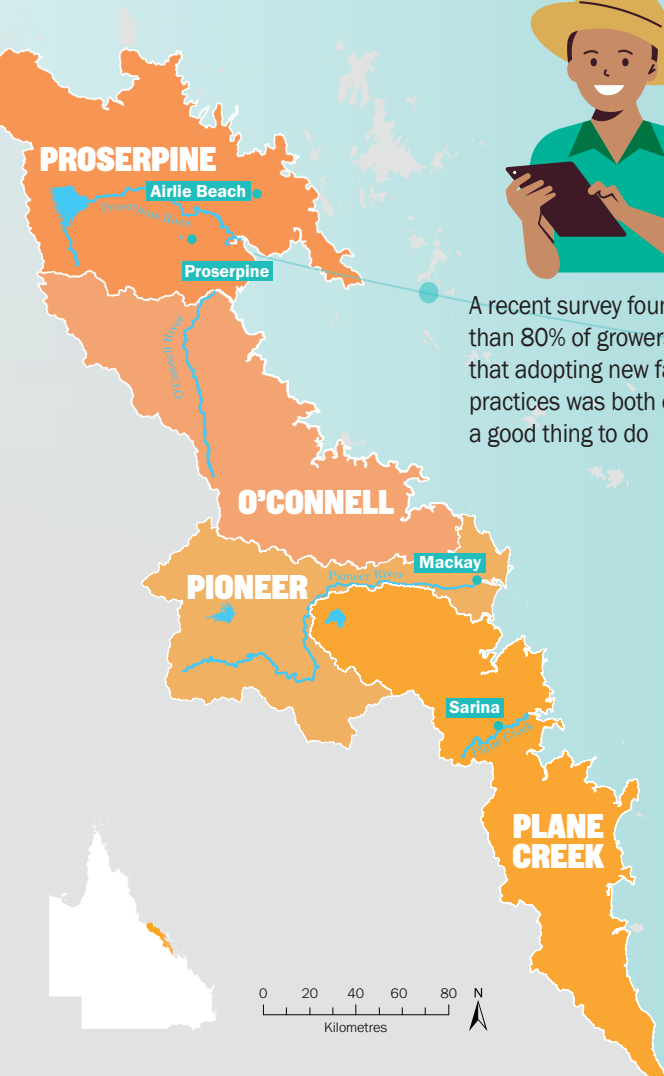
Pesticides affect plants in freshwater wetlands and the whole food chain, including amphibians and fish essential to a healthy ecosystem



A recent survey found more than 80% of growers agree that adopting new farming practices was both easy and a good thing to do



Small coastal catchments like those in the Mackay Whitsunday region have short and frequent runoff events resulting in short-term exposure to high concentrations of pesticides



The Mackay Whitsunday Water Quality Program is funded by the partnership between the Australian Government's Reef Trust and the Great Barrier Reef Foundation.