


# Best practice is a way of life for Tully's progressive Mackay family



Barrie Mackay of Mackay Estates Pty Ltd, Tully with a plant cane crop grown with zonal tillage on 1.9m wide dual rows. The Mackay family grows 87,000 tonnes of cane in addition to 2 million cartons of bananas annually.

By Bill Kerr

Impressive size of the multi-crop farming operations conducted by Mackay Estates Pty Ltd at Tully in the wet tropics is matched by a strong commitment to best practice with all cane and banana growing activities conforming to ISO 14001.

Best practice permeates every aspect of a diverse family business that has 350 employees. Mackay Estates' success in adopting best practice was recognised this year when director Barrie Mackay was presented with the local Mangrove Jack Award in recognition of the company's outstanding achievement in farming sustainably while maximising productivity, product quality and profitability.

Barrie is confident the family's use of best practice and its attention to detail in farming responsibly will enable Mackay Estates' operations to withstand any reasonable scrutiny under the State

Government's new regulations designed to reduce the impact of farming on the health of the Great Barrier Reef.

The management system is based on using less cultivation on wider, dual rows, controlling erosion through better drainage, green cane trash blanketing, construction of sediment traps and other measures that reduce run-off, monitoring of surface and groundwater quality and flows, slashing rather than spraying headlands, planting legumes to reduce fertiliser usage, placing all fertiliser underground, using chemicals sparingly and participating in training courses and farm trials aimed at improving cultivation practices even further.

He believes it makes good business sense to farm sustainably but he also gets great personal satisfaction from leaving a light footprint on the environment. As well as being astute business operators, the Mackays are keen boating and fishing

people who appreciate and respect the magnificence of the tropical environment in which they live. They have embraced best practice not just to ensure consistent low-cost and profitable agricultural production but also to foster a natural environment that protects and enhances the aquatic life on and around their farms.

Mackay Estates is Australia's largest banana grower, producing approximately two million cartons annually. The Mackays are also very large cane growers, this season harvesting 87,000 tonnes from around 1,200 ha spread across three different productivity areas at Tully. They also grow papayas and run beef cattle.

The cane focus is on maximising productivity from existing land area with practices that meet or exceed highest industry standards of best practice. The family is committed to adapting management as new information and opportunities arise. ►

Even so, this year's harvest was 5,000 t below estimate due to excessive rain at the start of the year, highlighting the uncertainty that weather always imposes on farming in the wet tropics.

Their ability to farm sustainably and profitably will be greatly enhanced by Reef Rescue funded projects designed to improve drainage in the sensitive Cherrin Creek catchment and to progress implementation of zonal and zero tillage in a controlled traffic farming system based dual rows 600 mm apart on 1.9 m row spacing.

Barrie manages two thirds of the company's cane activities, including the principal site at Warrami, plus two of its banana plantations. The group operates four large fruit packing sheds. Each carton carries a logo indicating that they come from a farming enterprise that is fully accredited under ISO 14001, a positive selling point that appeals to buyers.

Mackay Estates had its beginnings when Barrie's grandfather, the late Stanley John Mackay, came to Tully to cut cane. In 1945 Stan and his wife began growing bananas, branching into sugarcane in the early 1980s. These days cane is grown mostly in areas unsuitable for bananas but by no means is it given second class treatment.

Drainage is one of the biggest challenges for landholders in the Cherrin Creek catchment, which drains the Warrami area where Mackay Estates produces 55,000 t cane. It has the highest priority of any area in the high rainfall Tully-Murray catchment for

drainage work to control movement of sediment, nutrients and chemicals. Erosion has been a headache in the area since the late 1960s when King Ranch severely altered the drainage characteristics to promote pasture productivity. This was exacerbated by subsequent cane expansion in the early 1990s. These changes, coupled with high rainfall, highly erosive soils and strong groundwater flows, represent a formidable challenge for local landholders seeking to redress the problem.

The Mackays, in conjunction with the Crema family who also have a large diversified cane, bananas and cattle enterprise, secured Reef Rescue funding in Round 1 for a coordinated approach to stabilising drainage and establishing riparian buffering along 4.2 km of Cherrin Creek, which drains around 720 ha of farming land.

The size of the challenge (there is a 26 metre fall across 3.3 km) is matched by potential benefits. The project is expected to reduce by 90% the amount of suspended sediment flowing into the Murray River. Experience further downstream over the past 13 years has shown that construction of silt traps and wetlands significantly improves riparian and wetlands conditions.

The project involves building silt traps, detention basins, rock structures, bank battering, establishment of grasses and planting of native trees to reduce water velocity, prevent further deepening of drains and to retain water for as long as possible within the system. Slowing water flow and capturing small scale

rainfall events in the drainage system means that nutrients, herbicides and pesticides in sediment will be retained on-farm.

Reshaping of drain design will allow slashing with flail mowers to replace spraying of weeds along the banks. Revegetation of strategic areas is helping stabilise creek banks and



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## REEF RESCUE

Reef Rescue is aimed at addressing off-farm impacts on water quality by encouraging voluntary uptake of the latest technology and best practices.

increasing nutrient interception from groundwater. More than 4.2 km of native trees has already been planted on drainage lines. Farm run-off passes through a system of 11 silt traps, and rock stabilisation groynes and battering are used where necessary. This work will be complemented by future use of hooded sprayers, changes in fertiliser application rates and use of softer herbicides.

Mackay Estates' 1.9 m dual row farming system, based on GPS guidance and zonal and zero tillage, saves time, fuel and wear and tear and helps minimise run-off.

The fallow strategy is to direct drill legumes into pre-formed beds to create a large body of organic matter that improves soil health, fixes nitrogen in the soil (thus reducing the need for fertiliser top dressing) and minimises run-off during storms. Depending on the crop, legumes are sprayed out after the Wet Season in preparation for planting cane by zero till, or the land is rotary hoed using a zonal tillage implement purchased with Reef Rescue assistance.

A contractor uses a double disc opener planter to plant rows 600 mm apart. Dual rows slow down harvester speed but longevity of ratoons is improved. Yields have increased slightly over the last six years and Barrie expects further improvement over time. GPS guidance is used on all farming operations and will be added to the harvester next year. ■



Barrie Mackay (left) and Ash Benson, BSES Herbert River, discuss water polishing ponds constructed to aerate and filter water on two of Mackay Estates' four large cane and banana plantations at Tully.