The key target of Reef Rescue delivery in the Mackay Whitsunday and Isaac region is to get more of the identified A & B class improved land management practices, identified in the regional industries ABCD Management Practice Framework, adopted by local farmers, producers and graziers. For this reason, a large majority of the funding received goes out as individual landholder water quality grants so that positive changes can happen on their farms and properties. “The grants have seen wide spread adoption of many of the activities that were eligible under Reef Rescue over the first three years,” said Phillip Trendell, Land Projects Manager for Reef Catchments.

While this has been an excellent result, the local sugar industry was also very keen to support projects that could help even more growers make positive changes on farm as well. To achieve this, some of the Reef Rescue funding allocated to sugar has been set aside for industry-wide projects that aim to enable increased adoption of the A & B class cane management practices. This has been led by Reef Catchments and the Reef Rescue Regional Sugar Industry Working Group which has developed an application, assessment and prioritisation process.

“Over the first two years, projects included supporting community GPS base stations, yield monitors on harvesting equipment and variable rate technology equipment on all Sucrogen linked liquid fertiliser applicators,” said Chris Dench, Reef Catchments Project Officer and secretariat for the regional sugar working group. “This has led to outcomes such as on average now there is 20kg/ha less nitrogen applied by the liquid fertiliser fleet with the improved accuracy of application, and this may cover over 60 000 ha annually,” he added.

In 2010/2011, some of the Industry Wide projects supported have included:

- Mill Mud Applicators – the fitting of “back of truck” applicators that will apply banded mill mud at 3 rows at a time on top of the bed and at an application rate of 50 tonnes/ha. This is compared to the conventional application method of being broadcast at 150 tonnes/ha and so will reduce the risk of nutrient losses over a crop cycle and enable more growers to utilise the product.

- Zonal Tillage Demonstration Equipment –The opportunity for growers to trial a range of Zonal Tillage Equipment on their property before committing to a Zonal Tillage and Controlled Traffic system. Zonal Tillage confines compaction to the inter–rows improving soil structure, water infiltration and reducing sediment loss. The project includes delivery and removal of the equipment, a technical expert to demonstrate on site and the general maintenance of the equipment.

Chris said “These projects are a great example of how the Reef Rescue Industry Wide projects can allow growers to get access to new equipment and technology at a reduced cost to their business. It even allows them to try and compare so that they can make the right decision first time when they commit to making changes on farm”.
Reef Rescue is helping farmers capitalise on their natural assets

With an acre of covered concrete comprising the 450 cow dairy shed and feed pad and 440 tonnes of manure collected annually, Sunshine Coast dairy farmers Ivan and Shelly Wright decided to capitalise on their ‘natural asset’ by purchasing a slurry tanker.

When year three of the Reef Rescue Water Quality Grants program launched last year, the Wrights applied for financial assistance in the purchase of a slurry tanker, to enable them to expand and improve the reuse of their effluent.

“We really wanted to increase the area being fertilised by our dairy effluent, as we have seen first hand the benefits of applying manure to our soils. When the Reef Rescue program began we were provided with an excellent opportunity,” the Wrights said.

The Wright’s farm is in the Sunshine Coast hinterland and is part of the Mary River catchment. After building their dairy the Wrights implemented a nutrient reuse / effluent distribution and collection system designed by Agri-Science Queensland.

The system directs all effluent into a trafficable solids trap with a weeping wall which allows the solid and liquid components to be separated. The liquid effluent is then distributed through two centre pivots.

After seeing the benefits in utilising their effluent as nutrient reuse to irrigate their crops and pastures along with the reduction in fertiliser costs, the Wrights decided to investigate how to best distribute effluent over the whole farm.

“Once we saw the reduction in synthetic fertiliser needed for the pivots we realised we were sitting on a gold mine of nutrients and the rest of the farm could really benefit from using the effluent.

“We had attempted to stockpile the solids from the trap along with the wet manure from the feed pad that we scrapped daily, but found that it just wasn’t drying out. So we needed an alternative to a manure spreader to distribute the wet manure from the solids trap.”

The Wrights investigated a number of different alternatives to reusing their effluent and decided to purchase a slurry tanker which would enable them to recycle the water used for their wash down and redistribute the effluent over a further 81 hectares.

“A slurry tanker in Queensland is definitely not a sight you see everyday but after battling with the stockpile and spreader we knew this was the way to go.”

The tanker has an extendable arm which agitates the ponded solids and allows the slurry to be pumped into the tanker. The 12,500 litre tanker takes only 15 minutes to empty and is fitted with flotation tyres to limit potential soil compaction.

With the recent wet weather the tanker has not been used as frequently as anticipated but the Wrights have already seen a reduction in fertiliser costs and as an added bonus have cut down labour time by washing out the feed pad rather than scraping it daily.

The Wrights intends to conduct regular soil tests to monitor nutrient levels and to assist in determining fertiliser rates.

Year three of the Reef Rescue Water Quality Grants in the Burnett Mary has provided financial assistance to 11 dairy farmers in the Burnett Mary region to help improve water quality in the catchments entering the Great Barrier Reef lagoon. Year 4 of the Water Quality Grants program will be opening soon, so producers in the area will be sent information on how to apply shortly.

This project is supported by the Queensland dairy industry NRM partnership, through funding from the Australian Government’s Caring for our Country initiative.
Helping small FAMILY FARMS

Bill Jensen has come a long way since the days of carting around a spray tank on his back to keep weeds away from his vegetables.

There are not many small growers like Bill left in the Burdekin area of north Queensland. Many have got bigger to survive, but Bill resists this in favour of having a quality of life that suits his family.

He’s been growing fruit and vegetables in a small way near Ayr for 25 years.

He was born on a cane farm not far from where he is now and used to catch fish for a living. Bill now grows mangoes and lychees on 12 hectares and vegetables including eggplant, chillies and cucumbers on two and a half hectares. He sells them to local and central markets.

He’s interested in water quality because of his love for fishing and says he used to test creeks near farms where he lives. Bill says he’s still interested in water quality and his impact on it. As a consequence he’s been working on improving fertiliser use.

He used to get around the farm with a knapsack on his back and spray up and down each row but it wasn’t easy to contain chemicals this way.

He approached his local natural resource management group NQ Dry Tropics to get Reef Rescue funding for a micro-sprayer – a piece of equipment that sprays directly where it’s needed.

Horticulture representative group Growcom helped Bill identify improvements on his farm.

As a result he reckons he’s cut down chemical use by 80 per cent. The sprayer cost $12,000. He also spent money laser levelling out potholes.

Bill has also cut down on fertilisers by using a by-product from milling sugar cane — mill mud. It has gypsum, lime and nitrogen and he discs it into the soil once a year. “I don’t put a base fertiliser on anymore because it’s already there in the soil with the mill mud. I’ve saved $1500 this way,” he said.

Bill says he’s noticed a difference in yield since he’s been using it and it grows healthier plants. It also breaks up his heavy clay soils.

Bill puts his hand up for funding although he knows it’s hard to get for small properties. “I was on the committee that decides who gets funding and I know what they think. I’m trying to change their mind. The little farmer is just as important as the big farmer.”

According to Bill the argument that bigger farms have more impact on rivers because they’re using more chemicals doesn’t stack up. “Vegetable farmers shouldn’t have run-off because they should all be on trickle tape.”

Brett King from NQ Dry Tropics says he’d like to work more with smaller farms like Bill’s. “At the moment we’re helping a community of chilli growers to improve their production and water quality. Sometimes it’s difficult to get in touch with smaller growers and let them know how we can help them.

“The larger farms generally have a higher profile in the community and are willing to participate in Reef Rescue. There are opportunities to get in touch with more small farms to let them know they can benefit just as much.”

Another way NQ Dry Tropics has engaged smaller growers is to offer easy to access grants up to $5,000. This has worked well to help fruit and vegetable growers who it hasn’t reached before.

Fencing projects BENEFIT THE CAPE

40 kilometres of fencing along rivers and creeks has been funded by Reef Rescue across Cape York Peninsula over the last financial year. This riparian fencing, along with five new watering points for cattle is a major component of the Reef Rescue Program for the Cape.

Landholders undertaking Reef Rescue projects must match government funds on a dollar for dollar basis, so it’s no surprise that many landholders are doing their own fencing so that their in-kind labour is valued against any Reef Rescue grant.

Some of the watering points funded in the last round used solar pumping systems, which are quite expensive. But more landholders prefer dams as watering points, particularly if their properties are large and the owner is not able to check that floats in troughs are working properly.

Watering points not only provide an effective alternative to creek access, they can also be used to take pressure off of overgrazed areas by opening up underutilised parts of the property that were previously without water. Troy D’Addona of Butchers Hill Station is building a dam for this very purpose, to take pressure off the existing dam and surrounding land.

The improvements seen by installing watering points provides landholders of the Cape further incentive to increase their adoption of such incentives through the Reef Rescue Program.
Upper catchment

Think of farming in the Wet Tropics and it conjures up visions of tropical fruits, lush sugar cane fields and cattle pastures. Agriculture in this region is possible because of water abundance and ironically Reef Rescue is helping farmers to improve their land management practices to reduce water runoff from their properties and flowing into reef waters.

But in the upper catchment beyond the Great Dividing Range it’s a different story. Cattle grazing in the dry, inland country does present water quality issues, but generally only where land has been degraded. For graziers, Kate and Peter Waddell on Woodleigh station, soil degradation on their property was a major problem but not due to their grazing management.

IMPACTS

Large tin dredges operated on the creek on Woodleigh station 30 years ago. The dredges were abandoned in 1980 and the tailings dams were breached, allowing the tailings to flow directly into the creeks. “The dams are an environmental disaster, as there was no legislation at the time to clean up the site once the mining company left our land,” said Kate.

Through Reef Rescue funding the Waddells were able to stop huge sediment loads entering the catchment, having an immediate and noticeable impact on water quality. Their project is an example of how Reef Rescue can have a huge impact on water quality by helping farmers to repair erosion hotspots, which they could not economically justify otherwise.

The tailings dams, covering 85ha were constructed above the floodplains to store the clay fines left over from washing the alluvial clays. Over the years water flowing out of the breached dams has eroded deep channels and carried massive amounts of sediment to the creek. “It is likely that the sediments are impacting far downstream on the Herbert River and entering coastal waters” said Ian Little, grazing extension officer.

With Reef Rescue funding the Waddells repaired the dam wall, constructed by-pass spillways with silt traps to catch the overflow of storm water. The erosion of the tailings has now ceased and flow-over sediment was trapped in silt traps preventing it entering the catchment.

There are numerous tailings dams on other tributaries of the Herbert River with the same problem and the Waddells are now encouraging neighbours to repair tailing dams on their properties to prevent further impact on the Herbert River.

SUPPORT CONTINUES IN THE BURNETT

Burnett Catchment Care Association (BCCA), with support from Burnett Mary Regional Group (BMRG), continues to help the grazing industry in the coastal Burnett and Baffle region improve land management and reduce run-off.

A total of $375,000 from the Australian Government’s Reef Rescue has been spent on infrastructure in this financial year to support land managers in the coastal catchments to improve the quality of water that runs off farms, down creeks and rivers and onto the reef.

Katie Muller, Programs Manager for BCCA, said there has been a positive response by the grazing industry to Reef Rescue over the last three years of the program.

“This can be attributed to the excellent work by the Reef Rescue grazing team in promoting and developing the program, and the dedication of graziers in this region to adopt best management practices,” she said. “Graziers have been receptive in adopting these practices to increase sustainability and profitability, a win-win situation for both the reef and in the industry”.

During this third year of the program, 45 graziers in the Burnett and Baffle catchments received water quality grants, an improvement on the number of graziers from last year. These projects include fencing for rotational grazing, riparian fencing, additional watering points, fencing off eroded gullies and revegetation works.

Danny Green, General Manager of BMRG, said the organisation was providing as much support as possible to see landholders are able to get the full benefits of their Reef Rescue applications.

“As a result of the floods, some landholders have requested extensions and we’ve been able to extend those projects until the end of October,” he said.

Those who have been affected have been granted extensions if they are still able to fund their 50% contribution to the project. “We certainly understand that repairing the damage done by the floods is the top priority at the moment, and we’re more than willing to accommodate additional time,” Mr Green said. “Reef Rescue is a long-term program with long-term goals so a short delay is much better in the long run than rejecting applications and or cancelling projects outright”.

Applicants who have withdrawn are still allowed to re-submit their application in future years. Whilst a small proportion of landholders have withdrawn projects, only some of these were withdrawn due to flood damage.

Cathy Myire, BMRG’s newly appointed Reef Rescue Coordinator, said she was committed to seeing the program go from strength-to-strength. “We’ve funded over 210 projects across the grazing, dairy, horticulture and cane industries in 2010-2011,” Ms Myire said. “The program is progressing full-steam ahead and we’ll be rolling out the 2011-2012 Reef Rescue program within the coming months.”
It might seem a drop in the ocean by northern cattle industry standards, but 10 kilometers of fencing can go a long way towards increasing groundcover and reducing run-off into the Great Barrier Reef.

In late 2009, graziers Mick Duckett and Emma Robinson completed two fencing projects on their Cape River cattle property ‘Caerphilly’, 130km south of Charters Towers. Mick and Emma’s enterprise is one of 569 grazing enterprises to have collectively invested $14.3 million in property projects that have improved grazing land management practices across a total of 650,000 hectares. This in-kind contribution matched the Australian Government’s $10.2 million investment and resulted in greater sustainability and less sediment runoff from paddocks.

Mick and Emma’s projects enabled the couple to strategically rest riverfront paddocks on Caerphilly that had previously been continuously grazed.

Just over 18 months later, and in the midst of a bumper season with dense stands of buffel, urochloa, stylos and native blue grasses in their paddocks, Mick explained Reef Rescue helped him to deliver direct results.

“This sort of project makes a lot of sense to me,” he said.

“If run off is an issue, the only way for us as cattlemen to prevent that is to increase our groundcover. These projects help to facilitate that; in that they actually do something, they actually achieve something, and to me that is the best way to do it.”

Mick and his wife Emma have owned Caerphilly for the past five years. The property spans 25,000ha of improved Blackwood scrub rising to lighter forest country and Lancewood/Bendee ridges.

Caerphilly is now used to grow out stock as well as to breed, and supplies finished cattle to northern processors, store cattle to southern grass fatteners and weaner steers to the Indonesian live export market. Stocking rates are carefully matched to available pasture, an equation that determines how many cattle are retained for grass finishing through to market specifications and how many are consigned as weaners to the northern boat trade.

Mick and Emma are developing a composite breed on Caerphilly using Senepol, Belmont Red and Brahman genetics to combine the growth and doing-ability of crossbred cattle with the ease-of-management that goes with a straight breed herd.

With large areas and extensive paddocks, set stocking was always standard practice on Caerphilly. However over time, Mick and Emma said constant grazing pressure led to reduced groundcover and longer droughts. The couple decided to try rotational grazing to give paddocks the chance to rest and regenerate, particularly in the critical wet season months.

“We just basically said, ‘well, there’s four paddocks running x-number of cattle, let’s just take the step of putting them all into one paddock and moving them every three months, or moving them as we must’,” Mick explained.

“We could see the benefit in that the more you rest your country, the better it responds.”

Mick and Emma also identified a number of large paddocks that they believed could be better managed by being sub-divided into smaller paddocks. At the same time they learned through their local Landcare group of funding assistance for fencing projects through the Australian Government’s Reef Rescue program, administered locally through the NQ Dry Tropics NRM group. “We approached NQ Dry Tropics and they were fantastic to work with,” Mick said.

“Two projects were designed to reduce paddock size to make them easier to manage and rest. One paddock had an area of pulled country in the corner. The cattle basically lived in that pulled country and didn’t utilise the rest of the paddock, so we fenced the pulled country off, and established a couple of waters there.

“The second project involved fencing a 3240ha paddock into two paddocks and equipping a bore. The projects have made it easier to shift cattle and have delivered noticeable improvements in pasture.

“In the paddocks we have rested, the response has just been phenomenal; the increase particularly in the stylo legumes has been pretty amazing.”

Mick said the approach was not necessarily designed to increase productive capacity on Caerphilly, rather to increase sustainability of the pasture resource.

“We have gone into it with the idea that it is about drought-proofing, it means you can hang on longer in the dry years,” he said.

The work has achieved a lot but there is more to do. Mick and Emma are currently undertaking a third paddock splitting project on Caerphilly and there will be more to come after that.
Pilot grazing BMP
UNDERWAY IN FITZROY

Trials of the three modules from a new online tool to enable benchmarking in the grazing industry will be completed in the next few months, paving the way for it to become operational by the end of the year.

Queensland’s cattle grazing industry has been developing its own voluntary Best Management Practice (BMP) program that will ultimately demonstrate good land stewardship benchmarked against accepted and scientific best practice.

The two-year Grazing BMP pilot project has been modelled on the successful Grains BMP program and backed by the same partnership arrangement funded by the Fitzroy Basin Association Inc. (FBA) with further support from AgForce and the Department of Employment, Economic Development and Innovation (DEEDI).

Graziers have already piloted the soil health module of the online BMP tool to iron out any problems, and more land managers will be involved in testing the grazing land management and property design and planning modules, with trials due to commence in July.

DEEDI Agri-Science Queensland industry development officer based at Biloela Lindy Symes is leading the ground-breaking Grazing BMP project in the Fitzroy region with an objective to start delivering BMP workshops in CQ by the end of 2011 and eventually roll out the initiative across the State into the future.

FBA is supporting the development of Grazing BMP through funding under the Reef Rescue component of the Australian Government’s Caring for Our Country.

Ms Symes said a Grazing BMP Landholder Reference Group representing members of the funding partners and grazing businesses drawn from the Fitzroy, Burdekin and Burnett-Mary catchments had scoped the development of self-assessment modules for cattle producers.

“Our beef cattle industry is the only major agricultural industry without a BMP program to enable graziers to monitor and accurately benchmark their own management practices at every level,” Ms Symes said.

“This program will enable producers to identify and access training to improve their knowledge and skills and then design and implement actions to assist them to focus on the most profitable and sustainable management practices for their own business.”

“Grazing BMP group workshop modules will be delivered in one simplified and secure website package that allows producers to self-assess their business operations.

“These self assessments are automatically linked to action plans that record actions to improve BMP and instantly compares how their management relates to industry accepted BMP.

“Producers will have a clear indication of where they sit in relation to other grazing businesses within their catchment or across the State based on best management principles at three different levels - above, minimum or below standard.

“There is also an opportunity to align some recommended actions with incentive funding made available through regional Natural Resource Management Groups such as FBA,” Ms Symes said.

“Grazing BMP will ensure the industry is well placed to collate practice change and ultimately produce an industry scorecard that can demonstrate to the wider community documented good land management and environmental stewardship.

“Our cattle industry will now have a resource to be able to monitor the adoption of research and development recommendations, identify shortfalls in both research and practices that need promotion, and better target incentive funding to directly influence improved management,” Ms Symes said.

For more information about Reef Rescue or the projects profiled in this newsletter, contact Queensland Farmers Federation on 07 3857 3747 or Queensland Regional NRM Groups Collective on 07 4699 5002.