



Queensland's NRM *Rumble*

SUSTAINABLE AGRICULTURE

Beef producers invited to grazing workshop

A rotational grazing field day was held for beef cattle producers on a private property at Running Creek in South East Queensland recently.

Rotational grazing is gaining in popularity with local beef producers, as it can provide a variety of benefits including improved pasture retention and soil moisture, ease of herd management and improved tick control.

The field day involved a tour around the property of local cattle producer Clyde Bain, who has been developing the property for rotational grazing since late 2007.

The field day was organised by SEQ Catchments Community Partnership Manager for the Albert/Logan region Colin Hastie, who is hopeful cattle producers of all levels of experience will benefit from seeing first hand a property managed with rotational grazing.

"Hosting this type of field day on a local cattle producer's property will allow some landholders to see rotational grazing in practice for the first time, while also providing the opportunity for those with experience with the method to compare notes on key issues such as paddock spelling, stocking rates and weed control," Mr Hastie said.

The day was led by Ian McConnell, a Queensland Government grazing extension officer, who discussed how the fencing and water infrastructure was designed on Clyde's property, followed by an after lunch paddock tour.

Mr Bain's property covers 490 acres and offers a good balance of creek flats and iron bark hill country, and provides an ideal opportunity to look at cultivated

paddocks as well as introduced and native non-sown pastures across the property.

Mr Hastie said the feedback on rotational grazing that he has received from producers is overwhelmingly positive and even the more challenging aspects of the system are good problems to have, such as excess pasture growth in good seasons.

"Several local producers have mentioned that the better than average seasons we've had in recent years have required consideration of different stock management options to handle larger than

expected increase in feed levels on their properties," Mr Hastie said.

"Of course better pasture growth conditions are also better for weeds, so that is another one of the issues discussed at the field day."

The field day is part of a project hosted by SEQ Catchments to promote sustainable grazing practices by featuring four demonstration properties across South East Queensland, with funding support from the Australian Government's Caring for Our Country program.



Above: A rotational grazing workshop was held on Clyde Bain's property at Running Creek during April.

Right: Improved pasture retention is just one of the benefits of rotational grazing.



Sustainable grazing in the Southern Gulf

Across Southern Gulf Catchments (SGC), future sustainable agriculture projects and services are being guided by the governments' funding guidelines and local industry priorities through the Pastoral Industry Advisory Group (PIAG).

The Pasture Industry Advisory Group is made up of twelve local landholders from across the region as well as representatives from Southern Gulf Catchments and the former Queensland Department of Employment, Economic Development and Innovation. It was initially established in 2010 to provide comment on natural resource management strategies as well as guidance on future projects and investment programs relevant to the region's grazing industry.

"In the North West we face a lot of the same issues as other graziers but are also affected by our unique land types, seasonal patterns and remote locations. This Advisory Group provides valuable input and industry insight into trends and future needs for the grazing industry, with the aim of identifying issues to be addressed through the Regional Body's sustainable agriculture program." Charlie Hawkins, PIAG Chair and Pastoral Director of Southern Gulf Catchments said.

Regional Landcare Facilitator, John Target sees the benefits of the Advisory Group firsthand, "The feedback we receive from the Advisory Group ensures that our projects and services align with the priorities of the graziers within our region. Recently, a number of key priorities and gaps in local knowledge have been identified so we're now developing a series of projects, workshops and proposed trials to address this."

"Our focus is on securing a strong future for our region and as primary land users, the grazing industry plays a vital role in the viability of our rural communities and overall landscape health."

Simone Parker, Operations Manager, Southern Gulf Catchments.

As a direct result of feedback received from the Pasture Industry Advisory Group, the following upcoming events have been scheduled:

- Erosion Control Workshops at three locations
- Business Edge workshop to be held in Cloncurry in
- Workshops to address pasture recovery following weed control
- Proposed trial to assess the rehabilitation of degraded grazing land as a method to increase soil carbon sequestration and storage.

"Members of the Advisory Group are often the first to put their hands up to trial new technologies or to host field days. Most producers are quite happy to have a look over the neighbours' fence, so to speak, and this provides a really good way of promoting positive practices in a non-invasive way," said Mr Targett.

Southern Gulf Catchments is working with the Pasture Industry Advisory Group to ensure that both National and State priorities for sustainable agriculture are implemented in a way that is relevant and most appropriate for the grazing industry in North West Queensland.



As a result of feedback from PIAG, another series of Erosion Control Workshops will be held in the Southern Gulf Catchments region, similar to one held during 2009.

The Midas Touch

Tall tales passed down over the years claim the ancient Greek King Midas had a gift of turning any substance into gold. At least until he ran into trouble finding a feed that wouldn't require dental work. The Northern Gulf Resource Management Group's (NGNRMG) partnership project with King Brown Technologies can boast similar gifts, with the innovative Mareeba-based company producing gold for farmers in the form of premium-grade compost.

King Brown has produced more than 980 tonnes of gold-standard compost for the greater Atherton Tablelands farming community since the project began in 2009.

NGRMG's Sustainable Industries Officer, Kristjan Sorensen said "Our biggest problem is keeping up with supply."

Results include significant increases in farming efficiencies with less reliance on fertilisers and other artificial inputs.

One particular banana farm has reduced their nitrogen-based fertiliser use by 20 percent. Significant gains in production are also being seen with a tomato grower in Ravenhoe who is now producing an extra five kilos per plant.

The Composting project is also an example of recycling at its best. Green waste from the local Mareeba Shire is its main ingredient, reducing the need for landfill.

NGRMG and King Brown Technologies hope that they can keep up with demand, and as word spreads a move to more sustainable agricultural practices will result. Co-Director of King Brown, Kym Kruse said "It's an incremental change. We tell farmers to keep applying fertiliser till they want to reduce it. At first they might reduce by five percent, as time goes on and their confidence in the product grows, it might be 10 percent or higher".



Green waste is the main ingredient in gold-standard compost being produced in the Northern Gulf region.

New farmer on the right path to protect our Reef

While land around Capella in the Fitzroy Basin provides perfect conditions to grow grains, farming is a challenging career path.

Local man Andy Hawken is proving it is never too late to start - after living in the area for over 20 years he recently acquired a share-farming block and began his journey to become a farmer.

New to the grains industry his neighbours suggested he contact Central Highlands Regional Resources Use Planning Co-operative (CHRRUP), a sub region of Fitzroy Basin Association (FBA).

As a result he joined FBA's innovative training program designed to assist grain growers to adopt best management practices, Grains BMP.

Through the completion of the Grains BMP self assessment he identified two key areas where he required assistance - pesticide application, as he found his previous pesticide delivery system was outdated and resulted in excessive use of pesticides; and property design and layout as his property was made up of odd shaped paddocks.

Through the Grains BMP program, a spray delivery consultant was engaged to provide farmers like Mr Hawken with expert advice on how to improve his spray delivery system and become more productive and efficient when applying pesticides. With this new knowledge gained through Grains BMP, and an incentive grant from FBA, he built a new boom to give him the ability to spray over contours and rough terrain more efficiently. He also made changes to improve the precision of his machinery movement to eliminate overlap spraying (controlled traffic farming).

His pesticide application is now more efficient, he uses less chemical and diesel which saves him time and money while reducing run off of pesticides to the Great Barrier Reef lagoon.

The changes have resulted in more stubble, less compaction and more moisture in the soil, which leads to a better plant stand and more to harvest. This will ensure that he is efficient and more sustainable in the long run.

He said the projects undertaken through Grains BMP have revolutionised his farming efficiency and fast forwarded his technology by about 30 years.

Grains BMP is helping farmers both new and old to keep up to date with best practices and improve efficiency on their properties, improving their bottom line and the impact their property has on the Reef in one step.



The new boom built by Andy Hawken to help him spray over contours.

Inset: New to farming - Andy on his property in the Fitzroy Basin

Keeping up with the Joneses

Brian Jones with the planter he modified.



The Jones' grow peanuts, wheat, sorghum and maize on their property, which is nestled amongst the hills surrounding the small township of Wooroolin in the South Burnett.

Brothers Warren and Brian Jones believe in the importance of maintaining soil condition. They currently practice controlled traffic farming to minimise soil compaction and minimal till to maintain soil structure. They also soil test frequently to determine soil fertility and requirements for nutrients and use this information to plan strategic crop rotations that reduce the need for chemical inputs and maximise the health of the soil.

In August 2011, Warren and Brian attended a Precision Agriculture and Soil Management workshop held in Wooroolin under Burnett Mary Regional Groups' Better Catchments Program where they recognised an opportunity to further improve management practices on their farm. With the assistance of a small Better Catchments grant incentive, Warren and Brian were able to modify their existing planter to allow them to practice zero till cultivation, which has many advantages for the soil. A greater amount of stubble is able to be kept on the soil surface which reduces soil erosion - particularly important on a hilly property such as the Jones'. Practicing zero till also improves soil structure and increases organic matter in the soil.

Although the machinery modifications were more complicated than first expected the Jones Brothers rose to the challenge and after increasing the number of springs and redistributing some weights the planter is now able to achieve sufficient penetration to plant into stubble, even on sloping land.

An increasing number of land managers are attempting to "keep up with the Joneses" by adopting improved management practices. Land managers adopting improved soil management practices will further the sustainability of their cropping enterprises and lead to the conservation and improvement of soil condition throughout large areas of the Burnett Mary region.

The Better Catchments Cropping Grants project is being coordinated by the Burnett Mary Regional Group for NRM though funding from the Australian Government's Caring for our Country initiative.

An increased number of springs enabled sufficient penetration for planting in stubble.



Project Catalyst- supporting sustainability through innovative farming

David and Paul are not alone; there are many farmers in Queensland who want to farm sustainably. They are putting in a great effort to balance the need to earn a living from their land with the need to minimise the impacts of farm production on the surrounding landscapes.

The award winning Project Catalyst brings together 72 such sugarcane growers who are working to develop new, sustainable farming practices. Project Catalyst is an innovative partnership between sugarcane growers, Coca-Cola, WWF Australia and regional natural resource management bodies Reef Catchments (Mackay, Whitsunday, Isaac) Ltd, NQ Dry Tropics, and Terrain Natural Resource Management and it has already shown real environmental benefits. Catalyst farmers have improved runoff and drainage water quality of more than 77,500 mega litres over 15500 hectares contributing to significant load reductions reaching the Great Barrier Reef.

The project supports sugarcane growers to develop, trial, and validate innovative, 'A Class' farm management practices, that will enhance the quality of runoff entering the Great Barrier Reef. Growers are provided with agronomic and economic consultancy services, water quality monitoring, and co-funding to get the trials up and running. They are then able to share their experiences and the knowledge gained amongst the group and the broader sugarcane industry.

The sharing component comes primarily through events, the most significant being the annual Project Catalyst Growers Forum where all the growers, support staff and project partners come together to talk over the past year's work.

David describes the Forum as a valuable learning experience. "It's meaningful and you engage with people who are likeminded," he said.

"You can't beat getting together with other proactive growers," added Paul.

Fellow Mackay Project Catalyst Grower Tony Bugeja agreed, adding that the most important aspect of Project Catalyst was "the opportunity to network with others, to learn together, and to get our message out to the wider community."

The Project Catalyst Grower Forum was held in Townsville in February. The Forum included special presentations of standout farm trials from the Wet Tropics, Burdekin and Mackay Whitsunday regions as well as a field trip showcasing five Project Catalyst Farms from the Burdekin.

CEO of NQ Dry Tropics, Dr Scott Crawford said that the regional NRM group was proud to be associated with Project Catalyst and the Forum. "NQ Dry Tropics applauds the important work being undertaken by cane growers involved in Project Catalyst," he said. "Their willingness to try new and innovative management practices is further evidence of an industry increasing its focus on sustainability."

"As farmers we certainly don't want to be seen as environmental vandals. We are working with our natural resource and we've got to look after it."

Paul Villis, Project Catalyst Farmer, Burdekin



Sugarcane grower Paul Villis gives a talk to Project Catalyst Growers at his property in Ayr, QLD.

"We've got to maintain the land in a productive state. You should be able to farm with minimal impact"

David Ellwood, Project Catalyst Farmer, Mackay

Sugarcane grower Paul Villis explains his drip irrigation set-up to Project Catalyst Forum delegates at his property in Ayr, QLD.

SUSTAINABLE AGRICULTURE



The Sustainable Agriculture program – working together to improve and protect the land

The Condamine Alliance Sustainable Agriculture program is dedicated to improving and protecting agricultural land in the Condamine catchment.

It does this by helping farmers obtain and apply new skills, knowledge and practices to better manage soil carbon and groundcover.

Groundcover is one of the best ways to guard against erosion and keep soil safe.

Over the past year, the Sustainable Agriculture program has helped 150 cropping and grazing farmers apply improved practices across more than 20,000 hectares to manage soil carbon and reduce erosion risk.

Stewart Hansen from Jimbour is just one of the many farmers in the Condamine catchment who understands the important role of groundcover.

Stubble saves soil

According to Stewart Hansen, the soil on his 185-hectare property near Jimbour is “just beautiful”.

So when 140 millimetres of rain threatened to wash it away during a recent downpour, he was grateful for the wheat stubble that held it fast.

“If we didn’t have the stubble on the paddock that night, it would have been a mess,” the long-time farmer said.

“I’d hate to think what it would have been like.”

Quick facts about erosion management

What is it?

Soil erosion is the loss of soil caused mainly by wind and water.

Why is it important?

Wind and water erosion removes soil, nutrients and organic matters essential for plant growth. A single erosion event can result in the loss of soil that took tens, even hundreds of years to form.

What can we do?

Soil erosion is often accelerated under agriculture, especially on cropped land. The best ways to manage soil erosion are:

- Retain stubble
- Maintain groundcover
- Grass or vegetate natural watercourses
- Avoid overgrazing
- Reduce or avoid tillage
- Manage water run-off

“You can replace fences and stock but once your soil is washed away you can kiss it goodbye.”

Wheat stubble saved Stewart’s soil that night and he’s not going to forget it.

Since moving to ‘Lyndhurst’ from his previous farm near Murgon, he’s had the property professionally surveyed to check the contours and gradient.

Next, he plans to fence along the creek and grow groundcover between it and his lucerne and grain crops.

The big plan is to move to a zero till and controlled traffic operation.

“One of the first things I did when I moved to the property was remove the internal fences and plough everything,” Stewart said.

“I noticed that any bit of rain would cause little gullies to form because the soil is so soft.”

“I knew then that I had to have groundcover and stubble to control water run-off and prevent it from washing my soil away.”

It’s a good thing he did otherwise some of that “beautiful soil” would not be there today.

Regional NRM on the ground

In the 4 years to June 2011, Queensland’s regional communities have:

- Protected, enhanced, rehabilitated or revegetated 2,089,008 hectares of **native vegetation**
- Controlled **pest plants and animals** over 8,348,757 hectares
- Undertaken 1,482 new or improved natural resource **monitoring programs**
- Facilitated 1,474 **conservation agreements**, protecting 1,257,958 hectares
- Undertaken 10,384 **biophysical studies**
- Developed 6,682 sub-regional **plans**
- Delivered 6,480 **awareness raising** events with 299,745 participants
- Delivered 5,402 **training events** for 860,759 participants
- Assisted 16,939 **community groups** or projects
- Facilitated 6,754 **collaborate arrangements**

Proud
Supporter



2012



Boosting pasture sustainability

Fertility rundown in sown grass pastures is a widespread problem in Queensland, with an estimated cost to industry of more than \$17 billion during the next 30 years.

It results in less vigorous, less productive pastures with a lower basal groundcover and increased bare ground, leading to increased run-off and soil erosion. The decline in vigour of the pasture also results in lower competitive ability and the subsequent invasion by unproductive grasses and weeds.

In the Maranoa-Balonne, the Queensland Murray-Darling Committee has worked to demonstrate the importance of nutrients on the health, groundcover and production of rundown pastures to local landholders.

This work was part of a Landcare Sustainable Practices project that aimed to deliver increased landholder engagement and adoption of sustainable and innovative natural resource management practices by primary producers. This project is supported through funding from the Australian Government's Caring for our Country initiative

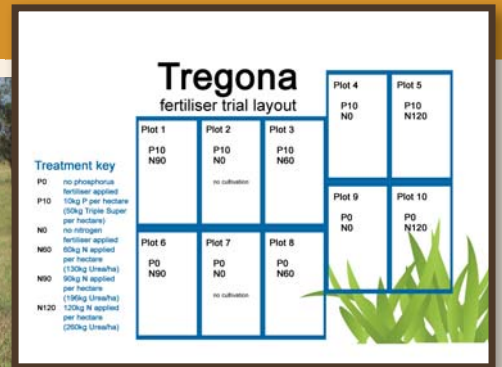
and contributes to the sustainable farm practices national priority area.

Working on the Plant family's "Tregona" in the Glenmorgan district, QMDC Grazing Lands Management Officer Dr Sid Cook investigated the impact of nutrients on the productivity of their rundown pastures.

"Since the early 90s they have noticed their pastures growing less vigorously, leading to a decline in their stock carrying capacity, particularly during dry periods," Dr Cook said.

"Research has shown that fertility rundown in long term sown grass pastures is caused by nitrogen and other nutrients becoming tied up in soil organic matter, roots and crowns of old grass plants.

"The decline in production contributes to over grazing, a reduction in crown size and overall cover of the grasses, leading to reduced resilience and often death during drought. If allowed to continue, scalds can develop on soils that surface seal or are hard setting allowing both wind and water erosion to occur, leading to land degradation."



Extension was an important part of QMDC's work on "Tregona" with the Plant family keen to share the trial results with their neighbours.

Dr Cook said the Plants hoped the trial, which was designed in late 2009, would answer some of the questions relating to the amounts of nitrogen required for sustainable production, as well as investigating whether phosphorus played any role in the rundown of buffel grass pastures.

He said the trial involved varying rates and repetition of nitrogen and phosphorus, ranging from zero on the control plots through to 120 kilograms of nitrogen per hectare.

"Aided by good summer rainfall from the time the fertiliser treatments were first applied, the pastures responded strongly to the application of nitrogen fertiliser," Dr Cook said.

"Between January and April 2010 nitrogen-fertilised plots produced between 5,083 and 7,887 kilograms of dry matter (DM) more than the non-fertilised control plots. When allowances are made for wastage and a minimum residual of 1,000 kilograms of DM per hectare, this equates to an extra 234 and 410 grazing days, respectively."



To find out more about natural resource management projects or contact details for your regional natural resource management group, visit the Queensland Regional NRM Groups Collective website - www.rgc.org.au or ph 07 4699 5000.

Supported by



Regional Groups Collective members

