

CQBEEF

Better Economic and Environmental Futures

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futurebeef

VegMachine hits the ground with CQBEEF

Terry Beutel, QPIF Rockhampton

Some exciting new technology has quietly found its way onto central Queensland grazing properties over the last year via CQBEEF. Using decades of satellite measurements of ground cover, Fitzroy Basin Association's (FBA) Ground Cover project produced a set of ground cover monitoring tools that are simple to access and easy to understand. And the technology is hitting the ground now where its needed, out on the land.

At the heart of the ground cover technology is VegMachine™ – software for monitoring and benchmarking ground cover changes on grazing land. With a few simple clicks, you point VegMachine to the area on your property that you want ground cover information for, and VegMachine shows you how cover has changed in that area since 1988. Its all very simple.

VegMachine has been developed by a consortium of producer support agencies like CSIRO and Queensland Primary Industries and Fisheries, and has run on more than 30 Queensland properties since 2002. The last years has seen some big changes to the system though with new features making it a more practical tool for land managers, and a new training package for VegMachine providers that makes sure they have all the facts on getting the most out of the system for you.

One of the first CQBEEF groups to trial the technology was the Rolleston group who hosted a VegMachine field day in late 2008. Each property at the field day received a ground cover map showing estimated average ground cover across their property, plus information on how the cover imagery is created and how to interpret it. In addition they had the opportunity for a one-on-one session with a VegMachine operator, to see graphs of how cover changed at specific parts of their properties through time.

The results were exciting, with participants quickly seeing the value of a tool that can help them to measure the effects of their management. One commented 'we were able to show a marked improvement in ground cover since I first did Grazing for Profit and learnt about managing grass. I want to use this tool in the future to monitor ground cover and the affects of management decisions'. Another remarked 'the year we went into control grazing our ground cover improved and the trend has stayed above the local average ever since according to VegMachine. We'll be using this tool to gauge how other management decisions have affected ground cover trends'.

Byrony Daniels of CQBEEF recently completed training to operate the updated



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Queensland Government

CQBEEF groups are hosting some interesting activities. The McKenzie River Group have recently held an Off Farm Investment information meeting hosted on Steve and Vicki Bottomley's property *Monash*. After so much interest in the Bottomley's operation and their water medicating system, the Bottomley's agreed to feature as this edition's Producer Profile. The McKenzie River group have also recently presented a Leucaena Establishment Producer Demonstration Site application. This being an interesting and relevant topic to many of you the newsletter includes an article written by Pasture Agronomist Stuart Buck on leucaena establishment and deep ripping. Mick Sullivan has compiled an article on the results and discussion generated from a worm burden testing activity the Broadsound group recently undertook. The Biloela group is continuing with their property planning theme and in the near future will host an AgForward Computer Mapping workshop. As I write this the Rolleston group are preparing for a Market Compliance and Beef Assessment Field Day where the groups will test their market compliance assessment skills against fat depth meters and ultrasound equipment. This activity is designed to assist Rolleston group members with a Market Compliance Producer Demonstration Site which they are also working on. Water medication and telemetry have been the topics of choice for the Moura group and the Bajool group have recently participated in a session on communication in succession planning.

This year we have two groups completing **ProfitProbe™** for the first time, Middlemount and Billaboo who both hosted **ProfitProbe™** Input meetings in July. As a refresher for the rest of you and a guide to what these new groups can expect Bec Gowan and David Hickey have provided an article which outlines some of the information you can expect to receive with your 'Probes' and a bit about what this information can tell you about your business. This article is a good appetiser for the **ProfitProbe™** results meetings which will be held in November.

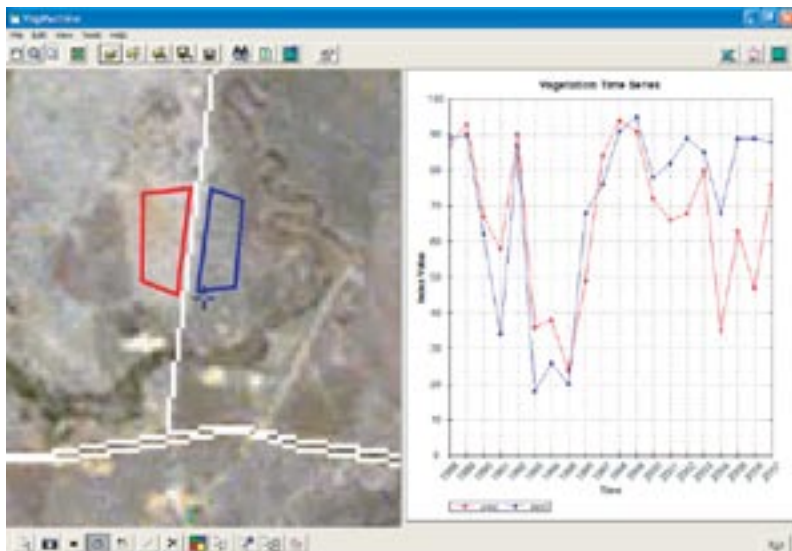
We have a new addition to the CQBEEF team, Peggy Rohan who will be based in the Emerald office (also being in the Emerald office I'm very excited about this).

Peggy has been mobile for the last few months and has spent time in the Rockhampton, Charters Towers, and Kairai QPIF offices, Toorak and Brian Pastures Research Stations, gaining experience which I'm sure will make her a valued member of the CQBEEF team. Peggy is featured as this editions staff profile.

If you have any improvements/newsletter article suggestions/ additions please let me know as I will be continuing in the role of Editor of CQBEEF newsletters.

This is the 5th edition of our CQBEEF newsletter I hope you enjoy it.

Byrony Daniels, Industry Development Officer – CQBEEF



VegMachine software in action. VegMachine uses series of satellite images to measure and graph multi-decade changes in ground cover in user specified areas. This example shows how ground cover in the west (red) polygon declines dramatically below that in the east (blue) polygon from around 2001. Today there is more bare ground and fewer desirable grasses than the red polygon compared to the blue, reflecting the differences between the red and blue graph lines over recent years. While VegMachine can't explain why this happened, managers can use this kind of information along with their own knowledge about the history of their country to help get a perspective on the management decisions that changes the health and productivity of their property.

VegMachine software. 'We'll be using it more and more in the future to help managers tap into this monitoring system' she said. 'The new software makes it even easier to share information. We can print a simple one page report on any part of the property the manager chooses. They walk away with a history of how ground cover has changed at that location, and a very good idea of how this compares to the local average. Property or paddock, it doesn't really matter, most times we can get the information for you, and help you link it into your management.'

VegMachine can give you feedback on past management decisions, help you identify where you are getting ahead or behind in your productivity, and help you to learn from the past to make better decisions for the future. It can't measure land condition, but used intelligently, it can give some really useful insights into the health of your biggest asset – your land.

To see VegMachine in action on your property contact Gina Mace of FBA on 4987 7904 or your group facilitator.

Ground cover mapping

Terry Beutel, QPIF Rockhampton

Producers can now access the latest ground cover imagery of their properties through *CQBEEF*. The images are based on the ground cover index from the Department of Environment and Resource Management, converted to a set of easy to interpret images, and built into the regional support pack that is now in use at *CQBEEF* workshops.

From a producer's perspective, the support pack is a great way to get a first look at ground cover mapping on your property. Recipients can access any of three map options quickly and easily for their properties

- An average cover image. This shows average end of dry season ground cover across your property over the last five years.
- A trend image. This shows how ground cover has changed across your property over the last five years, highlighting areas trending positively and negatively.
- A 2005 Landsat image that provides a traditional birds-eye-view of the landscape.

The mapping gives land managers a very simple way into accessing a valuable archive of information. You can walk away with some simple A4 size images of your property, and some information that you can use in your management decisions. These are not maps of land condition or feed availability, but you can put them together with the knowledge you have about the history, layout and management of your property to draw some really useful conclusions about your management and how it is affecting your land.

This mapping has a lot of potential uses on the average property. Among other things it can help you to:

- monitor ground cover on your property;
- identify areas at risk of over grazing or in need of rest;
- show where and how management has changed ground cover patterns;
- identify potential locations for new

fencing and other infrastructure to better manage grazing pressure; and

- demonstrate stewardship to financiers and markets.

Its also a good first step for those who are interested in using the VegMachine system to monitor ground cover on their property (see previous article). The two systems work together like a book and its cover. The mapping is like the cover of the book about your property. If you look at it, you get some idea about the story – how much ground cover has been there recently and how it has changed. By comparison, VegMachine is like opening the book up and reading it – you get all the details – 20 years of benchmarked ground cover monitoring for almost any part of your property.

If you're interested in seeing the mapping contact the *CQBEEF* team through Gina Mace of FBA on 4987 7904 or your group facilitator.

Does deep ripping prior to planting leucaena provide benefits?

Stuart Buck, QPIF Biloela

Stuart Buck, Queensland Primary Industries and Fisheries Senior Agronomist for pastures at Biloela has been investigating the impacts of ripping on leucaena production in native bluegrass country in the Callide Valley district. The paddock ranges from ironbark ridges running down to blue gum flats with loam soil.

The landholders had sown leucaena last year for the first time on another property with black soil with buffel grass, so for them this paddock is a trial to see how it goes on native bluegrass country. Another objective was to investigate the impact of ripping prior to planting leucaena. Ripping is advocated to breakup the soil to allow better soil moisture accumulation and root development by the establishing leucaena. Soil moisture and nutrient measurements have been taken, and plant growth assessments will be made once the crop is fully established.



Young leucaena February 2009



Established Leucaena at the end of May 2009



The benefits of Spinnaker are clearly seen here

Wanting to retain the existing grass for soil erosion control and minimise the cost of establishment, strips 3 m wide (width of equipment) on 6 m centres were cultivated first with a Yeomans ripper, then a number of passes with an offset disc plough. Once strips were prepared, areas were ripped and others left for comparison. Ripping was conducted by a Caterpillar D5 bulldozer with two tynes one metre apart which penetrated to around 65 cm of depth. After ripping the strips were ploughed a few more times to prepare a seedbed and control weeds.

Planting occurred late January 2009 on a good moisture profile. The variety Cunningham was sown at about 3 kg/ha with a double disc opener set on twin rows one metre apart. Spinnaker and Roundup was applied to control weeds post planting pre emerge. No fertiliser was applied. Good establishment has been recorded due to good soil preparation (well prepared seedbed, stored soil moisture) and an effective planter.

Soil measurements (moisture and nutrients) were taken just prior to ripping and then at planting. A three month fallow occurred between these operations where 183 mm of rain fell in 10 events. Soil moisture results indicate the areas that were ripped maintained soil moisture levels between

sampling times whereas the non-ripped plots did not (Figure 1). This result was a little surprising as it was expected that soil moisture would have accumulated in both areas, with the ripped areas accumulating more moisture. However this was not the case.

This extra moisture has resulted in higher leucaena biomass. Plant measurements (biomass and population) were collected late May, just at the end of the growing season. Biomass was 76% higher where the soil was ripped, and 32% more plants had established (Table 1).

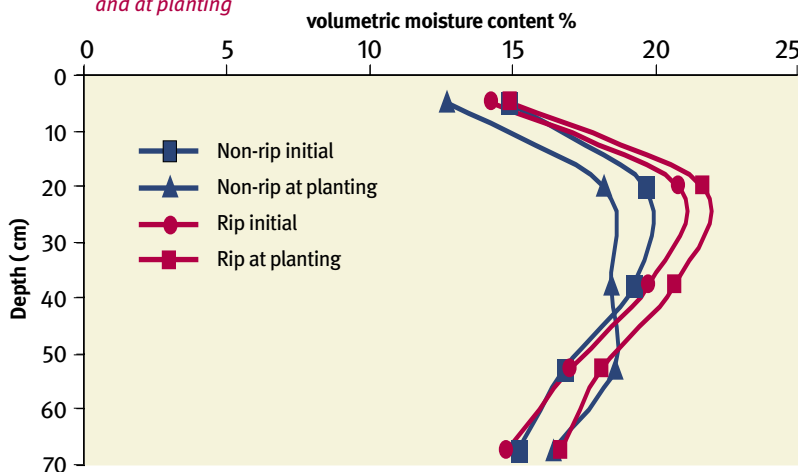
Table 1. Biomass and plant population responses of leucaena to ripping

	Rip	No rip	% change
Biomass (kg/ha)	358	205	75
Plant population (plants/m of row)	13.5	10.2	32

So on this soil type, ripping does seem to be beneficial during the initial 4 months of growth. Plant measurements on a 12 month basis for the next couple of years will provide information to see if these differences continue into the future.

Another interesting outcome of this trial has been the impact of using a residual herbicide (Spinnaker) to control weeds. In February 165 mm of rain was recorded in the paddock and Spinnaker has done an excellent job at controlling grass and broadleaf weeds. However due to the amount of rain and loamy texture of the soil, Spinnaker has now moved below the root zone and new grass weeds are now emerging. The benefits of using Spinnaker can easily be seen in a small area where the herbicide could not be applied at planting because the spray boom was blocked by a standing tree. The amount of grass and other broadleaves in this area will result in no leucaena establishment.

Figure 1. Soil moisture pre-ripping and at planting



Using KPI's for business management

David Hickey and Rebecca Gowen, QPIF Rockhampton

By now many of you will have three years of ProfitProbe™ reports. Given that each contains up to 10 pages there are a lot of numbers floating around. The important thing is being able to pick out the numbers which are most relevant, understand what is driving those numbers and how to use them to focus changes and improvements for your business. This is a good time to review your results from last year, consider what changes you said you would make and note what has been achieved.

Firstly, a refresher on how the key KPIs are calculated and what drives them.

RCS's 'Three secrets' explained

1 Asset turnover ratio

$$\text{Asset turnover ratio} = \frac{\text{Gross product (\$)}}{\text{Total assets (\$)}} \\ \text{Target} > 20\%$$

Asset turnover ratio is driven by Gross product and Total assets.

Gross product

Gross product is the total dollar value of beef that you sold less the dollar value of any purchases you made, plus the change in value of your herd.

As Gross product goes up, Asset turnover ratio improves for a given Total asset value.

The change in value of your herd includes; natural increase and weight gain/loss. (this is the reason you are asked to enter opening and closing weights of classes of animals in the 'Probe' input stock flow)

$$\text{Gross product (\$)} = \text{Sales (\$)} - \text{Purchases (\$)} + \text{Change in value of herd (\$)}$$

Dollar values of sales, purchases and the change in value of herd are calculated by;

$$\text{Weight (kg)} \times \text{Price/Value (\$/kg)}$$

Weight

The driving factors of weight are Weight gain and Weaning rate (calves weaned to breeders mated). The higher the change in

weight from opening (July 1) to closing (June 30), the higher the change in the value of the herd and increase in the Gross product (provided closing market value does not drop too much if at all, see Price/value below).

Weight gain is driven by the genetic capability of the animal and the quantity and quality of the feed available. Pasture management, pasture improvement and supplementation can be used to improve feed quantity and quality.

Weaning rate is primarily driven by the ability of the cow to conceive and raise a calf. Typically nutrition is the primary factor in breeder performance, but management and genetics are also important.

Price/value

Higher sales prices and lower purchase prices will improve Gross product, so meeting the market specifications is important in gaining 'premium' prices and buying 'right' is important.

The market value of animals on hand at the start and end of the year also affects Gross product. While the market is the principal determinant of Price/value you can improve the market value of your cattle by using strategies which maximise weight gain and body condition.

Expanding the business

Gross product can also be increased by increasing the number of kilograms produced by acquiring more land from which to produce, either purchasing, leasing or agisting.

Summary

In a nut shell, a high plane of nutrition all year round resulting in high reproductive performance and weight gain, as well as selling (top \$) and buying right (value for money) will benefit Gross product.

Total assets

As Total assets increase for a given Gross product the Asset/turnover ratio decreases. Land value is a major influencing factor here. This is why businesses that lease or

agist land generally have a higher Asset/turnover ratio than businesses that own all their land.

Over capitalisation with regard to Plant and Equipment will also contribute to a higher Total asset value and thus a lower Asset/turnover ratio for a given Gross product. Though, this effect is considerably less than that of Land value.

2 Overhead ratio

$$\text{Overhead ratio} = \frac{\text{Total overheads (\$)}}{\text{Gross product (\$)}}$$

Target < 25%

Overheads

Overheads are those costs which do not vary with change in units of production (no of cattle run). Typical items are rates and insurances. Over capitalisation on Plant and machinery often contributes to a high Overhead ratio.

As Overheads increase for a given Gross product the Overheads ratio increases. The higher the Gross product the lower the Overheads ratio for a given Total overheads.

There are two ways to reduce the Overhead ratio;

1. Decrease Overheads – analyse what you spend your money on in terms of Overheads and cut out what you can, and/or
2. Increase Gross product to dilute the Overheads you cannot cut.

3 Gross margin ratio

$$\text{Gross margin ratio} = \frac{\text{Gross margin (\$)}}{\text{Gross product (\$)}}$$

Target > 55%

This ratio is a real balancing act, as not only is Gross product the denominator of the ratio it is also a factor in the calculation of the Gross margin, as seen below.

Gross margin

$$\text{Gross margin (\$)} = \text{Gross product (\$)} - \text{Direct costs (\$)}$$

Gross margin is arrived at by subtracting

the value of the Direct costs from Gross product.

Direct costs are those costs that vary directly with units of production (no of head).

Therefore, as Gross product increases, so too does the Gross margin for a given level of Direct costs.

The balancing act is that, as the total number of kilograms produced and Gross product increases so to do Direct costs.

The difference between the Sale/Market value (\$/kg) and the Direct costs (\$/kg) (the margin) has to be watched.

There are two factors influencing this;

- a) **Sale/Market value** You cannot do much about the Market value, though you can target your market to maximise sale prices.
- b) **Direct costs** Again it is a balancing act, for instance, supplementation will increase weight gain and thus Gross Product and at the same time increase direct costs, purchasing more expensive bulls will increase your Direct costs but may improve weight gain.

The tricky bit is to ensure the relative increase in productivity is greater than the relative increase in cost.

Gross product

Gross product affects the Gross margin ratio in two ways;

- a) as a factor in the calculation of the Gross margin, an increase in Gross product will increase the Gross margin, and consequently the Gross margin ratio.
- b) on the other hand as Gross product is also the denominator of this ratio, an increase in the Gross product will have a decreasing effect on the Gross margin ratio.

Further key ratios

Finance ratio

$$\text{Finance ratio} = \frac{\text{Interest and lease costs (\$)}}{\text{Gross product (\$)}} \times 100$$

Target < 25%

The Finance ratio is a factor of the structure and amount of loans and Gross product. A

high Finance ratio is okay during periods of business change or expansion but should not remain over 25% for more than 2 to 3 years. If the Finance ratio is high you should consider whether loans can be restructured to reduce interest costs and also how Gross product might be increased. Businesses with low finance ratios are more resilient in the face of increasing interest rates or poor seasons.

Expense ratio

$$\text{Expense ratio} = \frac{\text{Direct + Overhead + Interest \& Lease costs (\$)}}{\text{Gross product (\$)}} \times 100$$

The Expense ratio is dollars spent for dollars earned. Obviously anything less than 100% is good i.e. you spent less than you earned. This ratio is a good indicator of the overall health of the business and can certainly be useful for tracking overall changes. However, further investigation is required to understand which factors (direct, overhead or finance) are causing a poor expense ratio.

Summary

Of the pages of numbers you get back from ProfitProbe™ these five ratios are the key ones to look at. From these, an overall picture of the health of your business can be identified. The next step is to consider which ratio is in need of most urgent attention then use the more detailed KPIs to identify what changes need to be made. The Beef Focussing Framework handout is also very useful for this (if you don't have a copy, let me know).

Many of you have had the opportunity to discuss your individual results with us and with your groups. At this time you should review those discussions and follow up on any unanswered questions. I would also encourage you to start thinking about the 2008-09 Probes. Were there any sections you struggled to complete last year? Is there any information you can start to collate now to reduce work later? Collating sales and purchases as they occur removes the need to go back through invoices and records later.

New catchments take priority for FBA

Jody McDonald, FBA Rockhampton

Fitzroy Basin Association Inc (FBA) and its sub regional partners will focus their work in 18 catchment areas over the coming year.

FBA's Nathan Johnston said the catchments were selected from more than 200 catchments across the basin where the organisation could potentially work.

'We choose priority catchments based on scientific and local knowledge of the land condition and the potential for positive change,' Mr Johnston said.

'Our Neighbourhood Catchments (NC) approach aims to get neighbouring landholders working together to achieve landscape-scale improvements,' he said.

'Sub-regional and industry field officers work with as many landholders in priority areas as possible, to develop on-ground projects that improve management techniques, update infrastructure and equipment and help protect local natural assets.

'Examples include the installation of watering points to manage stock movement near creek banks, fencing paddocks with differing land types to improve rotational grazing schemes, or fencing off areas of sensitive wildlife habitat or native vegetation.

'Projects funded by FBA make an enterprise more economically viable and environmentally sustainable in the long-term. They are often developed in conjunction with a whole-of-property plan.'

Mr Johnston said landholders could learn more about priority neighbourhood catchments and incentive funding on offer by contacting their local sub-region:

Three Rivers:	4985 7511
CHRRUP:	4982 2996
Boyne Calliope Sub Region:	4975 6555
DCCA:	4993 1004
FRCC:	4921 0573

These five sub-regions work with the Fitzroy Basin Association Inc, central Queensland's leading natural resource management group, to ensure a sustainable social, economic and environmental future for our region.

Monitoring worm burdens

Mick Sullivan, QPIF Rockhampton

Testing has been undertaken by some of the Broadsound *CQBEEF* group members to monitor worm burdens in their No 9 weaners. The Queensland Primary Industries and Fisheries Worbuster Laboratory located at the Animal Research Institute in Yeerongpilly produces test kits and undertakes the tests.

The kit contains small jars for faecal samples, submission form for sample mob details and post pack for posting samples to the laboratory. On property sampling involves collecting faecal samples from ten animals in the mob.

There are two components to the laboratory tests;

1. Count of worm eggs in the samples expressed as eggs per gram of faeces (EPG).
2. Culturing of the samples so the eggs can hatch and the worm species present identified.

Identification of the worm species is important because the level of infestation that will cause problems varies between worm species as shown in Table 1.

Using test results

The data in Table 2 provides an example of how test results are used. For Sample 1, the *Cooperia* count was under the significant level so no treatment was undertaken. Whereas in the case of Sample 2, treatment was undertaken due to the Barbers Pole count being well above the significant level.

Care must be taken when interpreting results, seasonal conditions and animal status must be taken into account because;

- Worm populations and egg counts can fluctuate quickly
- Worm burdens can be more serious when animals are in poor condition or under severe nutritional stress.

Weaners are the most susceptible group in the herd as they have not had an opportunity to develop immunity. By 18-24 months, most cattle that have been exposed to worms will have developed their immunity to the level where worm treatments are unnecessary.

Table 1. Worm species

Scientific name	Common name	Infection site	Time to egg laying	Main clinical effect	Faecal egg counts (EPG) in young cattle	
					Significant	Dangerous
<i>Bunostomum phlebotomum</i>	Hook worm	small intestine	42 days skin penetration 56-70 days oral ingestion	anaemia, diarrhoea	200	500
<i>Cooperia pectinata</i>	Small intestinal worm	small intestine	13-17 days	intermittent scours	500	10,000
<i>Cooperia punctata</i>	Small intestinal worm	small intestine	15-17 days	intermittent scours	500	10,000
<i>Haemonchus placei</i>	Barbers pole worm	4th stomach (abomasum)	26-28 days	anaemia	200	1000
<i>Oesophagostomum radiatum</i>	Nodule worm	caecum and large intestine	32-42 days	mucoïd scours, anaemia	150	300-500
<i>Ostertagia ostertagi</i>	Small brown stomach worm	4th stomach (abomasum)	21-24 days	severe scours	500	3000
<i>Trichostrongylus axei</i>	Hair worm	4th stomach (abomasum)	18 days	scours	100	1000
<i>Trichostrongylus colubriformis</i>	Black scour worm	small intestine	18 days	severe scours	500	3000

Table 2. No 9 Weaner worm test results

Sample	Test date	Group	Overall worm count (EPG)	Worm species count (EPG)		
				Barbers Pole	Nodule worm	Cooperia spp
1	13/5/09	Weaners >120 kg	440	22	4	414
2	7/6/09	Weaners <120 kg	900	756		144

Accessing the Wormbuster service

Test kits can be obtained from local resellers or by calling the Wormbuster laboratory on 07 3362 9534.

The cost includes postage, testing and reports.

\$14M in funds for FBA to support local landscapes

Central Queensland's leading natural resource management group, the Fitzroy Basin Association (FBA), has secured funding of more than \$14M to continue working with local land managers.

FBA obtained the funding through the Australian Government's Caring for our Country Business Plan for 2009-10 announced in July.

FBA secured base level funding of more than \$4.6 million over the next two years to continue their coordination role –recognising FBA as the region's peak natural resource management group.

In addition, funding the group received under the Reef Rescue component of Caring for our Country will allow them to invest just over \$10 million in CQ over the next three years in collaboration with industry partners.

The money will mostly be spent on-ground, working with landholders at the frontline of natural resource management to adopt world-leading farming practices that will reduce erosion and run-off to the reef.

FBA was also one of just five regional groups out of 14 in Queensland to successfully obtain funding under the competitive grants process of Caring for our Country and management was extremely proud of the achievement.

Together with Greening Australia and other

partners, FBA will manage a project worth \$600,000 to address weed and feral animal impacts on Ramsar listed wetlands in the Shoalwater and Corio Bay areas.

More than 1300 organisations submitted proposals for funding in response to the 2009-10 Caring for our Country business plan.

The Australian Government has approved more than \$403 million in Caring for our Country funding to organisations to undertake environmental and sustainable farming projects. It will be the single biggest investment over the next four years under the landmark \$2 billion program.

Reminders

- o *Dry Season Management of a Beef Business* booklets are available from QPIF offices.
- o QPIF Biosecurity require eligible cattle brains each year to be tested for proof of freedom from transmissible spongiform encephalopathies (TSE's). Owners receive \$300 for animals submitted. Eligible cattle are 30 months of age or older, displaying signs compatible with BSE and have not responded to treatment. Contact your local Biosecurity Inspector for more information.
- o Meat and Livestock Australia (MLA) membership is free – download application forms from www.mla.com.au
- o MLA members receive information and publications for free. To access MLA's *Water Medication* publication visit their website.
- o Profit Probes are due 20 September 2009 no late probes accepted.

Forage feed option delivers multiple benefits

Russ Boadle & Ken Murphy QPIF Rockhampton

To take the grazing pressure off drought-stressed native pasture, Raglan district cattle producer David Parsons contract blade ploughed 48 hectares of duplex soil blue gum coastal country to plant a mix of forage sorghum and Dolichos lab lab.

Mr Parsons is one of hundreds of cattle producers who work with Queensland Primary Industries and Fisheries (QPIF) FutureBeef staff to improve farm management to increase productivity, sustainability and profitability.

His local senior beef extension officer Ken Murphy helped David to explore the idea of planting supplementary feed at a CQBEEF Bajool Group meeting at David and Wendy Parson's 4030 hectare aggregation, *Moncton Hills*.

Mr Murphy said the CQBEEF project was proving to be a highly successful producer-driven initiative under the FutureBeef program.

Mr Murphy said that the Bajool group members appreciated there was no quick fix 'silver bullet' solution to a decade of low seasonal rainfall that had led to a steady degradation of native and improved coastal pastures despite reduced stocking rates.

To get the *Moncton Hills* pasture species composition back on track, Mr Parsons has cut his Brahman-based breeder herd back from 660 head to 430 females in the past two years.

Based on the advice of QPIF principal pasture scientist Bob Clem, Mr Parsons accepted the challenge to plant a one-off summer forage crop to provide short term bulk feed.

Mr Parsons said this was our window of opportunity to spell a percentage of our breeder country to give the native grasses time to reseed and store productivity.

Despite another dry start, a local contractor blade ploughed the selected paddock to remove eucalypt sucker regrowth and followed with a one pass ploughing and

seeding operation with a Little Giant offset plough in late January and early February.

A ground-drive seed box mounted on the offset plough distributed the forage sorghum at a rate of 7 kg/ha and because of the differing seed size, a second seeder was attached to plant out the Dolichos lab lab at 7 kg/ha.

The late January planting operation was interrupted by a 175 mm downpour and the balance of the paddock was planted in early February.

Mr Parsons said a follow-up fall of another 175 mm was recorded in February with no further rain until a mere 15 mm in April that delivered little benefit.

'There was an excellent forage-Dolichos lab lab strike and with some grazing rotation between the 48 ha forage paddock and 20 ha of Aleman grass ponded pasture, we were able to feed 90 cows and calves for six weeks,' Mr Parsons said.

'The limited summer wet season still promoted good grass growth so the black spear grass and Seca stylo in the 485 ha breeder paddock that we rested responded well.

'It was just unfortunate that there was no further rain to support a second grazing cycle in the forage-legume planting but the exercise has provided the incentive to extend the program,' he said.

Mr Parsons said he planned to plant the 48 ha paddock with a mix of Bisset blue grass and Katambora Rhodes grass. The seed mix would include Seca and Verano stylo legume to boost soil nitrogen levels and lift the pasture protein content.

The reduced stocking rate had lifted pasture nutrition which in turn resulted in an 87-89 per cent pregnancy test – the best for many years which delivered more calves from fewer breeders.

'This winter, we have an exceptional cover of standover pasture and aim to maintain the excellent stock condition with a urea/molasses roller drum lick supplement to utilise the dry feed,' Mr Parsons said.

With a frontage to Raglan Creek, Mr Parsons irrigates 80 ha of pangola pasture that is used primarily as a high value feed resource to grow out weaners.



CQ BEEF member, David Parsons Moncton Hills, who has gained multiple productivity and pasture sustainability benefits from a one-off forage sorghum – Dolichos lab lab summer feed reserve.

Steve and Vicki Bottomley McKenzie River CQBEEF group

Steve and Vicki Bottomley operate Monash Pastoral Company, their 8280 ha aggregation consists of *Monash* their breeding block 30 km south of Comet and *Zara* the finishing block located 35 km west of *Monash*. *Monash* is hilly range terrain with fertile creek flats, and mixed tableland country of variable quality. *Zara* is prime softwood scrub country. They have three daughters, one finishing grade 12, with the other two finished university and in the workforce.

The Bottomley's target their production with the end user in mind. 'At some stage in the future hopefully we'll be getting paid a better premium for tasty tender beef' Steve says. 'I often hear from my urban friends that they find it hard to buy good beef. We are aiming for a grass-fed product with eating quality as good as we can get.'

The Bottomley's purchased *Monash* in 1991 along with its mainly Droughtmaster herd. Vicki's father was a retired stud/seed stock auctioneer and worked on upgrading the genetic base, the main input being with Swan bloodlines. 'We've kept going with a high grade Droughtmaster breeder herd as they're really suited to the country', Steve says. 'They're great mothers, have little calving difficulty, are tick resistant, and the progeny can perform. When it got dry in 01/02 they kept calving and hung onto their calves'. Steve says the breed has come along way, 'I've been looking over some old Droughtmaster stud photos, and you can see how the breed has progressed without losing any of the characteristics they were bred for'. With an eye to the MSA market the Bottomley's have split their breeder herd. A selected top third of the herd has been bred to quality Droughtmaster bulls as a replacement heifer engine. The remaining two thirds of the breeders are put with Limousin bulls to introduce some hybrid vigour and thickness into the cattle. 'We want medium maturity animals like the Droughtmaster,

and the Limousin cross will fit with this' Steve says. Steve feels Limousin breeders have tidied up the temperament concerns and hasn't had any temperament concerns with this year's crop of weaners. 'We're also comparing how the crossbred and purebred cattle perform with and without HGP's in terms of meeting the MSA market and weight for age'. Results of this exercise will be available in 18 months.

The Bottomley's started using water medication on *Monash* in the mid 1990s. Early advice focussed on treating water through a full pipe line to multiple troughs where as Steve and Vicki elected to set up smaller individual units at troughs. The hills and undulating slopes of their country gave a distinct advantage to this arrangement. Units are on the same level as troughs and there is no syphoning if water flow stops, small individual units also sense low flows at the float valve. Cattle are rotationally grazed and the units follow cattle from paddock to paddock. The Bottomley's use water medication year round, tailoring brews to the season. In the dry season it's more nitrogen and less phosphorous. In the wet it's more phosphorous and less nitrogen. Right now it's more urea (N). Even when there is surface water around Steve finds that cattle are creatures of habit and prefer drinking from a trough. At the time that they introduced water medication to their operations Steve and Vicki were also operating Countryco, a rural and industrial supply business in Blackwater. 'We had access to much information there, and were able to trial much of what we recommended at *Monash*.' With water medication Steve has trialed many different brews and lots of different units. Currently they're using mostly HN55 Chemilizers and are trialling Gator units. A product called 'urea phosphate (UP)' has become the base of any mix. Steve believes that there is no perfect doser, with all units have their advantages and disadvantages.

Steve jokes that the best thing about CQBEEF is not just listening to David Hickey's bad jokes, but the ideas generated and people thinking out loud about what

Producer profile



Steve showing the McKenzie River group some water medication units on a recent tour of their property Monash.

would be the best decision for their business and why. In Steve's own words he really enjoys the 'dynamic banter of the McKenzie River Group'.

Steve's dream holiday would be toddling

about the United Kingdom or the USA meeting real people, the food producers on their turf. India would also be an amazing place. Such culture and diversity. Vicki would like to visit Ireland and have a good look at the country there.

Staff profile



Peggy Rohan,
Beef Industry Development Officer

CHILDHOOD: Born in Beaudesert, my family moved to Moree for a brief stint but most of my childhood (from the age of six)

was spent in the small country town of Kilkivan.

CAREER: Studied Bachelor of Agricultural Science (majoring in Animal Science) at the University of Queensland's St. Lucia campus. After graduating I headed north and spent two seasons working in a stock camp at Brunette Downs in the NT. Last year I worked at the Agricultural Business Research Institute in Armidale as a BREEDPLAN consultant, and commenced work with QPIF in February this year.

INTERESTS: Polocrosse, water skiing, art/craft

BRAG SHEET: Won the Brunette Downs Social Club Challenge for being the most successful staff competitor at the ABC Amateur Races and Campdraft in 2007.

HOLIDAY: Will be travelling in USA and Canada during August/September 09. I'd also love to visit friends in Finland and travel around Europe, then Africa, South America, New Zealand...I have a pretty long 'to do' list!

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