FutureBeef

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NORTHERN MUSTER

Information for rural business in North Queensland

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Mustering all Northern beef producers

Plans are well underway for the 2016 'Grazing into the future' themed expo

Queensland Government

NORTH QUEENSLAND REGISTER

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Welcome to **Northern muster 39**

Welcome to the summer edition of the Northern muster. Christmas is on its way, and although cattle need to be fed, and waters run, stop – just for a little while. Too much tragedy befalls us in the paddock, and with the pressures of running a business when the seasons are against you, it can be easy to lose sight of the simple treasures in life – the sound of children's laughter, enjoying a meal with family, or having a beer with the neighbour. The roof over your head, food on the table and health of your family is a lot to be thankful for.

Some reasonable falls from storms across the north in November has lifted spirits and given cattle and producers a tail lift through to Christmas for those lucky enough to score a bit of the wet stuff. Markets remains strong with price records falling, providing optimism of financial recovery if the market can hold at this level for some time.

The next Northern Beef Research Update Conference (NBRUC) will be held in Rockhampton in August, 2016 – mark it in your calendars! The Conference fosters joint industry ownership of the direction for future research, development and extension in the northern beef industry, encouraging dialogue between and within the various stakeholder groups.

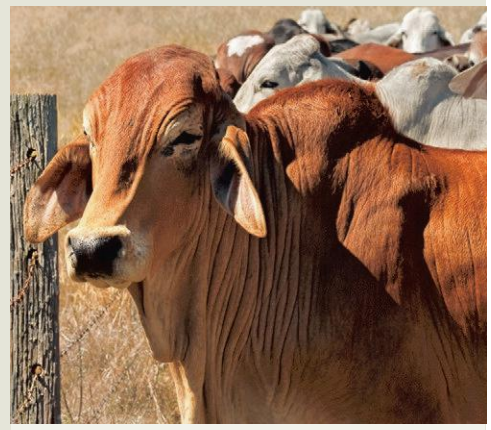
It is an opportunity for beef producers, industry researchers and extension officers to get the latest technical information from some of Australia's best researchers on both recently completed, and ongoing research projects in the area of genetics and genomics, reproduction and breeder management, sustainable grazing, animal welfare and ruminant nutrition. As well as the technical presentations, the conference program includes field trips to inspect research activities in the area and social activities.

Don't forget the maximum amount of funding available under the Drought Relief Assistance Scheme (DRAS) was lifted from $30,000 to $40,000 per PIC per financial year for property owners in their third and/or subsequent year of drought, and with an approved Drought Management Plan in place. All fodder, freight and Emergency Water Infrastructure Rebate claim forms must be submitted within six months of the date of purchase.

We hope you enjoy issue 39 of the Northern muster, and are able to enjoy some treasured time with loved ones over the festive season. Please contact the editorial team with any inquiries or feedback. To register to receive the online version of the Northern muster, subscribe on the FutureBeef website (*www.futurebeef.com.au/resources/newsletters/*) or email **northernmuster@daf.qld.gov.au** For the latest research-based information, tips, tools, events and recorded webinars, visit **www.futurebeef.com.au**

Happy reading,

Mellissa Holzwart, Jo Robertson, Melissa Frazer, Rebecca Gunther



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Improve business performance

Business EDGE network was developed by Meat & Livestock Australia (MLA) in 2010 to meet a producer-identified need for improved business skills and financial literacy.

Since then, more than 500 producers have attended more than 30 workshops across northern Australia. The material has recently been comprehensively reviewed and updated by Ian McLean and Phil Holmes, who deliver the workshops and were lead authors of The Northern Beef Report.

The review included the findings of The Northern Beef Report, made it more applicable to sheep graziers and mixed operations and incorporated the learnings and feedback from the producers who have attended Business EDGE.

While the foundations of the material are timeless business principles applied to agriculture, the update has improved an already excellent product, which is MLA's primary extension product for business skills and financial literacy.

Why Business EDGE is important

Industry analyses, such as The Northern Beef Report, found that improved business performance is needed for businesses to be able to fund growth, succession, retirement and the other aspirations of those involved. Improving the business skills and financial literacy of your management team is the starting point to improved financial performance.

Over two days, Business EDGE participants acquire the knowledge and skills to:

- determine if all the family's needs and aspirations can be funded by their business
- understand key accounting concepts and principles, and apply them to their business
- generate and interpret key financial information on their business
- set up their financial system to provide key information for management
- determine if their debt is creating or destroying wealth, and how much of it their business can afford
- assess and manage agricultural business risk
- understand and manage enterprise performance, including what the key profit drivers are, how to influence them, and what effect they have on overall business performance.

Business EDGE is delivered across Northern and Rangelands Australia by Bush AgriBusiness Pty Ltd. Discounts are available for registering more than one person from a business and for early bird registrations. Business EDGE is backed by a full money back guarantee. Business EDGE attendees are able to attend free follow up workshops.

When and where will the workshops be held?

Workshops are scheduled for across Northern and Rangelands Australia in 2016.

February 1 - 2	**Cunnamulla**
February 4 - 5	**Longreach**
February 18 - 19	**Mt Isa**
February 22 - 23	**Richmond**
March 3 - 4	**Charters Towers**
March 14 - 18	**Kimberley/Pilbara**
June 2 - 3	**Emerald**
June 6 - 7	**Toowoomba**

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Good Neighbour Program

The Flinders Shire Good Neighbour Program case study released in Hughenden recently investigated the feasibility and cost of implementing weed-free buffer zones on 13 property boundaries in the Hughenden area of north-west Queensland.

Biosecurity Queensland co-led the study with Flinders Shire Council (FSC) and Southern Gulf Catchments Ltd (SGC).

Prickly acacia and other priority weeds were controlled on 430 kilometres of boundary and 28 kilometres of watercourse. Buffer zones ranged from 10–50 metres on fence lines, and up to 250 metres on the upstream side of where watercourses crossed boundaries.

The case study demonstrated that in most cases, the establishment of weed-free buffer zones was relatively quick and efficient. In response to the outcomes of the case study, the Flinders Shire Pest Management Advisory Group has passed a motion to formally commence and extend the Good Neighbour Program within the shire.

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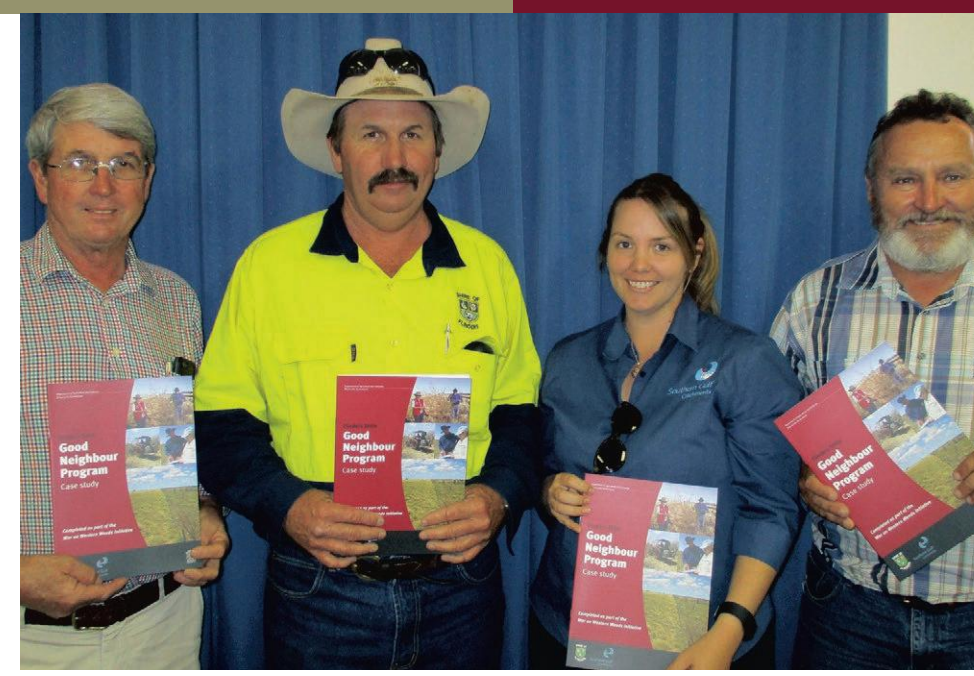

Ninian Stewart-Moore (FSC Deputy Mayor), Bill Paine (FSC), Samantha Cullen (SGC) and Nathan March (Biosecurity Queensland).

Market report

In the second half of 2015 our beef market has been running red hot. The fundamentals have all been in alignment—a shortage of cattle that meet slaughter and live export specifications, good demand in the market place, and the Australian dollar hovering down in the low 70 cents area—making our exports very competitive.

Cattle prices have never jumped so fast and so high in the history of our industry. In north Queensland best bullock abattoir prices reached $5.45 per kilogram dressed weight and heavy boat cattle just above $3.00 per kilogram live weight. Slaughter rates have drifted back in the third week of October but are still over $5.00 per kilogram dressed.

In southern and central Queensland, the best cattle prices of over $6.00 per kilogram dressed have been for pasture certified cattle being supplied into the Teys domestic (Woolworths) and exports markets.

Another innovation has been announced by meat processor, Teys, with their move into evaluating a system of payments back to producers based on carcass meat yield and eating quality. The new technology is under the guidance of well-known meat scientist, Dr Alex Ball. Teys is looking for an interested producer group that will help trial and build a value-based payment system.

September 2015 showed the first signs of a slackening in the record slaughter levels in eastern Australia. This was reflected in the declining monthly export volumes (back to around 100 000 tonne) throughout September. At the time of writing, our calendar year beef exports are well over one million tonnes and by December 2015 could reach a new record high.

There has been a lot of media coverage on the pros and cons of the proposed Trans-Pacific Partnership (TPP) and the flow-on effect to our agricultural industries. If the TPP comes into full effect it will remove import duties on approximately $9 billion of Australian trade in the region. How this will benefit the average beef producer in north Queensland is unknown at this stage.

Also, China has been in the headlines as another possible live export destination and a few head were air freighted over in October. At this stage no cattle above the Broome to Brisbane line are eligible because of concerns with blue tongue virus.

During 2014–15 Australia's beef industry processed 9.42 million head, the highest slaughter number since 1979; 1.38 million head were live exported. The red meat industry share of total Australian exports has risen from 4.58 per cent in 2013–14 to 6.25 per cent in 2014–15.

The export value of beef, sheep meats, goat and live cattle for 2014–15 was approximately $16 billion—beef exports $9.046 billion, sheep meats $2.61 billion, live cattle $1.35 billon, hides $632 million, beef offal $626 million, sheep skins $377 million and tallow $373 million.

The rising meat prices on our domestic market have put a downward trend on beef sales. Our consumption of meat per head is down to 30 kilograms per person, with cheaper chicken now up to 44 kilograms per head. Total domestic sales of beef and sheep meats reached approximately $7.8 billion for 2014–15.

Live export

Live cattle exports for the 2014–15 financial year reached a record 1.38 million head, valued at $1.4 billion. Indonesia was again our largest destination taking 746 193 head, followed by Vietnam (309 505 head), China (79 517 head), Israel (65 677 head), Malaysia (52 876 head), Russia (39 342 head), Egypt (19 000 head), Japan (9 864 head), Thailand (7 728 head) and Brunei (6 349 head).

Darwin was again was our leading port for 2014–15 exporting 615 000 head, followed by Townsville (296 945 head), Fremantle (131 951 head), Broome (92 871 head), Portland (85 884 head), Wyndham (39 273 head), Karumba (30 125 head), Brisbane (9 531 head) and Geraldton (9 325 head).

The flow of live export cattle has been severely disrupted into the last quarter of 2015 with the late announcement of import permits into Indonesia. A 200 000 head permit was released at the start of October and there has been a scramble for suitable types since. Cattle from 270–650 kilograms have been purchased and prices have quickly moved from $2.50–$2.70 per kilogram live weight to over $3.00 per kilogram live weight.

The continuing ups and downs and the uncertainty in the live export trade this year again demonstrates northern producers should not rely on this market alone for their sale cattle.

United States

The US has been the dominant market force this year on our export markets. Their shortage of lean grinding beef has pushed import tonnages from Australia to 341 000 tonnes this year to the end of September, compared to 275 000 tonnes the previous year. The large tonnages shipped so far this year have pushed exporters to cut back on export volumes into October to avoid possible import tariffs if, or when, we ship over the 418 214 tonne mark. Beef being redirected to other markets has seen lower prices for exporters.

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Scrotal size matters

Selecting a bull today can influence your herd for up to 15 to 17 years. Bulls can look good in the sale ring and yet be totally useless at getting the job done once home and put to work.

Left to right: Rod Barrett, Salisbury Plains; Alan Laing, DAF, Terry and Susan Vail, Salisbury Plains; and beef specialist John Bertram.

These were some of the key messages delivered at a recent FutureBeef genetics update and refresher day held at Salisbury Plains, Bowen. More than 30 beef producers came together to discuss the adoption of genetic information and technologies within their beef businesses.

The day featured presentations by senior beef extension officer, Alan Laing from the Department of Agriculture and Fisheries (DAF), Ayr, and genetics and cattle breeding expert, John Bertram.

Alan and John discussed technologies and practices that apply across breeds, and genetic benefits that can make a herd more profitable. John reminded producers that when buying a bull, "You've got the cheque book and it's your choice what you buy". It is the responsibility of the buyer to form a relationship with the supplier and ask the right questions".

Producers were encouraged to consider some key points when selecting a bull:

- Scrotal circumference – sires with larger testicles (measured at 12 months) sire daughters that reach puberty earlier.
- Buy bulls with above breed average scrotal size EBV's (Estimated Breeding Values).
- Use bulls out of dams that have had at least three consecutive calves naturally.
- Avoid bulls from dams who missed at the first re-breed.
- Use bulls that pass a full Bull Breeding Soundness Evaluation (BBSE), including above 70 per cent normal sperm (morphology).

The day also featured presentations by local producers who had completed a Breeding EDGE network course and adopted a range of genetic technologies. The producers shared their experiences of how attending the course and adopting technologies had assisted them to make positive changes to their management and profitability.

Susan Vail from Salisbury Plains, told the group that completing a Breeding EDGE course in 2012 had made 'buying a bull a pleasurable experience rather than a painful one'. Susan and husband Terry, along with Susan's father Rod Barrett, have embarked on a journey to produce animals that are fertile, resilient, more profitable and reach puberty earlier. Susan informed the group that their goal is to sell two to two-and-a-half year old ox that grade in the chiller, and obtain a premium price. Selection pressure is being applied to fertility, growth and carcase traits.

They are also working towards breeding polled herd bulls with balanced group Breedplan EBVs in the top 10 per cent. The Salisbury bull breeding herd is focusing on balanced trait selection to make significant genetic gains. Susan said all bulls must pass an annual BBSE. There is also a strict reproduction policy enforced on the female herd.

Bulls are joined at 2.5 per cent. Cows are exposed to a 100 day mating period and maiden heifers for 84 days. Goals include 80 per cent of cows getting pregnant in the first two cycles and weaner weights of 200kg.

Susan said attending the Breeding EDGE course had led them to realise the value of group Breedplan and set up matings to achieve required linkages.

Susan said that they couldn't achieve genetic improvement of their herd without the continued support and knowledge of Alan Laing and John Bertram.

Interested in a Breeding EDGE workshop? Visit the Futurebeef website.

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The following have information, fact sheets and links.

Tropical Beef Technology Services
http://tbts.une.edu.au/

Breedplan website
http://breedplan.une.edu.au/

Livestock library of scientific publications
http://www.livestocklibrary.com.au/

Animal Genetics and Breeding Unit. Research and Publications.
http://agbu.une.edu.au/

Agricultural Business Research Institute
https://abri.une.edu.au/

Declaring war on western weeds

Southern Gulf Catchments Limited (SGC) has become an active participant in the Queensland Department of Agriculture and Fisheries' War on Western Weeds (WoWW) project, through the appointment of technical officer Sam Cullen.

The WoWW project aims to reduce the incidence and spread of prickly acacia and bellyache bush in western Queensland through improved weed management, research and training. The project has a multi-faceted approach to tackling the spread of weeds, as well as trialling new weed management techniques.

One additional aspect of this project is to identify potential trials through the on-ground weed management of landholders. A number of opportunities to gain a further understanding of prickly acacia biology and best practice methods were exposed by the implementation of the Flinders Shire Good Neighbour Program case study.

SGC supported WoWW projects include:

- prickly acacia seed pod viability testing
- spray misting trials
- aerial heli-drop trials
- seed response to saline conditions
- riparian invasion studies
- dieback inoculations trials, with Vic Galea from the University of Queensland
- Muttaburra Good Neighbour Program case study
- Flinders Shire Good Neighbour Program case study
- Thomson River weed control program
- 'Epple Skatter Gun' trials
- germination and pasture response to mechanical control (two trial sites).

Sam Cullen
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Warianna Station manager Peter Myles and SGCs Sam Cullen discuss Prickly Acacia control as part of the Flinders Shire Good Neighbour Program.

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Cattle management key in weed control

Cattle and other livestock consume seeds from a diverse range of plants as part of natural grazing habits. Once consumed, some of the seeds pass through the gut of the animal and are deposited in manure over several days. During this time the animals can move or be moved considerable distances, either by hoof or via transport.

The movement of seed by cattle is not generally considered a problem when the seed is from plants regarded as beneficial to the grazing industry (such as pasture legumes and grasses).

However, movement of seed by cattle from weeds such as prickly acacia and giant rat's tail grass is a concern, as they can potentially cause long-term weed problems. Therefore, management actions should be put in place to reduce the risk of seed spread via stock.

In pastures containing prickly acacia cattle actively seek out and consume seed pods containing viable seed to meet nutritional needs, particularly during the drier part of the year.

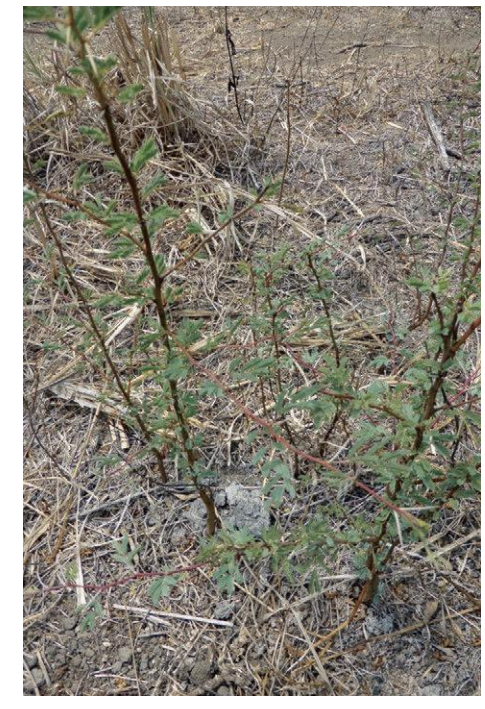
Recent research by the DAF Tropical Weeds Research Centre has shown that it took eight days for all mature prickly acacia seeds to pass through cattle.

The study was conducted under field conditions. Manure from three mobs of 15 dry cows was sampled and the seeds extracted from the manure for 11 days following feeding of prickly acacia pods containing mature seed.

The results from this study are supported by similar research from southern Africa, where it was observed that seven days was needed for all prickly acacia seed to pass through cattle. The viability of prickly acacia seed following passage through cattle can range from 10 to more than 50 per cent, and is largely determined by the level of seed dormancy prior to ingestion.

The study also showed that 50, 90 and 98 pc of prickly acacia seed passed through cattle in four, five and six days respectively. This supports current DAF Biosecurity Queensland advice that cattle being moved from areas where prickly acacia pods are available should be held for a minimum of six days to minimise the risk of spreading prickly acacia seed.

Prickly acacia seedling emerging from cow manure.



A group of older prickly acacia seedlings growing out of cow manure.

Cow eating prickly acacia pod.

Putting prickly acacia seed spread prevention strategies in place can largely eliminate seed spread (apart from along watercourses). Strategies include holding cattle in small, clean holding paddocks (where weeds can be more easily detected and controlled) until seed is eliminated from their gut, prior to moving them around or off the property.

A similar strategy for cattle coming on to the property can also reduce the risk of new prickly acacia or other weed infestations as well as reduce potentially costly, long-term weed management programs. However, holding cattle is only required when they have had access to prickly acacia pods or seed, which means spelling would not be required when moving cattle from prickly acacia areas where no pods are present.

As with prickly acacia, cattle will also actively seek out and graze the seed heads of giant rat's tail grass, another declared pest plant in Queensland. Previous DAF research indicates that giant rat's tail grass seed took five days to pass through cattle once they were removed from pastures that contained the weed.

Cattle holding and movement strategies similar to those outlined for prickly acacia will also assist with minimising the risk of giant rat's tail grass spread. Giant rat's tail grass is also easily transported by sticking to the coat and hooves of livestock, particularly under moist conditions such as on dewy mornings. Holding cattle will allow this seed to fall off the animals prior to moving them.

Seed spread prevention strategies, such as these, are aimed at minimising the risk of weed seed spread and limiting the potential for new weed infestations. These strategies apply not only to prickly acacia and giant rat's tail grass, but also to a range of other pest plants and undesirable pasture species in Queensland. It is important to remember that preventing the spread of weed seed is generally easier than trying to eradicate weeds after new populations have established.

The study of prickly acacia seed passage through cattle is part of the War of Western Weeds Project (WoWW), a five-year project managed by DAF that aims to reduce the impact and spread of prickly acacia in Queensland.

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Record your P

Feeding wet season phosphorus (P) and removing the calf as soon as possible after the wet minimises the need, and cost, for dry season supplementation. The wet season is also the cheapest time to put weight on cattle because all other nutrients are in the green grass — for free.

With the exception of frontage, basalt and goldfield soils, most properties need to feed wet season phosphorus in north Queensland (see Table 1). It is common in large paddocks to have a range of soils, some of which, if selectively grazed, may meet wet season phosphorus requirements. On the other hand, the better country may be continually over grazed and contribute little in terms of carrying capacity.

Just because cattle do not consume a phosphorus loose lick or block does not mean they have adequate phosphorus in their diet. Getting intakes right so cattle consume enough phosphorus per day to maximise herd performance on specific land types is critical, and can take a while to sort out.

Intakes can vary enormously between paddocks, and water sources (bore or dam) can influence lick consumption (see Table 2). Keeping records of numbers fed in different areas and the amount of lick fed out is critical to the economics of any phosphorus supplementation program.

In the early stages of developing phosphorus supplementation, it is a good idea to start feeding in a paddock easily accessible over the wet season to closely monitor intakes. Trial feeding will help avoid costly outlays for large tonnages of loose lick, blocks or bulk bags that cattle may not readily consume. Phosphorus supplements need to be available all wet season, or at least while cattle have access to green feed.

Country or soil type	Phosphorus status	Phosphorus supplement requirement per breeder per day (g)
Basalt, River Frontage Mitchell Grass Downs and Goldfields	Adequate	None – economic responses questionable
Deep sands	Deficient	10 g
Everything else	Marginal	5–7 g

Table 1 Phosphorus requirements per soil type.

Note: Other areas known to have a marginal P status include the Grey Clays south of Normanton/Burketown.

Loose lick	Blocks	Loose lick in bulk bags
Need lick sheds/ covered troughs	Weather resistant in most cases	Reasonably weather resistant with limestone
Lower cost/kg of P	Higher cost/kg P	Lower cost/kg of P
Recipe can be changed to achieve target intakes	Set recipe	Recipe can be changed to achieve target intakes
Difficult to put out full wet season requirements	Adequate supplement can be distributed in paddocks before onset of wet	Adequate supplement can be distributed in paddocks before onset of wet
Labour intensive	Less labour intensive	Less labour intensive, but need suitable lifting gear to distribute
Severe storms/ cyclonic rain can spoil supplement	Storm resistant	Prolonged heavy monsoon rain can spoil supplement
Freight efficiency — Option to increase P% and reduce freight cost/tonne of P	Less freight efficient as P% is usually lower	Freight efficiency — Option to increase P% and reduce freight cost/ tonne of P

Table 2 Pros and cons of phosphorus delivery systems.

Marginal areas target intake of P/ day	Phosphorus % in lick	Required intake of lick (g/head/day)
7	5	140
7	10	70
7	15	47

Table 3 Supplement intakes needed in marginal P areas.

Deficient areas target intake of P/ day (g/head)	Phosphorus % in lick	Required intake of lick (g/head/day)
10	5	200
10	10	100
10	15	67

Table 4 Supplement intakes needed in deficient P areas

Supplement vs phosphorus intakes

The concentration of P (percentage of phosphorus) in supplements varies greatly and, therefore, required intakes will vary between products. Tables 3 and 4 indicate supplement intakes needed to meet daily phosphorus requirements of cattle in marginal and deficient P areas.

When getting lick quotes consider the percentage of phosphorus in the lick as well as cost per tonne. The phosphorus per cent (P%) in a supplement has a major impact on intake required per head, cost per head, freight costs and workload in paddock distribution. Higher phosphorus concentration mixes will usually cost more per tonne but will be cheaper on a landed cost per unit of P.

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Heifers under investigation

Many producers will have found low pregnancy rates in heifers this year. Due to the continued dry conditions, heifer growth has generally been poor and therefore the onset of puberty was delayed.

A three year MLA Producer Demonstration Site (PDS) at Mt Oweenee Station, north of Charters Towers, is testing the hypothesis that low live weight during the mating period is the primary cause for low pregnancy rates in heifers.

The study has monitored live weight and subsequent pregnancy rates of two groups of heifers - No. 2 age group (2012 drop) and No.3 age group (2013 drop). So far, the results support the hypothesis that live weight is the primary driver of heifer pregnancy.

The previous year's No. 2 heifers (353 head) averaged 396 kilograms at mid-year pregnancy testing and 55 per cent of the mob weighed less than 400 kilograms.

This year's No. 3 heifers (565 head) only averaged 320 kilograms at mid-year pregnancy testing and 96 pc of the mob weighed less than 400 kilograms.

Not surprisingly, the pregnancy rate for the No. 3 heifers was 34 per cent compared to 70 per cent for the previous year's No. 2 heifers.

Even though the past two seasons have been quite different (this current season being particularly dry) the importance of live weight remains the same. The results of the study so far are indicating that average mob live weights of at least 400 kilograms (at mid-year pregnancy testing) is required to achieve pregnancy rates of at least 70 per cent.

The question of how you can improve pregnancy rates economically, given heifer weights need to be up around 400 kilograms, will be the focus of the next phase of this study.

The PDS producer group will consider options including the longer-term strategies of maintaining pastures in good condition to ensure a quick growth response during the short seasonal window and genetic improvement through bull selection. Short term strategies, such as feeding, could also be investigated.

The No. 4 age group (2014 drop) of heifers will be the final group to be monitored in the project and further results will be made available next year.

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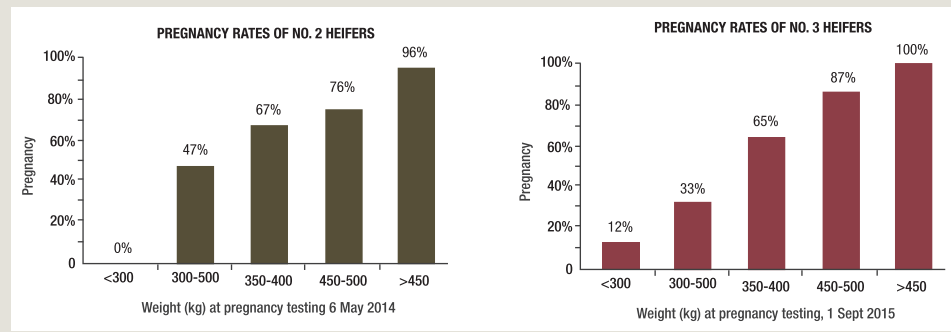

Percentage of No. 2 heifers pregnant by weight range.

Percentage of No. 3 heifers pregnant by weight range.

Secure your future

Most beef producers across north Queensland are battling poor seasonal conditions, with grass and water supplies under pressure. History tells us that it will rain again, and dams will fill, and green grass will return. But this is not going to automatically 'fix' everything in the average northern dry tropics family beef business.

Key factors impacting on success in the northern beef industry:

Grass = Options

Table 1 details the average annual rainfall and rainfall variability across north and north-west Queensland. Long-term rainfall records indicate seasonal conditions will continue to be highly variable across our landscape into the future. Water and grass supplies closely track the good and bad seasons.

A breeder needs four tonnes of feed each year, so managing grass is one of the most important aspects of running a successful beef business. Those producers who manage grass well have options up their sleeve, and feel more in control of the business. Wet season spelling and moderate stocking rates become more critical as rainfall variability increases.

Location	Mean annual rainfall	Standard deviation (mm)	Rainfall variability (%)
Mount Surprise	795	288	36
Kidston	702	264	38
Normanton	923	302	33
Richmond	477	207	43
Cloncurry	471	212	45
Longreach	434	197	45
Boulia	262	159	61

Table 1 Rainfall variability.

Costs of production will continue to rise

Over the last 25 years, many beef properties have failed to generate profit as cattle prices have not kept pace with labour and production costs. The rapid rise in cattle prices over the last few months of 2015 has instilled some confidence back into the industry.

However, reasonably good prices into the future will still not provide the opportunity for many beef businesses to return to profitability, as productivity levels are too low. Just like any business, productivity and profitability must be improved to secure a viable future.

Business skills

Business management of the typical family beef business with one or more properties must also improve. You cannot manage a business if you cannot measure what is happening in the business. Keeping accurate herd records on extensive beef properties is not easy and needs commitment from one or more people in that business. Recording and examining live weight gain, weaning rates, and deaths, allows timely and cost-effective management decisions to be made to lift herd production.

Do your research and crunch the numbers

Do your homework carefully before major business decisions, like purchasing a new property, are contemplated. Often best bet figures are used to give false productivity and profitability levels.

Successful expansion plans include: (i) grass, time, cash and exit plans built in as flexibility, (ii) a detailed analysis of the cost-per-beast area related to average district productivity levels, and (iii) careful planning based on conservative estimates of seasonal variability, live weight gain, stocking rates, prices, costs, long-term interest rates, replacement of equipment and living costs.

Key factors to improve productivity and profitability in the northern dry tropics:

Nutrition

Managing herd numbers and adequate grass supply is a key function on all properties. Good nutrition drives branding rates and live weight gains and keeps death rates low. Numerous grazing trials over the last 40 years have shown you can reduce total numbers and improve individual animal performance and not compromise profitability.

Marketing age

With most northern herds below 55 per cent weaning rate, producers need to grow out light sale cattle to heavier weights to maximise profitability. In other words, a cull heifer or steer is potentially making you more money per 12 months than your average breeder is. If you

have a low branding rate and are locked into weaner sales it is essential to calculate the most profitable age of turn-off for your property. This analysis has to take into account the impact of this transition on your cash flow (e.g. how to cover operating costs while holding sale cattle).

Phosphorus

Over 60 per cent of north Queensland is phosphorus deficient. Numerous trials have shown huge benefits (improved branding rates and live weight gains and lower death rates) of feeding phosphorus during green grass time. Most of the phosphorus research work is over 40 years old and effective wet season phosphorus feeding is still not widely adopted.

Pasture improvement

Any of our northern forest country in the 700 mm or above annual rainfall zone has the potential for pasture development. Improved pastures, with the right management, have huge potential for northern producers, with improved animal performance and stocking rates. Very strong market signals with dollars attached are creeping into our industry.

Properties that can produce good weight-for-age animals, of the right type, will attract price premiums and better returns. Examples of this trend include demand and price for pasture-fed certified (PCAS), EU eligible and feedlot feeder cattle over 400 kilograms with two-teeth or less.

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MSA feedback on the go

Accessing MSA grading results is now quicker and easier with enhancements made to the myMSA website, making it a 'one stop shop' for MSA producers.

A new function allows processors to alert producers, via an automatic email, of when MSA grading data are available on myMSA. This allows producers to view results within minutes of graders uploading the data. The alert will also provide producers, via MSA Index, with a snapshot of compliance rates and eating quality performance results for that consignment.

MSA operations manager Terry Farrell said this created an efficient feedback loop, offering a great step forward for MSA producers.

"It is providing feedback on the go. The emails will arrive in a producer's inbox no matter where they are—on their phone, tablet or PC at home," he said.

Producers can then use myMSA to investigate data further and create reports for single kill dates or over selected periods on:

- measurements collected of all MSA graded carcases (carcase feedback reports)
- compliance to MSA minimum requirements (MSA non-compliance report)
- compliance to company specifications (company specification non-compliance report)
- ranges and average of the MSA Index and carcase attributes (MSA graphs report).

"These reports have been updated as well, to be a more useful tool to identify times of the year that possibly require attention to improve compliance rates, or opportunities for eating quality improvements," Terry said.

"There is an index calculator in myMSA that will help with this, showing the impact of on-farm changes to eating quality."

In addition to accessing feedback, producers will be able to order MSA vendor declarations online and, in the near future, use new e-training programs.

Become a registered MSA cattle producer:
www.mla.com.au/msa
Access myMSA:
www.mymsa.com.au


Further details about the Soils4Grazing project can be found on SGC website www.southerngulf.com.au

Prevention better than cure

The condition of grazing lands can be improved under drought conditions. This was one of the many findings of the recently completed Soils4Grazing project.

The three-year project, a collaboration between Southern Gulf Catchments Limited (SGC) and the Queensland Government's FutureBeef team, assisted producers recover pastures on degraded but otherwise productive land types. Information about the project can be found on the SGC website.

Despite the drought conditions for the duration, at all three trial and demonstration sites across western Queensland, there was a measureable increase in ground cover on the treatment plots when compared with the untreated plots.

More impressively, even under drought conditions, the trial and demonstration site at Herbertvale Station, recorded enough perennial pasture recovery to be reclassified from grazing land condition D to grazing land condition C, which is a significant improvement. Analysis of actual pasture species responses was not possible as most seedlings died off before they could be identified.

Lessons from the Soils4Grazing project include:

- land condition can be improved, even under drought conditions
- wet season spelling is the most cost effective and practical treatment option for graziers
- controlling the timing and intensity of grazing is critical for long-term recovery
- mechanical treatments and wet season spelling increased the rate that water soaked into the soil and, therefore, decreased the amount of rainfall lost by run-off
- potential soil organic carbon storage for the land types is between 3–8 tonnes per hectare.

Whilst positive results were recorded, Soils4Grazing highlighted the difficulty and expense associated with improving land condition on severely degraded land. The key message from this project is that land condition should not be allowed to deteriorate into D condition if at all possible.

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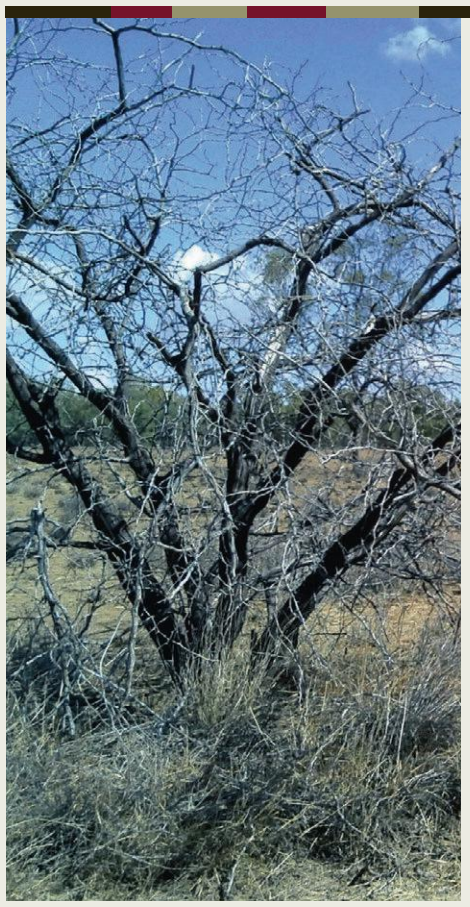
Putting a stop to the spread



In 2014-15, the Queensland government funded activities that resulted in prickly acacia being reduced in extent and density across approximately 150 000 hectares of lower Gulf properties. More than $200 000 was provided, with considerably more contributed in-kind by landholders.

There is now reduced risk to landholders from weed infestation on all lower Gulf properties involved in the 2014–15 activities (Magowra, Inverleigh, Inverleigh West, Glenore, Augustus Downs, Kamilaroi, Donors Hill, Lorraine, Armraynald, Lawn Hill and Gregory Downs).

Re-treatment of these sites have been ongoing, with some cases stretching over six years so far. This is necessary because of the inevitable regrowth from the large seed bank, which has longevity of at least seven years in the soil.

At least two new properties are expected to come on board in the coming year.

The significance of progress can be gauged from the success of operations on three Stanbroke properties — Kamilaroi, Glenore and Augustus Downs. Individual numbers of prickly acacia treated over six years has shown a marked downward trend on all properties.

Kamilaroi:

- A total 6336 individual prickly acacia treated over two years (2013–15), down from 16 452 the previous two years and from 22 772 the two years prior to that.
- The removal of all seed trees and regular treatment of regrowth has the seed bank in the soil is gradually diminishing. However, two more years of follow-up treatment is essential.

Augustus Downs:

- A total of 1267 prickly acacia treated over two years (2013–15), down from 1833 treated in 2012–13. Again, up to two more years of follow-up treatment is essential.

Glenore:

- A total 7335 prickly acacia treated in 2014–15; down from 15 322 treated in the previous treatment year (2012–13). Treatment has been fairly consistent since 2009–10; however, at least three more years of follow-up treatment is essential.

Over the years, treatment has moved from moderate to dense infestations of prickly acacia in particular paddocks, to treatment of scattered and isolated prickly acacia regrowth over many paddocks; hence, the comparatively large treatment area.

Treatment in the lower Gulf is largely by contract labour and quad bikes using ground-applied pellets or the tried and true basal bark method, especially near or in watercourses.

The Weed Sniper dispenses pellets from a helicopter to individual trees scattered across paddocks. It has now progressed from a trial basis to be fully operational on three properties — Inverleigh, Inverleigh West and Lorraine. The owners are encouraged by the results.

Funding is available from the Queensland Natural Resource Management Investment Program until June 2016. After that, Southern Gulf Catchments will be seeking funds to continue the increasingly successful prickly acacia reduction program in the lower Gulf.

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FutureBeef NORTHERN MUSTER *Information for rural business in North Queensland* Queensland Government

LEG-UP Buffel

It's an all too common tale amongst producers in Central Queensland. Paddocks that were once blanket pastures of Buffel grass, so green they were almost blue, are now yellowing patchworks filled with native wire grasses and the growing scourge of Indian Couch.

Offset treatment at Illamahta Station after stick raking the site.

There is a consensus that a lot of these issues and their follow-through effects (like reduced yearly weight gains on turn-off cattle) are a result of declining plant-available nitrogen.

The LEG-UP project, which has been developed through the cooperation of the animal and plant science divisions of DAF, is looking at methods of improving the soil nitrogen environment. The most practical, economic and long-term sustainable pathway to achieving this, is the introduction of legumes.

The trial is located at Illamahta Station, halfway between Mt Coolon and Belyando Crossing, managed by John and Kate Ashton.

John identifies that indicators of pasture run-down are beginning to show. "Buffel is certainly becoming less prevalent, not only on our place, but across the region. We have also seen currant bush starting to encroach, even on our better soils. A good place to start is by looking at the status of the soils. The benefit of this trial is that it's been located on a soil type that's pretty typical of ex-Brigalow regions used for grazing," said John.

LEG-UP will be using the new Progardes line of Desmanthus legume. Developed by James Cook University, the legume is showing promise on heavier soil types.

By integrating a legume into pasture there are a number of positive effects:

- **Increased ground cover**. Some pre-planting options can provide an increase in plant-available nutrients through mineralisation. This helps to establish the legume plants, and gives a boost to overall plant growth the next year. By maintaining a legume presence, grass growth can be maximised long-term.
- **Increased total pasture biomass**. With scale being such an important factor to the viability of beef business, at a property level it is critical that production focuses on growing as much usable forage as possible. Run-down pastures tend to have lower potential for dry matter growth.
- **Increased pasture quality**. By adding a legume component to pasture, the period of optimal crude protein can be extended as cattle change from a grass diet to a legume diet.
- **Increased seasonal resilience and competitiveness**. Increasing the nutritional environment of the productive grasses helps to maintain them through sub-optimal seasons and helps them to compete against less desirable pasture species.

Another objective of the trial will be to compare different planting techniques (broadcasting, cutter bar, offset and spray out) with establishment success of Progardes. For legumes to have significant presence in pastures, a population of around four plants per square metre needs to be reached.

The work hopes to assess which pre-treatments are able to consistently achieve this level of establishment and at what cost outlay. Hopefully, this information will help producers to identify what pre-treatments they should use in their own operation to make legume establishment a success and a cost effective process.

Anyone who is interested in updates on the LEG-Up trial is encouraged to contact:

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Flexibility drives profit

The Wambiana grazing trial has a clear message for northern pastoralists — when it comes to stocking rates, flexibility is the key to profitable and sustainable management.

Dr Peter O'Reagain presenting the results at Wambiana

DAF and MLA-funded trial has been conducted on the Lyons' family cattle property, 'Wambiana', 70 kilometres south of Charters Towers, for the past 18 years. The trial was established to find out which stocking rate and pasture management strategies were most profitable and sustainable long-term.

According to project leader Dr Peter O'Reagain, the stand-out strategy for commercial beef operations is flexible stocking rates around long-term carrying capacities with wet season spelling.

Key learnings presented at a recent field day for producers were:

- The optimal strategy is flexible stocking around long-term carrying capacity, using forage budgeting to adjust stock numbers as conditions change between years. Wet season spelling is also important.
- Moderate stocking rates generated far more profit in the longer term and, after 18 years, had by far the best pasture condition underpinning this profitability.
- Heavy stocking severely diminishes paddocks' resilience to drought, making them vulnerable to even the mildest dry year.
- Wet season spelling is also important to maintain and improve pasture condition; however, the response is sometimes slow.
- Heavy stocking rates, at about twice the long-term carrying capacity, were more profitable initially in the first few good seasons of the project but made the least profit and caused pasture degradation in the long-term.
- Variable stocking, where stocking rates were adjusted up or down based on pasture availability at the end of the wet season (May), made as much profit as moderate set stocking. However, this strategy proved more risky and pasture condition was slightly poorer.
- After 18 years, the density of 3P (perennial, productive and palatable) grasses, such as desert bluegrass, black speargrass and Queensland bluegrass, were three to four times less in the high stocking rate paddocks than in moderately stocked paddocks.
- Fire should be used judiciously to control woodland thickening. This and other similar strategies are currently being tested at the Wambiana trial.

To assess accurately a property's long-term carrying capacity, Peter recommends completing MLA's EDGE*network*® Grazing Land Management course: *www.mla.com.au/Extension-training-and-tools/EDGEnetwork*

The Stocktake Plus program also provides training, as well as an app for calculating forage budgets: *www.stocktakeplus.com.au/*

Read more on the ongoing Wambiana trial: *https://futurebeef.com.au/resources/projects/wambiana-grazing-trial/*

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FutureBeef NORTHERN MUSTER *Information for rural business in North Queensland* Queensland Government

Target your market

Producers can beef up their business by matching cattle to customer specifications rather than taking a 'shot gun' approach.

This is the message from Jarrod Lees, Meat Standards Australia (MSA) producer engagement officer (eating quality).

Nationally, 87 per cent of yearling cattle that were compliant with both MSA and company specifications in 2014-15, received an extra $91.00 per head on average, compared to stock that fell outside specifications.

Jarrod said building a relationship with livestock buyers, whether through stock agents or direct with the processor, can assist producers in managing their marketing, and to be aware of any specifications. Meeting company/processor and MSA specifications, are both important to be eligible for any premiums on offer, and although they can differ, the management of them can be complimentary.

Processor specifications can vary based on market requirements; producers should be aware of this. However, specifications such as P8 fat depth, hot standard carcase weight and dentition can be assessed or, at least, estimated on-property, so producers have a better idea what part of a processor payment grid their cattle should fit.

For example, glycogen management, which underpins meat colour and meat pH in MSA compliance, can be managed by ensuring cattle are gaining weight right up until slaughter. Adequate nutrition also impacts the rib fat and P8 scores of MSA and processor specifications.

Regardless of any other carcase attributes, when an animal fails on MSA specifications (such as meat colour), it cannot be sold as MSA certified and markets are limited.

High pH and/or meat colour are the main reasons for non-conformance in all states, with almost 6 per cent of MSA graded cattle in 2014-15 failing to meet these requirements.

"Glycogen management strategies include ensuring cattle are in a paddock with sufficient feed to keep 'fuel in the tank' two weeks prior to slaughter and, in that same time period, avoid moving, mixing or drafting stock prior to trucking," Jarrod said.

"This is especially important in grass-fed systems, to ensure cattle have sufficient quality feed in the lead up to slaughter whilst minimising any pre-slaughter stress."

MSA minimum requirements include:

- meat colour must be between 1B and 3
- pH must be below 5.71
- rib fat must be a minimum 3 mm
- there must be adequate fat coverage over the whole carcase.

There are now 43 MSA beef processing plants across Australia. In the last financial year 35 pc of the cattle slaughtered nationally (3.22 million head) were graded for MSA.

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Stocktake for profit

Despite the lack of rainfall to promote good pasture growth, it is vital to still match livestock requirements with available pasture, to avoid over grazing and destroying future longevity of your pastures.

It is more important than ever to monitor these pastures and stock them appropriately, to avoid causing long-term damage.

With the ongoing drought conditions seen across western and north-west Queensland, it is expected that 30–70 per cent of Mitchell grass tussocks will die. Droughted Mitchell grass usually responds to 75–125 mm of rain. In 2004, there was no response to much higher falls over summer.

Mitchell grass pastures will probably require three to five years to return to full productivity once the drought breaks, unless there is substantial drought-breaking rain – such as the 650–750 mm received around Kynuna in 1996–97.

A full wet season spell is recommended for pastures re-establishing through seedlings and to avoid over grazing where pastures are recovering through tussocks. A short wet season spell of four to six weeks can hasten the recovery of Mitchell grass tussocks and result in more feed than in grazed pastures.

Mitchell grass is most susceptible to damage when it is actively growing (for example, after the first wet season rains or following drought-breaking rains). Therefore, where possible, it is best to let Mitchell grass set seed before re-stocking. Continual high grazing pressure keeps Mitchell grass tussocks small and less likely to survive droughts.

There are tools available to help you match pasture supply to livestock requirements. These tools have been around for quite some time, but recently have been updated and are now available in an app that can be used on a smart phone or tablet, even when not in mobile range.

Stocktake Plus to improve accuracy

Short-term management of stocking rates is fundamental to sustainable beef production. Matching stock numbers to feed on offer is critical in our rangelands, which are subject to highly variable rainfall, resulting in large fluctuations in pasture growth between, and within, years.

Although not difficult, there will always be some level of error associated with visual estimates of feed on offer when completing a feed budget. Research is being conducted with the FutureBeef Stocktake Plus app at the DAF to improve the accuracy associated with visual estimates of pasture yield, and develop guidelines for estimating available feed across large, variable paddocks (*www.stocktakeplus.com.au/*).

Once you have forage budgeted to determine stocking rates for the paddock/s, it is essential to regularly monitor the condition of your feed, pasture and stock.

An important part of budgeting for the dry season is to remain focused on what you set as your residual yield. This is the amount of pasture to remain in the paddock at the end of the dry season.

Residual yield and ground cover determine infiltration of the next rains, and subsequent pasture growth. Stock need to be removed when pasture has been eaten down to the residual level.

Failure to remove stock can lead to the loss of desirable grasses, reduced rainfall infiltration, increased risk of soil erosion and weed invasion, reduced pasture growth, and slip in animal condition.

Another important consideration when forage budgeting is to consider the seasonal climate outlook. This year we are experiencing a strong El Niño effect, which has a high probability of dominating the coming season and prolonging drought conditions.

This risk should be factored into management decisions. For example, assume dry-standing feed will need to last longer, and with a possible late start to the season, reduced pasture growth next year. More climate outlook information can be obtained by visiting the Queensland government's 'The Long Paddock' website (*www.longpaddock.qld.gov.au*).

Unfortunately, drought and erratic rainfall patterns are characteristic of the Australian rangelands. Careful planning and adjustment of stock numbers to available pasture are critical to ensuring you and your livestock survive the drought.

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FutureBeef **NORTHERN MUSTER** *Information for rural business in North Queensland*

Producers learning to assess pasture quantity and quality at the Stocktake for Profit workshops at Hughenden in March 2014.

Pasture photo monitoring is a useful tool to keep a record of pasture degradation and to see changes in pasture composition between years. This site is being used to record the recovery of Mitchell grass tussocks after the wet season.

A photo monitoring site used to record the estimated amount of pasture yield (kilograms of dry matter per hectare). These records are kept year to year and looked back over to help calculate stocking rates for the following years.

Over the past 18 months, the North West FutureBeef team has been reviewing the pasture growth models, photo yield standards, and land type sheets for the Southern Gulf region. By making adjustments and updates to these tools, you will be able to make more accurate and reliable decisions on stocking rates for paddocks, depending on the class and live weight of the livestock.

Pasture growth models can be used to assist you to estimate the amount of growth for each of the land types across your paddocks using the amount of rainfall received.

Land type sheets are used to identify the type of country you have, and to provide information on soil types, preferable pastures and management techniques.

Photo yield standards are available for each of these land types, and can be printed out and taken around the paddock to help you to estimate the amount of available pasture.

Together, these tools allow you to estimate the amount of pasture available for more proactive management of pasture and livestock. They will also assist your decision making with the number of head that should be grazed in the paddocks, given your live weight targets and class of stock.

The updated versions of these tools will be included in the Stocktake Plus app, as well as in the revised Grazing Land Management EDGE course, which will be released in 2016.

For technically-minded people, the FutureBeef Stocktake Plus app has been heavily reviewed and updated over the past 12 months and is designed to assist producers in setting up and recording data from photo monitoring sites on their property, as well as creating forage budgets. Importantly, the app will work without the need for mobile phone reception.

You can store information and get results while you are in the paddock. Your monitoring and feed budget data, as well as your stock and rainfall records, are with you at all times. All the reports on your device can be printed and/or backed up when you return to your office.

If you have downloaded the Stocktake Plus app, make sure that you are using the latest version to ensure all of these updates are on your device.

The app is designed to:

- assist in monitoring grazing land condition by logically guiding the user through the process
- store monitoring information and produce reports, including long-term carrying capacity calculations, based on user input
- guide the user through a basic or detailed forage budget
- store rainfall records
- store stock numbers (converts to Adult Equivalents, displays current stock on Land Condition reports)
- direct users to their monitoring sites using GPS functions
- help the user identify their land type(s), using the land type mapping of Queensland
- back up all information securely on the internet, only accessible by the user.

The app also has many in-built support tools including:

- land type factsheets
- pasture growth tables
- ground cover photo standards
- accessible yield calculation sheets
- pasture photo standards
- a dendrometre for measuring tree densities.

Everything you need, to do your monitoring in the paddock, is now within your device. If you are interested in using this type of technology, there is no need to carry bulky pasture photo standards, GPS or camera to complete your assessments.

The Stocktake for Profit project is a joint initiative between DAF and Southern Gulf Catchments as part of the Caring For Our Country – Sustainable Grazing program. The program is designed to maintain and improve ground cover in the Southern Gulf region and was developed after local producer feedback suggested that the tools needed to be refined and updated.

If you would like more information about these tools, or are keen to attend a Stocktake for Profit workshop to learn more about pasture budgeting/monitoring, and how it can help to improve your management and adjust for the seasonal conditions, please get in contact.

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Queensland Government

Monthly beef report

In an effort to provide a greater level of market information to producers and exporters in northern Australia, Meat & Livestock Australia (MLA) has commenced producing the monthly North of the Tropic Beef Report.

The report gives a snapshot of northern live export prices, over-the-hook indicators and saleyard prices, in addition to northern slaughter, live exports and saleyard throughout.

The report can be downloaded at: *www.mla.com.au/NLRSReportDownload/North-Of-the-Tropics-Beef-Report-20-Oct-2015.PDF*

To subscribe to a monthly email, please email MLA: marketinfo@mla.com.au

Feedback can be provided to:
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FutureBeef **NORTHERN MUSTER** *Information for rural business in North Queensland* Queensland Government

Don't miss the 2016 Northern Beef Producers Expo 'Grazing into the future' being held on March 4 -5, 2016 at the Charters Towers showgrounds

Mustering all Northern beef producers

Planning is well underway for the next Northern Beef Producers Expo (NBPE) to be held again in Charters Towers at the Showgrounds on 4 and 5 March 2016.

With such positive feedback from the inaugural 2015 expo, the committee has mustered up some new faces, as well as old, and plans are well underway for the 2016 'Grazing into the future' themed expo.

Following on from the success of the 2015 event, the committee has again secured high profile keynote speakers and not-to-be-missed demonstrations. The showgrounds are set to be jammed packed with a fantastic variety of trade exhibitors. The event will also feature a social event for participants to relax, catch up with mates and enjoy a few laughs with our surprise entertainment.

The event will now run over two days with the official program to be released soon. Further information will be announced in the coming months, keep an eye on our facebook page for updates *www.facebook.com/NorthernBeefProducerExpo*

Sponsorship and trade display packages are currently available. To express interest in sponsoring the event or holding a trade display please contact the committee by email northernbeefproducersinc@gmail.com

The committee look forward to catching up with everyone in March next year. Until then we hope you have a wonderful wet Christmas and a safe and happy new year.

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Reduce rubbish, reduce rabbits

Rabbits have been in north Queensland for more than 30 years. In recent times they have been seen in higher numbers and in more locations, causing concern for landholders.

To investigate the habitat use, and population trends of rabbits in the north, Biosecurity Queensland has been monitoring sites around Charters Towers and on the Atherton Tablelands for the past 18 months.

Quarterly surveys have been completed on a number of properties to look for seasonal trends and to determine breeding times. Radio-tracking has also been used to determine whether rabbits are using warrens or above-ground habitats.

Generally, rabbit numbers are low across the northern region, with spotlight counts returning figures of one to two rabbits per kilometre.

This means rabbits are not impacting grass availability for stock and native animals at present. However, in some localised patches, the densities may be much higher, which means pasture loss would be more significant.

With current dry conditions caused by drought, rabbit numbers are generally declining. Spotlight counts show that numbers have been reduced by up to 80 per cent in most areas since December 2013. The only exception to this is around Atherton, where numbers have remained the same.

Rabbit numbers appear to fluctuate throughout the year depending on the season, with numbers at their lowest in winter, then increasing into spring and peaking in summer. However, breeding efforts occur throughout the year, with females either pregnant or lactating (supporting young) at all times of the year.

This is in contrast to southern parts of Australia where breeding usually occurs towards the end of winter and through to spring (following winter rain and pasture production), while temperatures are still cool. It is generally considered that rabbits cannot successfully breed in temperatures over 23 degrees Celsius, so finding breeding females in summer in north Queensland is very unusual.

In the hot areas of western Queensland, breeding is successful through the use of warren systems. However, in north Queensland, rabbit warrens are very small—either one or two burrow systems—because they are rarely used. Radio-tracking research has shown that rabbits are primarily living above-ground and not in warrens.

Around Charters Towers, for example, rabbits are using hollow logs and woody weeds such as currant bush (Carissa lanceolate). On the Atherton Tablelands they are living in long grass and basalt walls, and under shrubs and woody weeds, buildings, rubbish piles and other structures. There was little evidence of warren building, even in areas that had ideal soil for digging burrows.

Therefore, to reduce the impacts of rabbits, the most effective method is to remove the available harbour. On one property near Ravenshoe, clearing woody shrubs near the house, and in a paddock, greatly reduced the rabbit numbers. They remained low for over six months.

In some cases, rabbit hemorrhagic disease virus (RHDV) releases may be the answer to reducing large populations down to manageable levels. In Almaden, a RHDV release in August 2014 caused a great reduction in numbers. However, if steps are not taken to remove access to breeding areas, such as under buildings, sheds and shipping containers, the numbers will begin to recover.

The best time to control rabbits is when conditions are poor, as key breeding areas are more easily identifiable and can be removed. However, all it takes is a few good seasons in north Queensland for rabbit numbers to increase, which, in turn, can cause significant losses in production.

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