



Beeftalk

Taking stock of your future

Prime news and views for beef producers of South East Queensland

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editorial

Beeftalk is changing with the times. From spring 2013, *Beeftalk* will no longer be printed and will be available as a free online newsletter. To be on the mailing list please forward your email address to lyndel.bryant@daff.qld.gov.au. If you use the internet make the FutureBeef website (www.futurebeef.com.au) one of your favourites to access practical information such as the new MLA weaner and heifer books, various online presentations and past editions of *Beeftalk*.

The recent La Niña events have given Australia the wettest two-year period on record, from April 2010 to March 2012. Dave McRae outlines the global effects and updates the seasonal forecast.

In the quest for healthy productive paddocks, the foundation of a grazing business, Gavin Peck outlines DAFF and MLA project work addressing pasture rundown and Graeme Elphinstone adds to the list of legume choices suitable for SEQ. Ian McConnel provides insights on the World Wildlife Fund's goals for sustainable beef production and ecologies.

For those interested in the carbon farming initiative please note the seminar dates being conducted across southern Queensland—they're already underway so be quick.

The breeding season is near. Kay Taylor gives sound advice on selecting bulls that will perform. Rebecca Farrell and Mick Sullivan tell us where to learn to pregnancy test and how to get the added benefits from foetal aging for forward planning, budgeting and identifying problems, some of which are outlined in the Cash Cow project summary.

Be sure to check the 'timely tips' and a 'handy hint' on stock control from Carli McConnel. Please send in your handy hints for us to share. If your current *Beeftalk* mailing address is a mail service (e.g. MS 360) please contact Lyndel (details on page 9) to update your mailing address.

The winner of the *Beeftalk* 33 Grazon feedback prize was the Stenzel family from Mt Alford. As always we welcome your feedback and suggestions for topics. The next draw will be on 23 November, 2012.

Happy reading!
The *Beeftalk* Team



Rainfall—what’s happened over the last couple of years?

Successive La Niña events from autumn 2010 to autumn 2012 contributed to record rainfall throughout much of Australia and a number of extreme events including severe flooding across the eastern states and one of the most powerful cyclones to have affected Queensland since records commenced (Cyclone Yasi). These events followed a number of years of El Niño-related severe drought and poor seasons throughout eastern Australia.

The 2010/11 La Niña event was the strongest event since the 1970s and one of the four strongest events of the last century. This is reflected in the monthly Southern Oscillation Index (SOI) values during October and December 2010, and February and March 2011 being the highest recorded since records commenced in 1876. The impact of these two La Niña events on Australia’s climate is evident. 2010 and 2011 were Australia’s third and second wettest calendar years on record, respectively. April 2010 to March 2012 was Australia’s wettest two-year period on record and 2011 was also Australia’s coolest year since 2001.

This is in comparison to the United States where La Niña events generally result in below average rainfall across the southern states, such as the currently drought-affected regions of Texas, Oklahoma and New Mexico, and above average rainfall throughout the Northwest and Ohio Valley. La Niña events also usually result in colder-than-normal winters throughout the Northwest and Northern Plains and warmer-than-normal temperatures through the southern states. A recent example is the 2010/11 La Niña event that contributed to record winter snowfall and spring flooding across the north west and severe drought across the southern half of the United States.

A good explanation of the impact the 2010 to 2012 La Niña events had on Australia can be found in the Bureau of Meteorology’s newly-released report available at www.bom.gov.au/climate and more information on the changes to our climate drivers can be found at www.longpaddock.qld.gov.au For a USA flavour try www.cpc.ncep.noaa.gov Given the recent coverage of ongoing drought conditions in the United States, the US drought monitor site is also worth a look at <http://droughtmonitor.unl.edu>

What’s happening now?

The Bureau of Meteorology ENSO Wrap-up (issued on 14 August) states that the trend towards a strong El Niño event this winter has eased. However, there remains a moderate risk that a weak or border-line El Niño event will still develop. This is consistent with most climate models, which continue to forecast the potential for an El Niño while indicating that any event is likely to be marginal and not intensify. No models suggest a return of La Niña this year.

I do want to point out that the likelihood of an El Niño doesn’t necessarily mean doom and gloom. While El Niño conditions typically mean that large parts of eastern Australia are drier than normal during winter and spring, it does not guarantee widespread drought. In the shorter term, the current winter outlook remains reasonable. In the longer term it means considering what a potentially drier- and warmer-than-normal finish to winter and start to spring would mean to your enterprise. An updated ENSO Wrap-up report can be found at www.bom.gov.au/climate/enso

The Department of Science, Information Technology, Innovation and the Arts’ (DSITIA) monthly climate statement provides rainfall probabilities based on both the SOI Phase scheme and the experimental SPOTA-1 (Seasonal Pacific Ocean Temperature Analysis) scheme. The SOI phase scheme at the end of July indicates that there is a 50–80% chance of getting above median rainfall during August to October throughout most of Queensland. The exception is for the far west and far north-west of the state where there is a 40–50% chance of getting above median rainfall for August to October. The SPOTA-1 scheme provides long-lead probabilities of the key rainfall period of November to March for Queensland. Currently, the SPOTA-1 outlook for the coming 2012/13 summer indicates a slightly higher than normal probability of exceeding median rainfall for much of Queensland.

Updates are usually available by the middle of the month at www.longpaddock.qld.gov.au I’m also happy to give climate presentations at workshops, meetings or field days. If you are interested, please email me using the address below.

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Lantana poisoning

Lantana is found throughout most coastal and sub-coastal areas of eastern Australia in a wide variety of habitats, from exposed dry hillsides to wet, heavily shaded gullies. It is native to the tropical and subtropical regions of Central and South America.

Many lantana varieties are poisonous to stock. Red-flowered lantana is commonly believed to be more toxic than pink-flowered. In some areas of central Queensland, however, pink-flowered lantana is known to be highly toxic. If unsure, consult your local government weeds officer or other experienced landholders for local advice.

Many landholders have observed that mature, experienced cattle browse lantana at certain times of the year without obvious toxic effects. However, given the lack of precise information and the highly variable physiology of lantana types, **all lantana colour forms should be regarded as poisonous.** The toxins in lantana include the triterpene acids, lantadene A (rehmannic acid), lantadene B and their reduced forms.

Most cases of lantana poisoning occur when new stock are introduced into lantana-infested areas. Stock bred on lantana-infested country avoid lantana unless forced to eat it due to lack of other fodder. Young animals newly introduced to lantana areas are most at risk.

To minimise lantana poisoning take care when introducing new or young animals into a paddock if lantana is present. Ensure they have enough other fodder so they will not be forced to eat the lantana in quantities sufficient to result in poisoning. During drought, animals should not be placed in lantana-infested areas without alternative food.

Signs of poisoning

Signs of lantana poisoning depend on the quantity and type of lantana consumed and, under some circumstances, the intensity of light that animals are exposed to. Poisoning can result when a beast consumes one per cent or more of its body weight in fresh leaf (say 5–20 kg for a 500 kg cow), depending on the toxin content of the lantana.

Early signs of depression are noticeable, with head swaying, loss of appetite, constipation and frequent urination. After a day or two the eyes and the skin of the nose and mouth start yellowing with jaundice and the muzzle becomes dry and warm. The eyes may become inflamed and have a slight discharge. The animal also becomes increasingly sensitive to light. Finally, the muzzle becomes inflamed, moist and very painful ('pink nose'). After

exposure to the sun, areas of un-pigmented skin may peel and slough off. Death commonly occurs 1–4 weeks after symptoms occur. Death from acute poisoning can occur 3–4 days after eating the plant.

Treatment

If animals show any of the early signs, move them to lantana-free areas, monitor them and keep them in the shade and seek veterinary treatment immediately. Act quickly because early treatment offers a good chance of recovery—delaying treatment can result in serious kidney damage and failure. Remedies include administering intravenous fluids, treating skin damage with antibiotics and sunscreens, and drenching with activated charcoal slurry (2.5 kg activated charcoal in 20 litres of electrolyte replacement solution for cattle; 500 g in four litres for sheep and goats). Activated charcoal is an effective but expensive poisoning antidote and a second dose may be required 24 hours after the first if the animal has not improved. Bentonite can be substituted for activated charcoal but is not as effective and may take up to two days longer to produce the same result. Use the same dose recommended for charcoal, in a slurry with water.

Lantana control

Using a variety of control methods gives the best results when treating lantana infestations. Consider the size, density and geographic location of the infestation when choosing control methods. In general it is best to start your control program in areas of light infestation and work towards the denser infestations.

Landholders in south-eastern Queensland are reporting success using the splatter gun spray method to help control lantana. Check with your



local catchment group as some have the splatter gun available for loan (see *BeefTalk* 33 for more information about using a splatter gun).

Lantana seed banks remain viable for at least four years, so to ensure your initial management efforts are not wasted you will need to follow up and kill seedlings before they mature.

Appropriate fire regimes may become part of a management program to reduce lantana invasion and maintain pasture.

Removing lantana within areas of remnant vegetation may require a permit under the *Vegetation Management Act 1999* if there is potential for damage to the surrounding native

tree species. Ask for more information from the Department of Natural Resources and Mines (phone 13 74 68) before works commence.

Information sources:

Lantana *Lantana camara* (4 pages) Fact sheet, Declared class 3 pest plant www.daff.qld.gov.au/documents/Biosecurity_EnvironmentalPests/IPA-Lantana-PP34.pdf

Lantana, Best Practice Manual and Decision Support Tool (162 pages), Weeds of National Significance August 2009 www.weeds.org.au/WoNS/lantana/ (Free from DAFF Queensland on 13 25 23).

BeefSpecs tool helps predict weight and fat

BeefSpecs is an easy-to-use online tool that predicts final liveweight, P8 fat thickness and hot standard carcass weight (HSCW) from input information including breed, current liveweight and fat (P8) thickness, frame score and projected growth rate.

It also takes into account feed type (i.e. grass or grain) and, where applicable, HGP use.

Graziers can use BeefSpecs to see how changes in various parameters can improve the likelihood of their cattle meeting target market specifications.

Meat & Livestock Australia, the Beef Co-operative Research Centre and the NSW Department of Primary Industries (DPI) have developed this innovative tool to help beef producers make better decisions and meet market specifications.

BeefSpecs is available at <http://beefspecs.agriculture.nsw.gov.au>

Breeding information taken to a new level

If a picture's worth a thousand words, what's the value of a video? The FutureBeef team is now bringing you the latest in breeding information in easy-to-follow audiovisual format.

Visit www.futurebeef.com.au/resources/multimedia or www.youtube.com/user/FutureBeefAu to watch videos and presentations on key beef industry issues.

Of particular interest coming into the breeding season are the presentations about:

- **Bull breeding soundness evaluation (BBSE)**—a process for identifying bulls that are most likely to get breeders in calf
- **Genetic tools**—how to identify breeding stock with superior genetics
- **Breeder management to optimise reproductive performance and profit**—the key management strategies needed to improve breeder herd performance
- **Managing breeder condition: Body condition score**—how to manage breeder condition and maximise production from your breeding herd
- **Measuring the reproductive performance of your breeding herd and Lifting performance of breeding herds in Northern Australia**—outlining the preliminary results from the Cash Cow project.

Your feedback please

Presenters and the FutureBeef web team would appreciate your feedback on these or any of our other multimedia products. Please send your feedback via email to info@futurebeef.com.au or phone Felicity McIntosh, DAFF Brisbane, on 13 25 23 (cost of a local call within Queensland).

‘Cash Cow’ project

How well is your breeder herd performing?

The MLA-funded ‘Northern Beef Fertility Project’ (aka Cash Cow) is the largest female fertility project run in northern Australia to date. It set out to answer some fundamental questions:

1. How can producers accurately measure the performance of their breeders?
2. Why do some mobs perform well and others don’t?
3. Why do some females readily become pregnant after calving, and wean a calf, whilst others take much longer to become pregnant or fail to wean a calf?

To learn more, over a four-year period (2008–2011) the reproductive performance of 78 256 breeding females located on 75 commercial beef cattle properties across northern Australia—from St George in Queensland to the Kimberley in WA—were monitored. All females had NLIS tags and performance data was collected electronically crush-side twice a year, once at weaning and again at pregnancy diagnosis. The data collection system collected 16 pieces of data per female per session and enabled processing rates of around 1000 head per day.

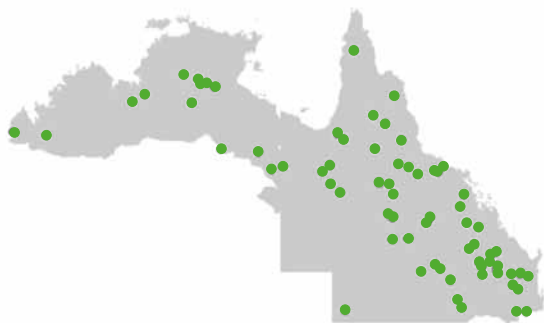


Figure 1. Collaborating properties across northern Australia

Researchers from the University of Queensland, DAFF Queensland, Northern Territory Department of Resources and AusVet Animal Health Services, in collaboration with an electronic data capture provider (Outcross Performance Pty Ltd), cattle veterinarians and cattle producers, worked on this project.

The range of performance across the properties varied enormously. An important finding was that half of the mobs achieved weaning rates of less than 70%. In the extensive regions of north

Queensland, NT and Kimberley half of the mobs achieved weaning rates of less than 60%. However, the top performing 25% of mobs achieved weaning rates of 80%.

Over six million pieces of data were collected and analysed to determine the main factors affecting pregnancy and calf loss. The interim analysis shows that some basic factors can have significant impacts.

Factors affecting pregnancy rates

The major factors that reduced the chance of cows conceiving within four months of calving included:

- calving in the July, August, September period
- being in less than good body condition at time of pregnancy diagnosis
- lactating and grazing pastures low in protein during the dry season, and low in phosphorus during the wet season
- having a history of not rearing a calf the previous year.

Factors affecting losses from confirmed pregnancy to weaning included:

- exposure to at least seven days of hot weather during the month of calving
- calving out of season (April–June)
- having a history of failing to rear the last calf
- poor protein intake during the last third of pregnancy.

A common language for key performance measures

From the outset it was apparent that a satisfactory ‘common language’ was needed for describing reproductive performance, particularly in relation to reproductive efficiency and beef output from these herds. The Cash Cow project has developed the following key performance measures:

Net beef production (kg/breeder) or beef production efficiency (kg/AE) provides the most accurate measure of beef output from a breeding herd. It requires data on the number of cows mated the previous year, cow weights, number of calves weaned, average weaner weights and an estimate of cow survival, all factors that were measured in the Cash Cow project. Net beef production, together with estimates of cost of production, will enable producers to determine the efficiency and profitability of their breeding enterprise.

Weaner weight per cow retained (kg/cow) is an indicator of both net beef production and beef production efficiency. It is a practical measure that doesn’t require foetal ageing.

To calculate the weaner weight per cow retained multiply the number of calves weaned by the average weight of weaners and then divide this by the number of cows retained after final mustering the previous year.

Percentage of females that are back in calf four months after calving provides a measure of how efficiently cows are re-conceiving and, importantly, tells a producer what proportion of their calving cows will re-calve 12–13 months later. Annual foetal aging (pregnancy diagnosis) is used in determining this performance indicator.

Foetal and calf loss between confirmed pregnancy and weaning highlights the rate of foetus and calf mortality in a herd. These losses are a major issue in the extensive rangelands regions of northern Australia. Half the maiden heifer mobs monitored in the Cash Cow project experienced losses of 25% or more.

These are just some examples of the findings.

As this article is being written, the Cash Cow analysis team is continuing to interrogate the massive database of information. Ultimately, the project will not only determine the major factors affecting breeder performance, but will also define achievable performance benchmarks for different regions.

Two presentations given at BEEF 2012 in Rockhampton are available for viewing on the FutureBeef website at www.futurebeef.com.au/resources/multimedia :

1. Measuring the reproductive efficiency of your breeding herd
2. Lifting performance of breeding herds in Northern Australia

Professor Michael McGowan

School of Veterinary Science, UQ

Phone: 07 5460 1856

Carbon Farming Initiative

The Carbon Farming Initiative (CFI) gives farmers and landholders the opportunity to generate additional income through implementing practices that reduce greenhouse gas emissions or store carbon in the landscape.

Any credits generated from an approved activity can be traded on the international or domestic carbon market. Participation in the scheme, which began in December 2011, is voluntary.

CFI handbook

An information booklet is available covering how the CFI operates and how to evaluate which CFI activities might best work for your business or organisation.

You can download the electronic version of the

booklet from www.climatechange.gov.au/cfi or pick up a hardcopy at your local Landcare office.

Finding out more

A series of CFI information sessions are being held across greater south-east Queensland from August to October. At these events you will have the chance to ask questions about the CFI and the productivity, economic and environmental benefits of being involved in the carbon market.

If you would like an information session hosted in your neck of the woods, contact your local Landcare coordinator or Rhonda Toms-Morgan. We'll also keep you up-to-date with links in our events calendar.

Rhonda Toms-Morgan

Queensland Murray-Darling Committee

Phone: 07 4620 4600

Email: rhondat@qmdc.org.au

The Carbon Farming Initiative Roadshow

Specialist speakers will provide information on the CFI, how it operates and what types of CFI activities might be right for you, your business or your organisation.



Australian Government
Carbon Farming Initiative

What does the CFI mean for rural producers?
Are there opportunities for you?



Aug 29, Roma
Aug 30, St George
Sept 20, Goondiwindi

Rhonda 07 4620 4600
www.qmdc.org.au



Burnett Mary
REGIONAL GROUP

Sept 11, Monto
Sept 12, Kingaroy
Oct 9, Bundaberg
Oct 10, Gympie

Vikki 07 4169 0720
www.bmrg.org.au



CONSERVATION
PARTNERS INC.

Sept 13, Chinchilla
Sept 14, Oakey
Sept 19, Warwick

Kevin 0487 385 032
www.cfi.org.au



Sept 18, Beaudesert
Sept 18, Fernvale
Oct 11, Beerwah

Christy 0457 106 252
www.seqcatchments.com.au

This Roadshow and all associated material are supported by funding from the Australian Government Department of Agriculture, Fisheries and Forestry as part of the Carbon Farming Initiative Communications Program.

Pregnancy testing for better planning

The ideal breeder would produce a calf every 12 months and early in the season; early calves are heavier at weaning. An early, tight calving pattern not only simplifies stock and marketing management, it also makes it easier to time weaning, which is critical for managing breeder body condition.

In many herds there is considerable opportunity to make better use of pregnancy testing as a management tool. Accurate foetal ageing is the key to improved decision-making. The reproductive performance of the herd can be better assessed with information about how many animals got pregnant and at what stage.

If cows calve in low body condition they take longer to commence cycling and this leads to a drawn out conception pattern. Fertility diseases such as vibriosis can also contribute to a drawn out conception pattern with cows aborting then re-conceiving.

Accurate foetal age data also enables better planning over the next 12 months. The first two columns of table 1 shows the foetal age results from a pregnancy test on the 24 May 2004. The

assumptions in the box below this are then used to predict cow and calf data for a future weaning date of 4 May 2005. This data helps to forward plan:

- when calving will occur
- when weaning should occur
- how big weaners will be and appropriate supplement requirements.

Foetal ageing improves the efficiency of culling decisions. Removing late conceivers improves overall weaner weights and enables selection of more fertile animals i.e. those that conceive the quickest. With a tighter calving pattern, you can manage your breeders better and use supplements more effectively.

If you need to reduce numbers due to poor seasons then the late calving cows can be on the short list. You can also achieve premiums through the National Cattle Pregnancy Diagnosis (NCPD) scheme using tail tags to identify pregnant breeding females or empty feedlot heifers.

Foetal aging is typically done in control-mated herds two months (6–10 weeks) after the bulls are removed, but it can also be used in continuously-mated herds to identify and draft or sell cows that will be lactating at an undesirable time. The bulls do not have to be out of the paddock to obtain the benefits of foetal aging.

Table 1: Estimated calving data for Brian Pastures CRC Composite Cows.

Foetal age data (24/5/2004)		Predicted cow and calf data at future weaning date (4/5/2005)				
Foetal age at testing (months)	No. of cows tested	No. of cows surviving	Calving date	Calf numbers	Age of calves at weaning	Mean calf weight at weaning (kg)
E	39	39	NA	0		
3	1	1	3-Dec-04	1	5.1	166
3.5	7	7	18-Nov-04	6	5.6	179
4	35	35	3-Nov-04	31	6.1	192
4.5	18	18	19-Oct-04	16	6.6	205
5	166	164	4-Oct-04	148	7.1	218
5.5	59	58	19-Sep-04	53	7.6	231
6	80	79	4-Sep-04	71	8.1	245
Total	405	401		326		Average 222

		Predicted cow numbers at future weaning (4/5/05)	
		No.	%
Gestation length (days)	283		
Estimated breeder mortality (%)	1	Wet cows	326 81
Estimated foetal & calf losses (%)	10	Dry cows (empty at pregnancy diagnosis)	39 10
Mean birth weight (kg)	34	Dry cows (lost calf)	36 9
Mean calf growth rate (kg/hd/day)	0.87	Total cows	401 100

Foetal ageing is also very useful when changing a herd from year-round to controlled mating. You can identify animals that will not calve in the desired period and decide whether to retain them or not. If enough cows are due to calve in the desired calving period then the rest can be considered for culling. If more cows need to be retained, managers can retain those most advanced in their pregnancy.

You can use paint brands to identify potential culls according to stage of pregnancy. Once the main mob is returned to the paddock you can reassess the potential culls and cull according to the overall herd and seasonal situation.

Table 2 shows a simple paint brand system for identifying cows at pregnancy testing. While this system can cover all stages of pregnancy, in most cases only the empties and potential culls need to be identified.

Table 2: Paint brands for pregnancy testing

Paint brand	Pregnancy status (months)
O	0
T	1.0
┌	2.0
└	3.0
┘	4.0
┙	5.0
<	6.0
^	7.0
>	8.0
N	9.0

Data recording

NLIS has greatly improved the efficiency of collecting and using individual animal data. However, in many herds individual identification is not required for effective management. There are a range of quick paper-based recording systems that you can use crush-side to collect herd management data such as pregnancy status, lactation status, body condition and weight. If you would like information on these systems and the recording sheets please contact your local FutureBeef extension officer.

Mick Sullivan

DAFF, Rockhampton

Phone: 07 4936 0239

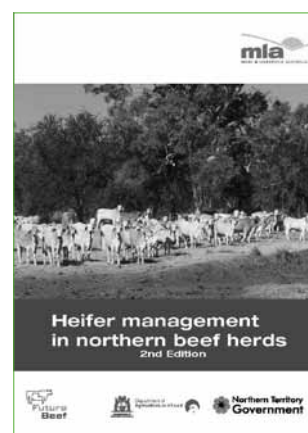
Email: mick.sullivan@daff.qld.gov.au

Key messages: Heifer management

Key messages from from MLA's newly released manual *Heifer management in northern beef herds 2nd edition* include:

- Body condition at mating has the greatest effect on heifer fertility.
- Conservative stocking and good pasture in heifer paddocks are the cheapest ways to achieve good body condition. Supplements may be cost effective.
- Segregate heifers from the breeder herd and graze them on the best paddocks. They may need supplements over the post-weaning dry season to reach critical mating weight.
- The majority of heifers should be at or above the critical mating weight (CMW) at the start of joining. The CMW for *Bos indicus* heifers is 320–340 kg.
- A heifer needs to have a body condition score (BCS) of at least 3.5 (on a scale of 1–5) at calving to maximise the chance of getting pregnant again while rearing her calf.
- Use young bulls evaluated for breeding soundness and with appropriate calving ease and low birth weight EBVs and mate more heifers than are needed for replacements.
- Select replacement heifers from those that get pregnant early in the joining period and with good temperament.
- Ideally, mate heifers for only three cycles (63 days). On extensive properties, pregnancy diagnosis can be used to identify heifers that conceived early in the mating period.
- Genetic improvement is faster through crossbreeding than through selection.
- Bull selection will have a much greater impact on herd improvement than selecting heifers or cows.
- Wean calves early, down to 100 kg (3 months), or even earlier if heifer survival is at risk.

To obtain a free copy of this publication see the article *Free publications: Weaner Management and Heifer Management* on page 17 in this edition of *BeefTalk*.



Thatch grass

Thatch or jaragua grass (*Hyparrhenia rufa*) is a common grass on roadsides in south-east Queensland. The bulk and height of this grass makes it easy to recognise. A native of South Africa, it has been marching southward for the last 20 years. It is sometimes erroneously called 'grader grass' because it flourishes in the disturbed soil that graders leave on roadsides. However, grader grass is *Themeda quadvalvis*, a much smaller grass and a relative of kangaroo grass.

As the name 'thatch grass' suggests, this plant is used for roofing huts in South Africa. It was introduced into Australia as a pasture species. Generally it has not been used as such and the plant is often grazed out in the paddock but proliferates in the 'long paddock'. The sheer bulk of the un-grazed plant is a problem because it out-competes other species and can fuel very hot fires. Concern is increasing about this species' potential as an environmental weed.

The grass is generally palatable to cattle when short but when mature is unattractive to all but the hungriest of stock. It may have become more prolific in pastures over the last two years due to the high rainfall.

Trials in South America have found this grass is productive but needs to be rotationally grazed to keep it productive and palatable. There have been concerns that the plant is now beginning to dominate some pastures and shade out legumes.

Thatch grass is a perennial with rhizomes. Stems are 30–300 cm tall and 2–6 mm in diameter. Leaf blades are 10–60 cm long and 2–8 mm wide. A distinguishing feature of the grass is the stem sheaved in green leaf alternating with the lighter creamy coloured stem. This gives alternating yellow and green areas along the length of the stem.

Coolatai grass (*Hyparrhenia hirta*) is similar to thatch grass and is causing concern in NSW and some areas of southern Queensland. Trials have found that Coolatai grass is resistant to many herbicides.

Thatch grass has the potential to become a problem in some situations so monitor its spread carefully in your pastures.

Damien O'Sullivan

DAFF, Kingaroy

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Photo by Damien O'Sullivan

Thatch grass (*Hyparrhenia rufa*)

Reminder to update mailing address

If your current *BeefTalk* mailing address is to a mail service, e.g. MS 360, could you **please** send me your rural number address, e.g. 214 Goodger Road.

Many of the *BeefTalk* newsletters that are 'returned to sender' are returned simply because Australia Post will no longer deliver to mail service addresses.

Thanks!

Lyndel Bryant

DAFF, Kingaroy

Phone: 07 4160 0758

Email: lyndel.bryant@daff.qld.gov.au

Adding legumes to sown pasture

Adding legumes to sown grass pastures is the most viable option for Queensland producers to combat pasture rundown, a phenomenon that reduces pasture production and animal performance by up to 50% within 5-20 years of sowing due to tie up of available soil nitrogen.

An MLA-funded project, 'Review of productivity decline in sown grass pastures', completed in 2011 by the Queensland Department of Agriculture, Fisheries and Forestry (DAFF) clearly showed that incorporating legumes into grass-only pastures was the best long-term option for increasing pasture production, animal performance and economic returns on ageing sown grass pastures in central and southern Queensland.

DAFF Senior Pasture Agronomist (Sown Pastures) in Toowoomba, Gavin Peck, said that economic analysis determined that mitigation of pasture rundown effects by introducing pasture legumes returned a net present value of \$400–1400/ha, far exceeding other options such as mechanical renovation, protein supplements, herbicides and fertilisers (see figure 1).

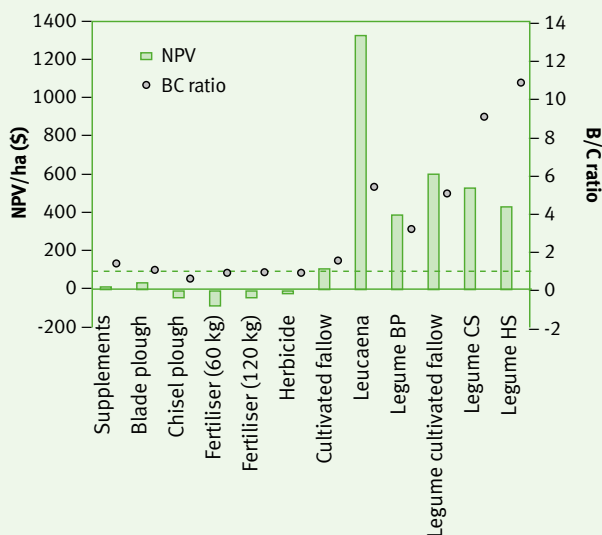


Figure 1. Economics of pasture rundown mitigation options at Moura Qld (2011)

Pasture rundown is not due to a loss of nitrogen from the system. The initial high production of sown pastures results from increased available nitrogen and water that accumulates in the soil during a fallow. After sowing, available soil nitrogen is progressively incorporated into soil organic matter which breaks down slowly, nitrogen is effectively tied up in the soil and unavailable for plant growth.

DAFF conservatively estimated that the cost to industry of pasture rundown would exceed \$17 billion in the next 30 years, based on productivity decline across 12 million hectares of established improved pastures in northern Australia, around 75% of which is predominantly buffel grass.

Symptoms of pasture rundown are widely recognised, but often wrongly attributed to water or seasons. Visible signs include reduced pasture growth, changed pasture density (clumpy carpet of small tussocks or fewer but larger tussocks), nutrient deficiency symptoms (yellowing or reddening), little or no flowering, changed pasture composition and decreased animal performance.

Previous trials have shown that incorporating stylos into grass only pastures can increase animal performance by 40–60 kg/head/year and well-managed leucaena by 70–110 kg/head/year. DAFF also estimated that stylos could increase nitrogen fixation and cycling by 20–50 kg N/ha/year, leucaena by 60–75 kg N/ha/year and medic by 20–50 kg N/ha/year, leading to improved grass growth and pasture quality.

DAFF's review project identified some persistent and productive legumes for permanent grass pastures on clay soils. However, Gavin said that options for the Brigalow Belt were commercially released relatively recently, and commercial plantings have had mixed results.

MLA is funding a five-year project with DAFF to increase the adoption of legumes and other options for improving productivity of sown-grass pastures in central and southern Queensland. The project is working with extension networks to increase understanding about legumes, comparing the persistence and productivity of existing legume options (with an emphasis on desmanthus and Caatinga stylo), and improving the reliability and performance of legume options through better establishment and grazing management.

Another project is looking at how alternative rhizobia inoculation practices could increase pasture productivity threefold across the northern beef industry if new approaches prove to be more reliable when sowing into hot, dry soil conditions typical of northern Australia. The project will test the effectiveness of native rhizobia in tropical and subtropical pastures, and evaluate new approaches with the potential to improve rhizobia establishment and legume nodulation.

Gavin said that the project would ultimately develop guidelines and recommendations to establish rhizobia with legumes in tropical and subtropical pastures.

Key points

Tips for establishing persistent pastures in central and southern Queensland



- Plan pasture sowings early and treat it like a crop.
- Choose the best adapted varieties considering soil type and rainfall (see *Legumes in sown pastures in SEQ region* on page 13)
 - » on clay soils, try leucaena, desmanthus, Caatinga stylo, butterfly pea, burgundy bean or medics. Lucerne is suitable where paddocks can be regularly spelled.
 - » on lighter soils, try shrubby stylo (e.g. Seca), fine stem stylo, siratro or Wynn cassia.
- Prepare a seedbed (i.e. fallow to accumulate soil water, control weeds, ensure good soil to seed contact).
- Provide correct nutrition (e.g. soil phosphorus levels).
- Purchase high quality seed (poor seed gives poor establishment).
- Avoid residual herbicides that can prevent germination or kill seedlings.
- Get the time of sowing right for tropical and temperate species.
- Inoculate legume seed with correct rhizobia immediately before sowing.
- Apply an anticide to seed if ants are a problem.
- Sow enough seed (high plant populations give more productive pastures); remember that coated seed is generally only 20–40% seed.
- Sow small seeds shallow (optimum sowing depth is < 1 cm).
- Use presswheels or rollers to improve seed–soil contact.
- Reduce competition from weeds through grazing, slashing and herbicide applications.
- Graze only after plants have developed crowns and secondary roots, and allow all pasture species to set seed.
- Manage grazing of established pastures to retain a proportion of leaf and stem.

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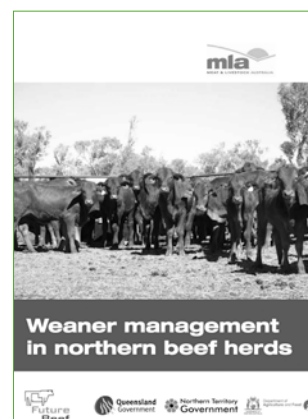
Key messages: Weaner management

Some of the key messages of the newly released manual *Weaner management in northern beef herds* include:

- Calves are taken from their mothers mainly for the benefit of the cow.
- When the calf is weaned and lactation ceases, the cow's nutrient requirement is reduced, allowing her to regain condition.
- Weaning the calf is equivalent to feeding the cow with 2 kg of grain or 3 kg of fortified molasses each day.
- Lighter stocking in breeder paddocks maximises the opportunity for the cows to maintain good body condition.
- A cow needs to have a body condition score of 3.5 or higher at calving to maximise the chance of getting pregnant again while rearing her calf.
- A cow must get pregnant within 75 days of calving to produce a calf every year.
- Weaning to maintain the cow's body condition will improve re-conception for the next mating. It is too late for the current re-conception.
- If the wet season fails, all calves can be weaned younger under both seasonal and continuous mating systems.
- Hay is the main feed for weaners in the yard. Good quality hay must always be available from the first day of weaning.
- Weaning is the time for educating young animals to set them up for ease of handling throughout their lives.
- Weaner paddocks should be rested over the year to accumulate a body of good grass and herbage; they should not be used as holding paddocks for sale or sick stock, or for the working horses.

To obtain a free copy of this publication see the article *Free publications: Weaner Management and Heifer Management* on page 17 in this edition of *BeefTalk*.

A webinar presented by Russ Tyler summarising the publication can also be viewed online at <http://futurebeef.com.au/resources/multimedia/#weaner>



Driving beef industry RD&E innovation

Continuing innovation in the northern Australian beef industry relies on appropriate research, development and extension (RD&E) that meets the industry's needs. The North Australian Beef Research Council (NABRC) is an independent group of producer representatives, research organisations and education providers and is charged with the task of guiding the development of RD&E projects.

The council gains grass roots input and stakeholder collaboration through 11 Regional Beef Research Committees (RBRCs) across northern Australia. Each committee—six in Queensland, three in the Northern Territory and two in Western Australia—has a producer chairperson. The South-East Queensland RBRC chair is Cam Hughes of *Malarga*, Brooweena and the secretary is Damien O'Sullivan from DAFF, Kingaroy. The Southern Queensland RBRC chair is Andrew Gray of *Uambi*, Texas and the secretary is Roger Sneath from DAFF, Dalby.

These committees review RD&E proposals as well as feed regional priorities into NABRC to help influence the RD&E agenda. As producers and beef industry members you are encouraged to view these priorities and suggest ideas to your local beef committee.

Over the last 18 months, after extensive consultation with regional committees and leading experts, NABRC developed a priorities prospectus based on six key themes:

1. reproduction
2. nutrition and growth
3. animal welfare
4. precision livestock management and technology
5. grazing land management
6. human capacity and enabling change.

You can view the prospectus, including local priorities, and contacts for your regional committee on the NABRC website: www.nabrc.org.au

Other key primary industries have also developed RD&E strategies and these sit together under the 'National Primary Industries RD&E Framework'. The NABRC Prospectus is the strategy for northern Australian beef production, which the major industry players, including the NABRC partners, the National Red Meat Co-investment Committee (RMCiC), Cattle Council of Australia, AgForce Cattle and the Northern Territory Cattlemen's Association, have endorsed. Meat & Livestock Australia, as a member of both NABRC and RMCiC, is also using it to guide their investment plans.

The MLA's national strategy seeks to address the general decline in key research, development and extension capacity within many research organisations. The strategy encourages more strategic collaboration between RD&E organisations using MLA industry funds to underpin longer term and larger projects. MLA believes this approach will secure RD&E capacity that is threatened under a short-term project approach.

As we confront the decline in institutional investment, logic dictates that we foster stronger relationships with private and corporate RD&E providers with a view to collaboration in areas of common interest. The NABRC will initiate this contact as it relates to northern beef production in the near future. Whatever shape this public/private collaboration takes, NABRC is strongly committed to its 11 RBRCs and seeks to develop their influence. In this way we can be sure of maintaining a strong grassroots connection that delivers greatest benefit to producers.

Ralph Shannon

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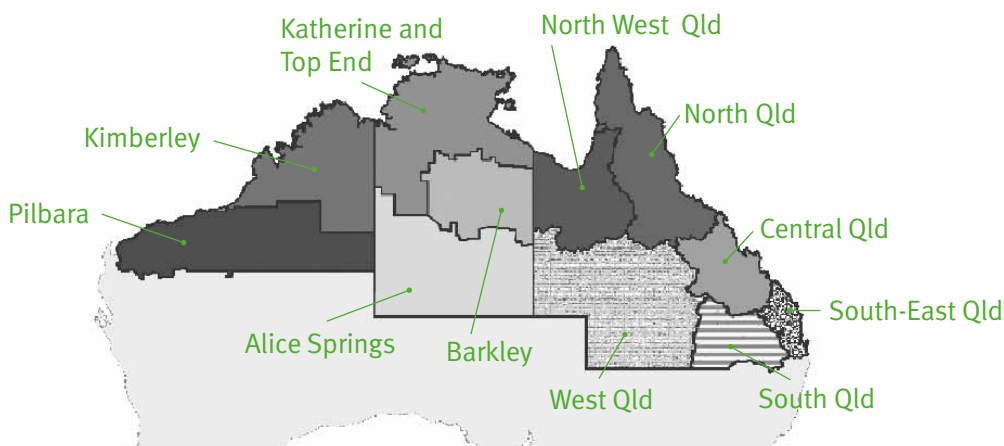


Figure 1. Regional Beef Research Committees (RBRCs)

New laws for transporting livestock

Article reproduced with permission from Meat & Livestock's *Feedback* magazine July 2012, page 2.

New national standards and guidelines for the transport of livestock are being progressively rolled out from 1 July this year, bringing consistency to the way livestock are transported nationally and aiming to ensure good welfare practices for all livestock journeys.

The standards were developed in consultation with government, peak industry councils, welfare groups and the public, under the support of the Animal Welfare and Product Integrity Taskforce.

The new standards will form the basis of State and Territory legislated laws, which will be enforced on a state-by-state basis.

The standards are expected to be introduced in Tasmania, Victoria, South Australia and the Northern Territory from 1 July. The rollout is set to continue later this year in NSW and in 2013 for Western Australia and Queensland.

The standards and guidelines cover the transport of livestock by road and rail, and by livestock transport vehicles aboard a ship.

The standards apply to 12 species of animals—including cattle, sheep and goats—and cover:

- planning and preparation of livestock
- time off water
- fit to load

MLA has produced a revised edition of the guide *Is it fit to load?* to assist livestock producers in selecting animals fit to transport, in line with the updated transport guidelines.

Further information:

For more information on livestock transport standards visit www.livestockwelfarestandards.net.au

Is it fit to load? Download for free at www.mla.com.au/fittoload



Legumes in sown pastures in SEQ region

Well managed legume-based sown pastures have the potential to at least double animal weight gains per head compared to grass-only sown pastures.

Once established, legume-based sown pastures are proven to be more resilient to pasture rundown and have the capacity to persist and remain productive for many years, and often decades.

SEQ region encompasses a large number of different grazing land types, which include a diverse range of rainfall, geology, soil type, topography and vegetation characteristics. However, this region is also fortunate in having a large diversity of suitable sown pasture grasses and legumes that are adapted to these various land types and grazing systems.

The range of adapted pasture legumes are listed for the two main rainfall zones—Coastal and Sub-coastal.

Coastal zone (1000 to 1600 mm average annual rainfall)	Shaw creeping vigna, glycine, siratro, villomix, wynn cassia, white clover, Maku lotus, lotononis, BeefBuilder stylo, fine stem stylo and seca stylo
Sub-coastal zone (700 to 1000 mm average annual rainfall)	Siratro, burgundy bean, wynn cassia, seca stylo, fine stem stylo, leucaena, lucerne, white clover and annual medics

Most sown pasture seed mixtures should include two or three legume species.

Read more about sown pastures for the higher rainfall country of the gympie region at <http://futurebeef.com.au/topics/pastures-and-forage-crops/sown-pastures-for-the-higher-rainfall-country-of-the-gympie-region>

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Help keep Australia TSE-free

Mad cow disease (BSE) and scrapie in sheep are forms of transmissible spongiform encephalopathy (TSE). TSEs are a class of rare brain disease caused by an accumulation of abnormal prion protein in the brain. In 1986 it was recognised in Britain that BSE could be infectious to humans. Mad cow disease originated from cattle being fed meat meal derived from the rendering of scrapie-infected sheep. Commendably, Australia was one of the first countries to implement effective quarantine measures against BSE entering the country. We are also internationally recognised as a BSE negligible risk country.

To maintain our access to overseas markets and public confidence in our meat industry, Australia has adopted several measures to deal with the disease, including:

1. a ban on feeding animal matter to ruminants
2. adopting the National TSE Surveillance Program.

Ruminant feed ban

Under the ruminant feed ban it is illegal to feed restricted animal materials (RAM) to ruminants in Australia. RAM includes meat and bone meal, meat meal, bone meal, blood meal, poultry offal meal, feather meal and fish meal. Our main ruminants are cattle, sheep, goats and deer. Other ruminant species include alpacas, llamas, bison, buffalo, chamois, antelopes, giraffes and camels. If you are feeding supplements make sure to check labels for warnings such as:

'This product contains restricted animal material—
DO NOT FEED TO CATTLE, SHEEP, GOATS, DEER OR
OTHER RUMINANTS.'

TSE surveillance program

Under the TSE surveillance program, cattle and sheep showing nervous system problems are tested to verify freedom from TSEs. Livestock producers can help by reporting any incidences of livestock showing nervous signs to their local Biosecurity officers (DAFF Customer Service Centre on 13 25 23) or private vet.

Testing involves taking brain samples, so incentive payments are available for eligible stock. Eligible cattle and sheep must show some clinical signs consistent with TSE. Cattle must be at least 30 months of age but less than nine years and sheep must be over 18 months of age.

Symptoms

BSE (bovine spongiform encephalopathy) is a progressive, fatal disease that affects the nervous system of cattle. In common with other TSEs, BSE has a typical incubation period of four to six years. Most cases are seen in cattle four years of age or older. Signs can appear gradually, however once clinical signs have appeared the affected animals die within 2–24 weeks. There is no fever. Nervous signs of some kind are always present, but vary and generally fall into three categories:

- changes in behaviour, such as nervousness, apprehension and frenzy when cattle are confronted with gateways and other obstacles
- abnormal posture and gait, such as staggering, swaying, lifting legs high when walking, tremors, falling over and being unable to get up when lying down. Animals may hold their head or ear in abnormal positions
- extreme sensitivity to sound and touch.

There is no treatment for BSE. A number of proven tests for BSE are available, but not for live cattle.



Photo by Binendra Pratap

Incentives

- Incentive payments are available for producers with 'eligible' stock. Payments are \$300 for cattle and \$50 for sheep.
- Veterinarians can claim for each brain sample they collect: \$200 for sampling cattle (\$100 for sheep), \$100 for documentation and \$25 towards postage.
- The producer receives the added benefit of a 'free' post-mortem diagnosis.
- Enhanced and continued market access for meat and meat products.

More information about TSE is available from www.daff.qld.gov.au/4790_15386.htm

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Why the beef industry is important to WWF

The Australian beef industry is our largest user of agricultural land and since settlement has been the driver for significant changes in our landscape. Developing land to increase beef production has greatly altered the ecosystems in much of rural Australia and has also altered the hydrology of our catchments. The way beef producers manage their land is crucial to the health of ecosystems locally and downstream.

We recognise that global demand for beef is increasing and, as the world's population grows, we will need to utilise the world's grasslands to provide affordable protein. In growing our beef industry we must, however, ensure the ecological footprint of beef production does not cause damage.

To achieve this, World Wildlife Fund (WWF) is collaborating with industry and supply chain partners through the 'Roundtable for Sustainable Beef'. The roundtable 'envision[s] an Australian beef industry in which all aspects of the beef supply chain are environmentally responsible, socially equitable and economically viable.' It will use a whole-of-industry perspective to help the Australian beef industry prosper and evolve responsibly towards a long-term sustainable future.

The roundtable has an opportunity to create value for sustainably-produced beef through the value chain. This value will potentially reward beef producers who are currently using sustainable practices and provide positive incentive for others to adopt continuous improvement.

Why is WWF at the roundtable?

WWF is passionate about ensuring the health of ecosystems, such as the Great Barrier Reef, that rely on healthy catchments. To achieve acceptable outcomes for these ecosystems, and for beef producers, it is crucial we work together to discuss the science, develop solutions and implement initiatives that provide positive economic, social and environmental outcomes.

WWF also brings a great deal of consumer recognition to the table, allowing the initiatives that the roundtable supports to be recognised and trusted at the consumer level.

What are WWF's goals for beef producers?

Beef producers have known for a long time that maximising long-term beef production is achieved through successfully managing their land condition, ensuring a density and coverage of 3P (productive, perennial and palatable) grasses and maximising soil and woodland health. These are the fundamentals of the land condition scoring framework, and when land is in 'A' condition it is known to be at its most productive. In 'A' condition, a landscape is also most resilient to extreme climate events, erosion and weed invasion, can sequester carbon and retains more moisture. Like beef producers, WWF would like to see all grazing land in 'A' condition, or being managed towards 'A' condition.

Science also tells us that a major source of sediment being exported from farms is from relatively small areas of exposed sub-soil. Wilkinson et al. (2012) used sediment tracing techniques to identify the source of fine sediments from the Burdekin catchment. They found that 77–89% of the fine sediment loss was derived from sub-soil sources in close proximity to the drainage network. This identifies already-eroding areas close to riparian zones as a major source of downstream sediment.

These areas of exposed sub-soil have great potential to quickly increase in size, leading to more degraded land, more sediment movement and a reduction in productivity.

This, and other, work informs us that while improved land condition will significantly improve water quality and reduce the likelihood of 'hotspots' emerging, the management of identified sediment sources on-property is needed to minimise diffuse pollution from grazing landscapes.

Management of these hotspots must, however, be through locally-relevant and practical approaches that allow for continued profitable beef production on the property.

Further information:

Ian McConnel

World Wildlife Fund

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Warts on cattle

A contagious papilloma virus causes warts (papillomatosis) on cattle. Warts can be unsightly but are rarely serious. They are usually confined to the neck and shoulder region but may form on other areas of the skin. Calves are most susceptible. Warts are rarely seen on cattle over two years of age. The virus gains entry through any skin abrasion and takes from one to 12 months to appear as a wart. Warts usually clear up within six months without any treatment.

It is common for large warts to bleed, especially if rubbed or knocked, and this can result in a bacterial infection that may require treatment. In chronic infections some animals may lose condition, have stunted growth and, very rarely, an infected animal may die.

The four most common types of warts are described as squat, pedunculated, flat and tags. They appear as raised hairless lesions varying from pea-size to the size of a tennis ball.

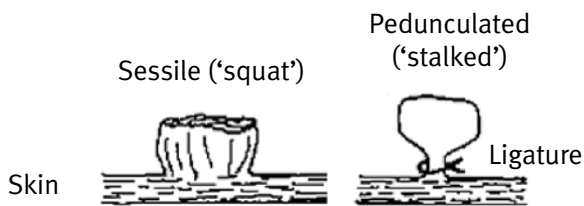


Figure 1: Common warts on the skin
Copyright: Department of Natural Resources and Environment, Victoria.



Figure 2: Common warts on the teats
Copyright: Department of Natural Resources and Environment, Victoria.

Spread

The virus is very infectious. It can be spread through direct physical contact between animals or indirectly via items that infected cattle have touched, such as fence posts, trees, troughs, yards, tagging pliers and brushes.

Control

If possible, keep infected animals separate from the rest of the mob. Minimise mustering, yarding, dipping and other husbandry practices during any noticeable outbreak of warts. A wart vaccine

that was registered for use in Queensland was withdrawn by its manufacturer in June 1990. No vaccine is currently registered for use in Queensland. However, vets may be able to make a vaccine from warts removed from an affected animal as treatment of extensive wart lesions.

Treatment

If nothing is done, moderate wart infections will clear up without treatment as the animal ages and builds immunity. Warts can be removed surgically or by tying a tight ligature around the base, depending on the number, type, size and location of the lesions. Sometimes cutting a few warts off will cause other warts on the body to go away. Viruses escaping into the blood stream are thought to stimulate active immunity. Alternatively, a wart ointment available through veterinary suppliers may be a useful treatment. If you are concerned about the seriousness of a wart infection, contact your local veterinarian.

Source: *Warts on cattle*. Victorian Department of Primary Industries.

Weed identification tool

A weed identification tool is available to use online at www.weeds.gov.au

It provides information about invasive land and water plant species that are on a national weed list or are legislated against in a state or territory. The weed identification tool is not a complete list of all weeds in Australia but other invasive plants are being regularly added to the tool.

To find plants you can enter the weed type (e.g. tree, shrub or grass), flower colour and/or the state or territory where the plant is growing. The program then gives a list of plants meeting the criteria you have set and gives photos and descriptions of each plant.

The weed identification tool provides information on the species' appearance, distribution, habitat, reproduction and dispersal, taxonomy, growth, impacts, control methods, origin, legislative status in states and territories and its status on national weed lists. The information is a compilation of information from a wide range of sources and contributors.

Plants that are perfectly safe to grow in one part of the country can be an environmental or agricultural problem in another. Select plants appropriate for the geographic area in which they will be planted.

Training: AI and Pregnancy diagnosis courses

Beef Breeding Services (BBS) offers training and support services in artificial breeding, bull selection and breeder herd management. BBS and the Australian Agricultural College Corporation coordinate the training.

The most popular workshops are pregnancy diagnosis and artificial insemination (AI).

Pregnancy diagnosis is a three-day course that teaches you the skills to manually test animals for pregnancy. You will learn to use an analytical approach to examine a range of factors in diagnosing pregnancy.

Pregnancy testing can be used to inform decisions about culling, drying off, directing a breeding program or to establish pregnancy status prior to live export.

Cost: \$1050 GST inclusive.



Artificial insemination is a four-day course that covers all the skills you will need to conduct AI programs on your herd, including:

- anatomy and physiology
- heat detection and synchronisation
- program planning
- semen handling
- purchase, care and maintenance of liquid nitrogen units.

Cost: \$1400 GST inclusive. A one-day refresher course is also available.

If you have specific requirements, the training can be customised.

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Free publications: Weaner management and Heifer management

Meat & Livestock Australia has published two new manuals.

The *Weaner management in northern beef herds* manual is a 59-page compilation of the latest research, demonstrations and practical knowledge available on weaning and weaner management in northern Australia. This manual focuses on two important aspects of weaner management:

1. best management practice for feeding and educating weaners
2. using weaning of young, light calves under difficult conditions to reduce mortality and improve breeder fertility.

The *Heifer management in northern beef herds, 2nd edition* manual focuses primarily on heifer management in extensive beef herds but these principles apply to all beef herds across northern Australia, despite differences in scale of operations, breeds, climatic conditions or pastures types. This 34-page manual is an outcome from



the MLA-funded heifer projects run in northern Australia and incorporates findings from these projects and research results from Beef CRC 2 projects.

To order or download free copies

To order hardcopies of these publications, phone the MLA membership services hotline on 1800 675 717 or email publications@mlla.com.au

Or download electronic copies from www.mlla.com.au/Publications-tools-and-events/Publications

- *Weaner management in northern beef herds* (Publication code 9781741919011)
- *Heifer management in northern beef herds 2nd edition* (Publication code 9781741916553)

Buying bulls this year?



As we approach the breeding season it raises the question, do you have sufficient 'sound and fertile' bulls on hand? Many areas are now experiencing better seasons and this provides an opportunity to 'tidy up' breeding programs that may have slipped, or become later and longer, during drought years.

Some bull breeders have a very good bull replacement policy. However in many herds, by the time a bull failure is detected (if at all), the loss to the production system is far greater than the cost of a replacement bull.

The first priority for bulls in a breeding herd is to maximise pregnancies within a limited mating period. The challenge is to identify and cull sub-fertile bulls from the existing sire battery and replace them with bulls of superior fertility that also offer other positive genetic traits.

There is great variation in the calf-getting capacity of bulls. In fact, it is often the minority of bulls that produce the majority of calves. The joint Queensland Government-MLA Bullpower project demonstrated that, of the 245 bulls mated:

- 58% of the bulls sired 10% or less of the calves
- 7% of the bulls sired **no** calves
- 13% of the bulls sired over 30% of the calves.

All new potential sires joining your herd need to have passed a bull breeding soundness evaluation (BBSE). This is the standard bull assessment process that the Australian Cattle Veterinarians (ACV) recommends. The BBSE summary report indicates scrotal size and whether the bull meets fertility standards encompassing physical assessment, crush-side semen assessment, morphology and serving ability. A complete BBSE provides the purchaser with a much greater degree of confidence about the potential calf-getting ability of the bull(s).

Bull buyers need to take responsibility and be proactive in obtaining the information they need to make good bull selection decisions. If a bull vendor does not advertise that they have BBSE information on their bulls, ask them for it. If they cannot, or will not, provide the information, seriously consider whether you should source bulls from them. Most people would not buy a car without proof that it is in good working order.

Unfortunately, serving ability or capacity is often not assessed in the BBSE, so the bull's interest and ability to mate with cows is often unknown. It is recommended that you observe all bulls before

the commencement of mating or at least early in the mating period to check that they are actively serving. Appropriate disease prevention is also important. Ideally paddock sires should be re-assessed each year before mating because the effect of injury, structural weaknesses, age and progressive genetic conditions will become evident over time and can significantly reduce the number of calves produced.

Additionally, bull buyers need to have a clear picture of the genetics required to take their herd forward. BREEDPLAN data provides an estimate of the genetic potential of a sire for a range of economic traits including fertility, calving ease, growth and carcase characteristics. Unfortunately, neither the bull purchaser nor the progeny from a sire, benefit from the amount of feed or pampering a bull may have received before sale. Hence the importance of identifying the genetic potential of the prospective sire(s). The right (or wrong) bulls will continue to make a big difference to profitability long after they have been replaced.

Kay Taylor

*Former Senior Beef Extension Officer,
Queensland Government, Miles
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Beef CRC: legacy website

The Beef CRC has launched its legacy website, an online archive of research outcomes from the Australian government and beef industry's investment in the Cooperative Research Centre for Beef Genetic Technologies.

The available information includes:

- 20 peer-reviewed fact sheets
- Australian beef producer case studies
- Producer books, featuring different production systems and case studies
- Champions national beef extension network
- Summary and status of Beef CRC 3 products (focusing on beef genetic technologies) as at June 2012.

Visit the Beef CRC legacy website at www.beefcrc.com

Producers asked to stand by what they sell

As consumer scrutiny of the production of food grows, Australia's livestock producers are being urged to once again commit to the Livestock Production Assurance (LPA) program.

LPA is the Australian livestock industry's on-farm food safety program, which was introduced seven years ago.

It underpins the LPA National Vendor Declaration, which all LPA-accredited producers are required to sign when selling livestock.

From 1 August 2012, accredited producers will be required to confirm their commitment to the LPA program when ordering new NVD booklets. If they do not, they will be unable to purchase LPA NVDs.

"In signing the declaration, producers are pledging that they have carried out all the farm management practices that underpin the LPA standards," said Kevin Roberts, LPA Advisory Committee chairman.

"These practices ensure that the red meat produced is safe to eat, and meets the stringent conditions of our export markets.

"The success of our livestock industry is underpinned by Australia's enviable reputation as a producer of safe red meat. We export red meat to over 100 countries with varying food safety and market requirements," Mr Roberts said.

"LPA provides a food safety assurance to these customers. It's about every individual producer fulfilling their responsibility in the safe production of red meat. Signing the LPA NVD demonstrates that producers stand by what they sell."

According to Mr Roberts, the Australian red meat industry, its reputation in both domestic and international markets, and the livelihoods of individual livestock producers are dependent upon all participants fulfilling the obligations of LPA accreditation.

LPA accreditation also helps to ensure that livestock sells for the highest possible price and is not discounted.

To renew their commitment to the program, producers are required to complete a declaration that includes answering nine questions. This can be done online via www.mla.com.au/lpa or by calling the LPA helpline on 1800 683 111.

"Accredited producers have previously agreed to the requirements of the program and the recommitment process is a way to ensure



Kevin Roberts, LPA Advisory Committee chairman.

awareness of the on-farm practices required under LPA is maintained," said Mr Roberts.

"The LPA Advisory Committee has agreed to this way forward because all LPA-accredited producers need to be aware of and understand their responsibilities under the program."

LPA is overseen by the industry's LPA Advisory Committee (LPAAC)—made up of representatives of peak bodies in the red meat production business—and aims to provide an assurance of the safety of red meat grown on Australian farms.

FutureBeef and the social media revolution

Did you know that world-wide:

- there are 165 million Twitter users
- 175 000 tweets are made per minute
- four billion things are shared on Facebook every day
- two million YouTube videos are viewed each day

And in Australia there are around 10 million Facebook accounts!

FutureBeef has joined the Facebook and Twitter phenomenon to try reach as many people as possible with news and information relevant to the beef industry and beef consumers.

Let's share information and create awareness to benefit our industry and businesses.

Join in the FutureBeef conversation today at www.facebook.com/futurebeef and www.twitter.com/futurebeef



Timely tips Spring/Summer 2012

SPRING: September–October–November

Breeding

Breeders

Assess breeder condition for mating. First calf cows may need extra care, including supplements.

Vaccinate maiden heifers for leptospirosis if a problem has been diagnosed (two vaccinations four weeks apart).

Check calving cows, especially heifers, regularly. If possible keep calving cows, especially heifers, in paddocks that are readily accessible and fairly close to a set of yards.

Make up a calving kit (calf pulling gear, chains, buckets, clean water, antiseptic, gloves, boots and overalls). Have calving gear clean and ready to use.

If you have to assist a cow giving birth, make sure you wear appropriate safety gear (long gloves etc). Brucellosis, leptospirosis (from infected urine), Q fever are very serious diseases in humans.

Know, and have on display, the telephone number of your local vet.

Record all females that have calving problems and sell them and their calves as soon as practicable.

Order NLIS ear tags or rumen boluses for calves branded this year.

Bulls

Evaluate information available on potential bull supplies, ideally after semen-testing your current working bulls so you know how many you need to purchase.

Purchase bulls according to guidelines. Remember, you get paid for number of calves (fertility) and weight (weight gain).

Check purchased bulls are in working condition, not fat sale condition.

Conduct a breeding soundness evaluation test (BBSE) on all bulls, checking for both physical and reproductive soundness:

- Semen-test all working bulls, culling any that are sub-fertile.
- Check all bulls for injuries, stiffness of gait, cuts or swelling, foot problems such as overgrown toes, swelling between the toes etc.
- Cull bulls on age unless you are very sure they are still fertile and active. The general recommendation is cull at about seven years of age but in smaller herds bulls may continue to

work until much older.

- Cull any bulls with defects.

Vaccinate bulls for three-day sickness (BEF) and vibriosis (two doses one month apart initially, then annual booster).

Check mating paddocks are secure.

Put bulls out with breeders:

- Mate heifers one month before the main herd if nutrition is adequate.
- Mate young bulls with young cows.
- Avoid mixing bulls of different ages, if possible, to reduce fighting.

Weaners

If you have time, spend it working the weaners and reminding them of the training they received as weaners.

Check for worms and treat if necessary.

Growing cattle (steers and cull heifers)

Consider vaccinating against three-day sickness (BEF), particularly forward stock close to turnoff.

Nutrition

Review dry season management plan and climate forecasts.

Reassess pasture quantity and quality in relation to ground cover and feed values at the end of the dry season.

Feed energy and protein supplements to breeders that are heavily pregnant or lactating and to weaners to maintain liveweight.

Evaluate effectiveness and cost-benefit of winter supplementation program.

Re-order molasses, grain supplies or supplements for next dry season.

Pastures

Check pastures at the spring break. Is there enough ground cover?

Consider spelling pastures early in the growing season for a positive impact on pasture composition. Prolonged heavy grazing of fresh growth will have a serious detrimental effect on the desirable species of grasses.

Consider burning native pastures to maintain good pasture condition and control woody weed growth. Check and control weeds before they seed. Actively patrol known 'hot spots'. Check areas used for supplementary feeding.



Timely tips Spring/Summer 2012

Watch long-range weather forecasts for suitable time to plant pasture.

Check firebreaks and fire-fighting equipment.

If pasture development is a part of your overall plan, sow pastures if seasonal conditions are favourable. If you can't get the pasture in by the beginning of October it is best to wait until the New Year. This reduces the risk of failed establishment due to heatwave and drought conditions or, in a very good year, flood conditions.

Parasites and disease

Vaccinate bulls for vibriosis.

Vaccinate for three-day sickness.

Vaccinate all breeding cattle, including bulls, for pestivirus if this is a problem in your area. Note that the initial vaccination can cause a fever, so vaccinate bulls well before joining.

Obtain cattle dip analysis and adjust chemical level if necessary.

Check early calves (late winter) for ticks.

Start tick control program, if required.

Check weaners for worms (send faecal samples to WormCheck program) one month after season has broken.

Business

Meet with all staff to discuss progress of the business and plans for the future, including retirement and succession planning.

Research training programs and budget for personnel to attend programs applicable to your business.

Review overall property management and consider changes that may be necessary.

Review your breeding program. Assess whether it is producing animals that meet market requirements.

Property maintenance

Check mating paddocks are secure.

Check river and creek crossings before wet season.

Before end of dry season look for green patches in paddocks that might indicate water leaking from underground piping.

Maintain fire-fighting equipment, extinguishers etc and ensure staff are fully trained in equipment use.

Clean around buildings and check gutters are free of leaves.

Ensure fire breaks are maintained and accessible.

SUMMER: December–January–February

Breeding

Breeders

Mate heifers with young bulls and mate them earlier than the rest of the herd. This will give them a little more time to conceive next mating period.

Check heifers are well grown and in strong condition.

Don't let maiden heifers get too fat.

Identify dry cows that have lost their calves and sell them.

Treat all cows for buffalo fly if bad this season.

Calves

Brand, dehorn, castrate, tag and vaccinate (5-in-1 or 7-in-1).

Enter new calves onto herd performance recording program.

Enter new calves onto NLIS database.

Bulls

Observe bulls in mating paddocks. Are they all working?

When mating multiple bulls with a group of cows, try to use bulls that are the same age and weight to avoid bigger, older bulls expressing dominant behaviours.

With single sire groups, keep a close eye on the bull working. Each time, note the tag number of a cow he is with and check that she does not come back in season in three weeks. If a number do return get another bull into that paddock, remembering that not every mating results in a pregnancy. Preferably use bulls with at least 70% normal sperm for single sire mating. Normal sperm count of 50% is adequate for multiple bull mating.

Weaners

Check for re-grown horns and dehorn if necessary. Check ear tags and replace if missing.

Growing cattle (steers and cull heifers)

Weigh and assess individually rather than on average.

Assess performance against required target.

Check whether poor calves come from one bull. If so, cull bull and calves.

Treat cattle for buffalo fly if bad this season.

continued...

Summer Timely Tips continued...

Consider HGP implants for steer calves for non-EU sale, remembering implants can affect MSA grading.

Evaluate markets and plan sales. Do you have to book cattle into meatworks or feedlots?

Nutrition

Start phosphorus supplementation program in deficient areas. Continue until end of the growing season.

Make sure you have correctly estimated the amount of hay needed for weaning and any other supplementary feeding. Fill hay shed while hay is cheaper.

Pastures

Evaluate post-dry season pasture management.

Spell leucaena for at least two months.

Consider applying maintenance fertiliser to sown pastures.

Lock up paddocks to build up pasture seed banks in the soil.

Consider growing a summer forage crop to carry cattle while pasture paddocks are being spelled.

Consider setting areas aside for reforestation.

Parasites and disease

Continue tick control program.

Check young cattle for worms. Treat if necessary.

Send faecal samples to WormCheck two weeks after treatment to check for resistance to worm drenches. Get samples from the smallest animals.

Control buffalo fly where applicable with correct sprays, insecticidal ear tags and buffalo fly traps.

Make sure all chemical treatments used are entered into correct files for traceback. Observe withholding periods (WHPs) for all chemicals used on farm.

Business

Have annual health check.

Have a break with the family over Christmas.

Evaluate markets and plan sales for coming year.

Review marketing options.

Update NLIS database for all cattle that were born, purchased or sold, or that died, during the year.

Check all permits and registrations are up to date.

Property maintenance

While water is in dams and creeks, carry out annual maintenance on windmills and watering points.

Carry out workplace health and safety audit across property.

Do annual electrical safety checks on all household and farm equipment.

Consider attending Chemical Accreditation Program through AgForce SMARTtrain.

Carry out vehicle and machinery maintenance during 'wet season' break. Check that dry season supplement feed-out trailers are ready for the next dry.

Growing leucaena in Queensland

Leucaena is a tropical shrub legume that provides high quality foliage for grazing ruminant animals. It's very palatable and will persist and remain productive for more than 50 years. Merchants first brought leucaena into Australia over 100 years ago and so many stands have naturalised along the Queensland coastline. This leucaena is called common or weedy leucaena, and is a different variant to the grazing cultivars that were first grown in commercial beef situations during the 1970s.

Originating from Mexico and central America, leucaena prefers a tropical environment where wet, hot summers and mild winters prevail. Little to no grazing value is available during the winter in southern Queensland, as growth ceases once average daily temperatures fall below 12–15°C. Leucaena will drop leaf after frosting and heavy

frosts can kill stems, however, frost rarely causes plant death. Once temperatures warm in spring re-growth quickly occurs from the stems, or from the base of the plant if the stems were frosted.

Leucaena will grow on a range of soil types however production is maximised on deep (1 m+), fertile (high phosphorus), well-drained soils (loams to medium clays). Once established leucaena can be productive on a range of soil types. Recent plantings in forest country with native pasture (e.g. fertile loam creek flats) are providing high forage production that is significantly boosting the protein available, especially in spring and autumn.

Animal production from leucaena has been extensively studied and grazer experience confirms that beef production per hectare can more than double the production from grass-only pastures on the same country. The current

producer demonstration site at Bell that DAFF beef officers Tim Emery and Roger Sneath coordinated is providing further evidence, with cattle on leucaena–grass pastures gaining 260 kg/ha compared to 130 kg/ha on grass-only pastures over a 12 month period. This is primarily due to high quality feed being available for longer during the season. This, together with higher feed availability is enabling better individual animal performance and higher stocking rates. Stock are reaching slaughter weights 6–12 months earlier than similar stock on grass-only pastures (figure 1), providing a better weight-for-age animal with improved carcass characteristics.

While leucaena–grass pastures provide significant beef production and profitability benefits, these can only be obtained if cattle are drenched with the ‘leucaena bug’. The ‘bug’ is an anaerobic rumen bacterium that neutralises a toxic by-product of mimosine breakdown. Mimosine is an amino acid found in leucaena leaves and stems. The bug is distributed from DAFF’s Wacol Tick Fever Centre in Brisbane. Place your order by phoning 07 3898 9655.

Another serious issue is the weed potential of leucaena. Poorly managed leucaena will produce seeds that can be spread by birds, wind or water

and lay dormant for many years. The grower organisation, The Leucaena Network has produced a code of practice that all leucaena producers should follow to minimise the environmental impacts while maximising the productive potential of their leucaena plantations. It’s imperative that leucaena is managed to prevent seeding, and that all volunteer plants are controlled, especially outside grazed paddocks. Log onto www.leucaena.net to become a member and to access the latest information about leucaena production.

Is growing leucaena for me? If your pastures are run-down or there are periods of low protein availability, leucaena can improve cattle performance. Choose a paddock with your deepest and most fertile soil type, preferably above the frost line. Establish a vigorous leucaena stand with a productive grass, and rotationally graze to maximise animal production and minimise height and seeding. For more information about establishment techniques, varieties and management log onto the DAFF website, or contact Stuart direct.

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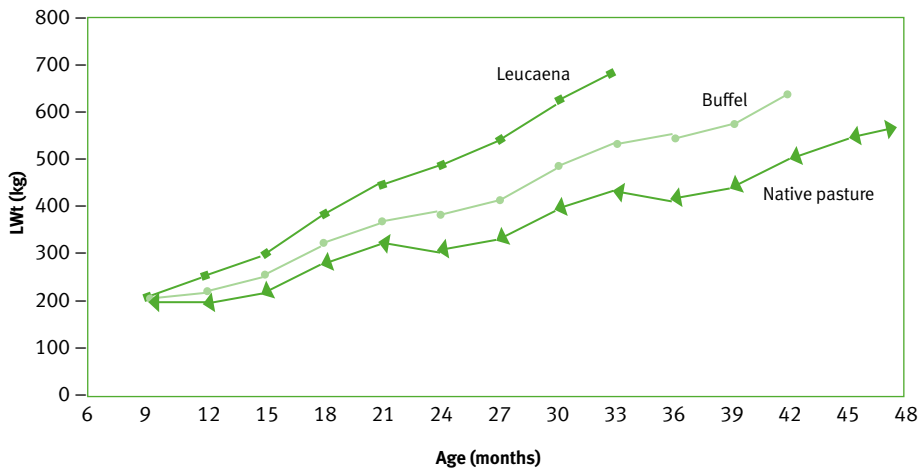


Figure 1. Steer performance from leucaena compared to buffel and native pastures (Col Middleton).

If you would like a copy of *Beefstalk* mailed to you, please complete the following form and send to *Beefstalk*, DAFF, PO Box 118, Gayndah 4625 or Email felicity.mcintosh@daff.qld.gov.au

Name:

Address:

Postcode: Shire: Property Number: No. of cattle:

Phone: Fax: Email:

Which of the following best describes you?

Beef producer Agribusiness outlet Education Other (please state)

Handy hint:

Stop weaners turning around in the race



Weaners were turning around in our cattle race when we were inoculating them. This was wasting our time and effort and resulting in frayed tempers.

To stop the weaners turning around we narrowed the race by inserting panels made from 40 mm x 40 mm RHS inside the race. The panels are Cobb & Co-twitched to the rails of the race to stop the panels being shifted up or down, backwards or forwards.

Panel dimensions and RHS size will depend on the dimensions of your race and how narrow you need to make it to prevent young stock turning around. If your race is already quite narrow you may only need

panels on one side of the race. We use the panels in two sets of yards where one race is shorter than the other. We made up two panels to a side so the panels can be used in both yards. The rails are spaced to stop the calves getting their heads stuck.

We only use these panels at weaning so the panels have to be light and easy to move. The rest of the time we need the races to be wide enough for adult cattle.

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