

CQ BEEF

Better Economic and Environmental Futures

Issue 14

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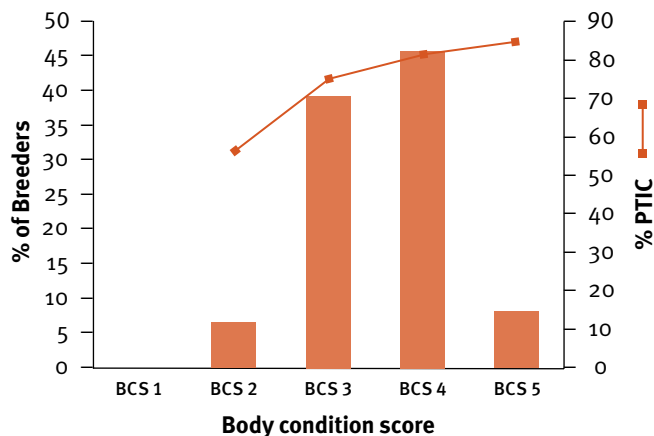
Targeting better breeder performance – a group approach

Reproductive performance remains a critical issue for beef cattle herds across Queensland. Low conception rates, reproductive losses and delayed conceptions can have a significant impact on profitability. Members of the Billaboo CQ BEEF group have recognised these losses occurring in their own herds and have established a Producer Demonstration Site (PDS) with the help of MLA and DAFF to look at:

1. Better measuring the reproductive performance of their herds so that losses can be identified.
2. Determining the risk their businesses face from reproductive diseases in their herds.
3. Implementing the best strategies to manage their breeder herds to reduce the negative impact of reproductive diseases.

Since starting the PDS in 2010, group members have been keeping detailed records of pregnancy test results and foetal ageing, heifer and cow weights and body condition scores after the dry season (before joining), the disease status of breeding females and also weaning percentages.

The results from the first year of data have been collated and analysed for the group. In graph 1 the bars show the percentage of breeders in each body condition score. The line shows the pregnancy rate of cows in each condition score. As you can see, the cows in better body condition had a higher pregnancy rate. The majority of the cattle were scored a 3 or 4 for body condition.



Graph 1. Breeder body condition scores and pregnancy rates.

Peggy Rohan
Beef Extension Officer
DAFF Emerald
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Key points

- Breeder weight and body score affect pregnancy rates.
- The majority of herds in CQ have had exposure to pestivirus (BVDV).
- Vaccination is not something you should do in isolation—the herd’s disease risk and other control measures also need to be considered.

Continues on page 3



Editorial

Welcome to our 14th issue.

On 2 March Central Queensland's next generation were invited to an MLA-hosted Beef-Up Forum at Capella. The 'happy snaps' below show a very successful day where participants listened to, and discussed, presentations from key industry speakers. Team MoosterChef won the popular MasterChef-style cook-off.

Recently the Climate Savvy Grazing project held a series of field days at properties near Mornish and Rolleston. Another two field days were postponed due to rain at Clermont and Alpha. Discussions at the field days focused on land condition,

pasture management, spelling strategies, climate variability and change scenarios, carbon in a beef business and fire as a management tool.

The Climate Q project has some money to track diet quality through a series of faecal NIRS samples. If you're interested please contact me by email, byrony.daniels@deedi.qld.gov.au or phone 07 49 837 467.

We hope to see you at Beef Australia 2012. Please pop in at the DAFF site and/or register for a DAFF seminar.

Byrony Daniels, CQ BEEF editor

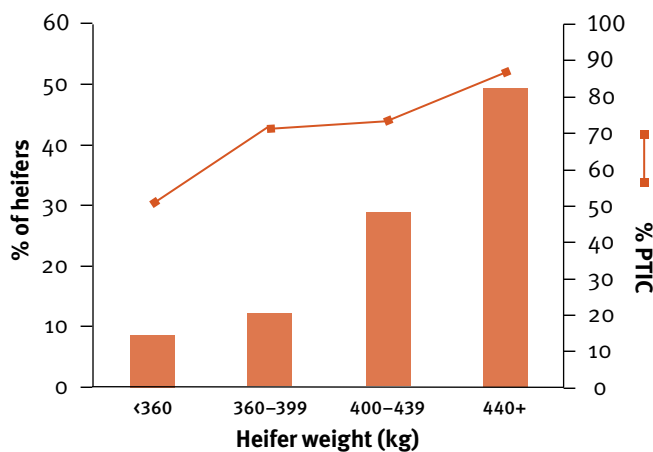
Please use the feedback sheet provided to let us know of any topics you would like covered in the newsletter. If you know someone who would like to receive the newsletter, ask them to fill out their details and return the feedback sheet.



Happy snaps from an MLA-hosted Beef-Up Forum held at Capella in March.

Members of CQ's 'next generation' (above) gathered to interact with key industry speakers and challenge each other in a MasterChef-style cook-off, where team Mooster (right) took out the honours.





Graph 2. Heifer weights and pregnancy rates at time of pregnancy testing.

Graph 2 shows the significance of weight at joining for maiden heifers. Heifers above 440 kg achieved an average 87% pregnancy rate compared to just 51% for heifers below 360 kg at the time of pregnancy testing.

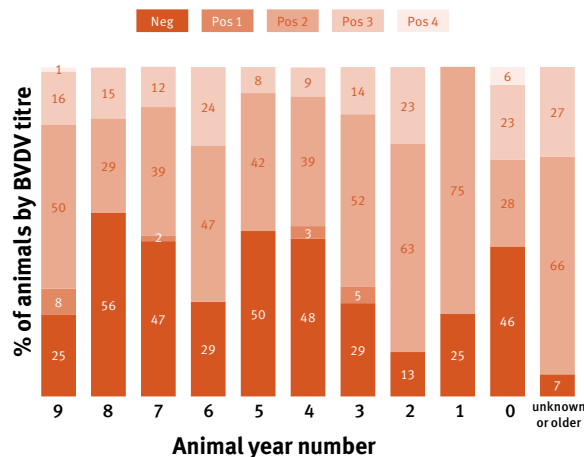
Serological tests showed that all herds in the project had been exposed to the reproductive disease, pestivirus (BVDV). Graph 3 shows the proportion of animals in each age group that had been exposed to BVDV. A positive 1 or positive 2 result indicates widespread exposure in the past. A positive 3 or positive 4 result indicates recent exposure to BVDV infection (within the last 3–9 months).

The group members met recently to review their results and discuss management strategies. Professor Michael McGowan (UQ veterinarian and highly regarded expert in the field of bovine reproduction and associated diseases) attended the meeting to provide insights into methods of controlling BVDV within beef herds. Professor McGowan told the group that it is common in many herds for the younger animals to be naive while older animals have a much higher rate of exposure.

The group discussed various methods of controlling BVDV within their herds. The most critical time to protect your herd from infection is during joining and the first two trimesters of pregnancy, when any infection may delay conception, cause abortions or result in the birth of persistently infected (PI) calves. Your management of BVDV will depend on your enterprise and your production goals. Professor McGowan suggested that a stud herd may derive considerable benefit from eradicating BVDV, whereas the focus in a commercial herd might be on controlling BVDV infection.

Auto-vaccination

This approach involves using one or more persistently infected (PI) animals to infect heifers before they are first mated. The trouble with this method is that PI animals can be difficult to identify, often die at a young age, and because they often are clinically normal, they may be inadvertently mixed with other pregnant females, which can result in further losses.



Graph 3. Prevalence of previous exposure to BVDV by age.

Biosecurity

Because introduced animals are often the source of infection, biosecurity is an important consideration.

Although a persistently infected bull calf is unlikely to be selected and sold as a sire, it is possible, and for this reason many bull breeders are testing to ensure their sale bulls are not persistently infected.

Pregnant cows are the animals most likely to introduce the disease. Professor McGowan explained that a pregnant female is like a Trojan horse because there is no way to test if she is carrying a persistently infected calf.

To assess the risk you can keep introduced cattle separate from the herd until they have been tested to determine their BVDV antibody status. If an AGID antibody test identifies a number of 3+ or 4+ antibody animals then there is a good chance that the infection occurred recently (possibly during the first two trimesters of pregnancy) and that some of these females could be carrying a PI calf. Unfortunately, the AGID test will not detect PI animals—these animals will give a negative result along with animals that have not been exposed to the disease. A more expensive ear notch test is available to identify PI animals. Any offspring from a PI cow will also be persistently infected.

If it is identified that a group of introduced pregnant females present a risk in a herd, then a management strategy could be developed on the basis of the status of the existing herd and management system in place.

Vaccination

A vaccine is available but it is relatively expensive with the two initial doses currently costing \$8.24/hd and the annual booster \$4.12/hd. Professor McGowan says that vaccination is like buying insurance—it is about managing your risk.

Because all the tested Billaboo group herds showed significant levels of exposure to pestivirus in the older cows there would be little value in vaccinating these

animals. However, the heifers in these herds have had little exposure and are at risk.

Vaccinating joiner heifers will provide initial protection but they will be at risk as the protection wanes. A heifer-only vaccination strategy relies on the animals being exposed to the disease to boost immunity before the vaccine protection wanes. This strategy could be appropriate if the heifers are mixed with older age groups where the disease is present before their second mating.

Where heifers are segregated from the main breeder group for the first and second matings then vaccination over two years is desirable.

Where older cow groups have had high levels of exposure to BVDV, it is possible PI animals are present, thereby keeping the disease active in the herd. Culling older cows and vaccinating

heifers will remove potential sources of infection. As the incidence of disease is reduced, the herd's vulnerability will increase.

Consequently, vaccination may be appropriate where there is a risk of the disease being re-introduced by purchased or stranger cattle.

Economic analysis of vaccination strategies was undertaken using Breedcow/Dynama software. This showed that a 2% reduction in foetal and calf losses from pregnancy test to weaning would pay for a whole herd vaccination strategy.

Given the high levels of exposure to pestivirus in older animals in many herds, a whole herd vaccination strategy can be implemented by starting with joiner heifers and gradually (year-by-year) building up to vaccinating the whole breeder herd.

New team to assist beef producers with genetics and breeding

Tropical Beef Technology Services (TBTS) has appointed Paul Williams and John Bertram to its technical officer team from 6 February 2012. They will replace the previous technical officer Philip Mann who has done an exceptional job over the past three years.

TBTS is a joint initiative between Meat and Livestock Australia (MLA), the Agricultural Business Research Institute (ABRI) and eight tropical cattle breed associations (Brahman, Droughtmaster, Santa Gertrudis, Brangus, Belmont Red, Charbray, Senepol and Simbrah). TBTS undertakes a range of initiatives to improve the understanding and uptake of genetic improvement technologies in the tropical cattle beef breeding sector.

Both Paul and John bring a wealth of practical experience and research knowledge in breeding tropical cattle to the TBTS project.

Paul was previously employed as a technical officer for CSIRO Livestock Industries based in Rockhampton. His main responsibilities involved running and assisting in all aspects of research projects focused on beef production in Northern Australia. This included performing ultrasound scanning on beef cattle for carcass and fertility traits and undertaking artificial breeding programs.

Through his role with CSIRO, Paul commenced with Beef CRC I in 1996 on the Northern Crossbreeding Project at Duckponds, Emerald. His work continued in CRC II and III where he specialised in ovarian and carcass scanning, studying genetic links between meat quality, adaptation and heifer puberty. Through his Beef CRC roles Paul has worked in the Northern Territory and across Queensland and has vast experience with management of breeding programs, data collection and analysis.

John will need little introduction to most CQ BEEF readers. After over 20 years in senior beef extension roles in the Northern Territory and Queensland, John now works as a breeding and genetics consultant. He has had a particular focus on beef cattle fertility, selection and genetics—regularly distilling complex research findings into practical management strategies. John also breeds performance focussed tropical composite cattle on his properties in the Brisbane Valley and in the Goondiwindi region.

Paul will initially be based in Armidale for intensive training before relocating to the Rockhampton office in Brahman House in July 2012. During Paul's training period, John Bertram will undertake many of the important TBTS initiatives including on-property consultations relating to performance recording and general extension activities such as workshops and field days. Following Paul's move to Rockhampton, John will continue to play a part-time role in the project and mentor Paul.

Christian Duff will also continue to work part-time in the TBTS project, primarily through management of ABRI's Beef Breeding Extension Division.



Tropical Beef Technology Services (TBTS) has appointed Paul Williams Technical Officer team.

QRAA...Your partner in sustainability and productivity

QRAA Sustainability Loans can help you achieve long term productivity and sustainability for your cattle enterprise. In recent months QRAA has assisted Central Queensland graziers to improve pasture utilisation and reduce the threat of overgrazing through lending funds for projects to reduce paddock sizes and increase the number of watering points.

If you are looking for cost-effective ways to implement grazing land management and sustainable production strategies then QRAA's Sustainability Loans with concessional interest rates and long term repayment arrangements may be of assistance.

With a buoyant cattle market, the opportunity exists for beef producers to maximise their dollars per hectare through infrastructure changes that can result in better carrying capacity, improved calving rates and an increase in stock condition.

QRAA Sustainability Loans provide funds for projects such as fencing, upgrading stockyards and pasture improvement programs. These loans can provide terms of up to 20 years so the loan term matches the depreciation of your infrastructure investment.

Funds can also be provided on terms up to seven years for livestock purchases to change an enterprise from a fattening to a breeding operation. Graziers looking to improve their

supply chain could discuss with QRAA the opportunity to add fattening or breeding blocks to their pastoral enterprise or, subject to relevant approvals, develop a feedlot operation.

QRAA Sustainability Loans do not incur any fees or charges. Loan amounts up to \$650 000 are available and, depending on the type of project and financial requirements, up to two years of interest-only repayments can be provided within the loan. There are no exit fees with QRAA loans.

Interest rates can be locked in for one year, three years or five years with the corresponding interest rates currently at 5.22%, 5.06% and 5.33% for loans drawn down from 1 January 2012 to 30 June 2012.

QRAA has Client Liaison Officers based in Rockhampton, Longreach, Bundaberg and Mackay who are happy to discuss your requirements on-farm and assist with loan applications.

If you are considering farm succession, a QRAA First Start Loan may be available to assist with the purchase of an initial property or to purchase a stake in a current partnership for the next generation. Loan terms and conditions are similar to the Sustainability Loans.

For further information on QRAA's First Start and Sustainability Loans contact QRAA on Freecall 1800 623 946 to speak to your local Client Liaison Officer or visit qraa.qld.gov.au.

Craig Turner
Manager, Customer Relations
QRAA
1800 623 946



<p>Mark Barrett Bundaberg</p> <p>Sam Spina Innisfail</p> <p>Geoff Kerr Longreach</p> <p>Mieke Elder Roma</p> <p>Bill Fletcher Kingaroy</p> <p>Peter Crowley Mackay</p> <p>Brendan Hamilton Rockhampton</p> <p>Zoe Burke Toowoomba</p>	<p>Freecall: 1800 623 946</p> <p>Website: www.qraa.qld.gov.au</p> <p>Bundaberg Mark Barrett Phone: (07) 4154 2874 Mobile: 0417 775 547 mark.barrett@qraa.qld.gov.au</p> <p>Innisfail Sam Spina Phone: (07) 4064 2824 Mobile: 0429 497 757 sam.spina@qraa.qld.gov.au</p> <p>Kingaroy Bill Fletcher Phone: (07) 4160 0716 Mobile: 0417 778 317 bill.fletcher@qraa.qld.gov.au</p> <p>Longreach Geoff Kerr Phone: (07) 4658 2879 Mobile: 0417 775 345 geoff.kerr@qraa.qld.gov.au</p> <p>Mackay Peter Crowley Phone: (07) 4967 0728 Mobile: 0427 770 147 peter.crowley@qraa.qld.gov.au</p> <p>Rockhampton Brendan Hamilton Phone: (07) 4936 1872 Mobile: 0417 775 245 brendan.hamilton@qraa.qld.gov.au</p> <p>Roma Mieke Elder Phone: (07) 4622 8527 Mobile: 0427 029 141 mieke.elder@qraa.qld.gov.au</p> <p>Toowoomba Zoe Burke Phone: (07) 4634 8887 Mobile: 0427 690 448 zoe.burke@qraa.qld.gov.au</p>
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Lantana fly spreads its wings in CQ

The lantana fly is proving to be an effective biological control agent against lantana infestations, much to the delight of DAFF entomologists.

Lantana fly, *Ophiomyia camarae*, is native to the Caribbean, Mexico, Central America and Florida. Unlike some previous biological control agents for lantana, *O. camarae* is non-selective in the form of lantana it attacks and this has aided its spread.

The benefit of *O. camarae* lies in its ability to attack large lantana infestations growing in inaccessible areas, such as deep gullies and forests, where it is difficult to use traditional control methods.

The conditions along the eastern coastline provide ideal growing conditions for this small, red-eyed fly. The larval stage of the fly feeds on the lantana leaves, causing a distinct herringbone pattern of mines radiating from the midrib of the leaf. The leaves then turn yellow and fall prematurely, reducing flowering and seeding ability and so reducing the spread of the plant and making it easier to control.

The release method has been extremely easy and effective, using either adult flies or a bag of mined leaves containing pupating flies, hung in the branches of a lantana bush. The adults emerge from their pupae within a week, mate and lay eggs on the leaves, completing the life cycle in 25–36 days.

The fly was reared at the Tropical Weeds Research Centre in Charters Towers from 2008 to 2010, when the rear-and-release project finished. With assistance from regional councils, landholders and fellow government agencies, over 107 500 lantana fly have been released at 83 locations in coastal areas from Cooktown to Gladstone.

Establishment and spread in central Queensland has been very successful with mined leaves being found up to 125 km from the nearest *O. camarae* release site. Populations of *O. camarae* have been found all along the coast from Mackay to North Rockhampton and most recently at Kinka Beach, south of Yeppoon. It is also well established in the area west of Mackay and south to Nebo, encompassing Homevale National Park.

Establishment has been limited west and south of Rockhampton but we are still hopeful, as there is plenty of lantana in this area for the fly to invade. The spread along the Fitzroy Development Road was very promising and showed the potential of *O. camarae* to widen the establishment area and make an impact on more lantana infestations in central Queensland.

Key Points

- *Ophiomyia camarae* creates mines on the midrib of lantana leaves and defoliates all varieties of lantana
- Adult flies are only 2 mm long and can be seen feeding on flowers
- *O. camarae* flies appear to be spreading up to 125 km from release sites
- New sites are recorded and mapped as part of ongoing monitoring of lantana biological control agents

Kelli Pukallus

Biosecurity Queensland, DAFF
Tropical Weeds Research Centre, Charters Towers
07 4761 5711



Leaf damage



Adult lantana fly, *Ophiomyia camarae*

Meaty award for CQ Beef officer

DAFF beef extension officer David Hickey has taken out a national industry award in recognition of his outstanding work on the recently completed CQ BEEF project.

David, based in Rockhampton, triumphed in a field that included extension professionals from right across Australia to collect the Australasia-Pacific Extension Network (APEN) gong for *Excellence in Extension by an Experienced Professional*.

“To be recognised by your peers at a national level is a truly humbling experience, and is something I’m delighted about,” he said. “I accepted the award on behalf of the CQ BEEF project team, as it was their diligent work and resilience that helped make it such an innovative, world-class project and one that achieved significant outcomes.”

The CQ BEEF project focused on improving the output and profitability of beef producers in Central Queensland by increasing the adoption of best practices and technology. It is part of DAFF’s statewide FutureBeef initiative to share research knowledge and promote current technologies and best management practice to lift beef industry profitability.

David will be showcasing some of the project’s outcomes at the Beef Australia 2012 exhibition in Rockhampton from 7–12 May 2012.

“The thing that made CQ BEEF so special was that, although the start point and end goal were clearly defined from the outset, the methodology used throughout the four-year project was very much driven by the graziers.

“Our ongoing monitoring and evaluation afforded us a lot of flexibility, and allowed the graziers to take more ownership of the project.”

CQ BEEF was an extension project developed and implemented by DAFF in the Fitzroy River Basin region of Central Queensland from 2006 to 2010, and received funding and support from the Fitzroy Basin Association. A total of 137 producers across 67 businesses were involved in the project.

At the award’s forum in Armidale, New South Wales, David presented a poster on the extension method of CQ BEEF, conducted a one-hour workshop on project development and presented a paper on the CQ BEEF monitoring and evaluation process.

“One of the most prominent issues facing the beef research community and the industry as a whole is the lack of adoption of practices that will improve the productivity and sustainability of beef businesses and the industry,” he said. “That was the driving force behind the CQ BEEF project, and the evidence suggests that it has been very successful in increasing the uptake of best practices within the industry.”

Although David has been working as an extension officer for the past 14 years, he admits that he learnt a lot from the project. The need for commitment to change on the part of both the producers and delivery staff involved was essential, as was using a range of engagement tools. The project focused all analyses at a whole-of-business level so that producers could see the bigger picture.

Showing the overall benefits made it easier for producers to adopt changes in their businesses. David felt that one of the most satisfying aspects of CQ BEEF was that its package of principles was transferable to other industries where adoption of new practices and technologies was essential.

“By using a fairly holistic approach our method can quite easily lend itself to other industries and situations,” he said. “The award is testament to the success of the CQ BEEF project and the hard work of the team.”



David Hickey accepted the *Excellence in Extension by an Experienced Professional* award at the APEN forum in Armidale.

Staff Profile

Brooke Edwards
Graduate Agricultural
Economist
DAFF Rockhampton
07 4936 0327



Childhood: Born and grew up in Brisbane but spent three years in the Fiji Islands and two years in Cairns.

Career: Just graduated with an economics degree last December so my career is only just getting started!

Interests: Running.

Holiday: Best holiday was six months in Europe on my university exchange last year.

Beef Australia 2012 Seminar Program





Seminars will be held from 8.30 am to 5 pm each day concurrently at two venues, the Bos Taurus and Bos Indicus rooms within the James Lawrence Pavilion, while a 'Technology Room' within the same pavilion will feature free recurring daily presentations.

While all sessions are open to all members of the public, a number of sessions are particularly suited to cattle producers aged 18–35. These are marked below with the Beef Australia 2012 Stockman.



Please note, a ticket will be required and must be booked prior to attending all seminars, including those marked as 'free'. This is to ensure that Beef Australia 2012 can provide adequate seating. Tickets can be booked online at www.beefaustralia.com.au

Tuesday , 8 May	
Bos Taurus Room	Bos Indicus Room
8.30–9.15 am What does the future hold for US domestic beef and export trades? Steve Kay, Cattle Buyers Weekly Web based seminar Ticket price: Free	9–11.30 am Technology... A valuable tool for your farm management Hosted by: AgData Australia Ticket price: \$10
9.30–11.30 am The Right Staff... how to keep your most valuable asset motivated Barb Bishop, beef industry HR specialist Rebecca Taylor, One Harvest Ticket price: \$20	12 noon–1 pm Advances in Leucaena production for northern Australia 1–2 pm Improving productivity of sown grass pastures Hosted by: Queensland Government (DAFF) Ticket price: \$10
2–5 pm Women of Influence Gathering Hosted by: Westpac Ticket price: \$10	3–4.30 pm Your business in the rapidly changing global market Hosted by: ANZ Ticket price: \$10
Wednesday, May 9	
Bos Taurus Room	Bos Indicus Room
8.30–9.15 am Challenges and opportunities for EU Beef Jason Strong, MLA Regional Manager Web based seminar Ticket price: Free	9–11am Tools for achieving sustainable profits for northern herds Hosted by: Pfizer Animal Health Ticket price: \$10
9.30–11 am How Information and Technology Systems will enhance your business Hosted by: CQUniversity Ticket price: \$10	11.30 am–1.30 pm Breeding and genetics for fertility Hosted by: Queensland Government (DAFF) Ticket price: \$10
11.30 am–1 pm How CSIRO science will underpin beef productivity into the future Hosted by: CSIRO Ticket price: \$10	2–3.30 pm How to make a profit in the face of climate change and greenhouse gas emissions Hosted by: Queensland Government (DAFF) Ticket price: \$10
1.30–5.30 pm MLA Producer Seminar Hosted by: Meat & Livestock Australia Ticket price: \$10	4–5.30 pm Grazing BMP benchmark practices and performance Hosted by: AgForce and Fitzroy Basin Assoc. Ticket price: \$10

Thursday, May 10	
Bos Taurus Room	Bos Indicus Room
9.30–11.15 am Producer Power ... How your story can grow your industry Troy and Stacy Hadrick Jo Brosnan, NTCA Ticket price: \$20	 8.30–10.30 am Oxidative stress, why the energy thief is stalling performance Hosted by: Novus Ticket price: \$10
11.30 am–1.30 pm Advances in Animal Welfare Hosted by: Queensland Government (DAFF) Ticket price: \$10	11 am–1 pm How genetics, the environment and global markets come together at AAco. Hosted by: AAco Ticket price: \$10
2–5 pm Succession Planning—preparing for the next generation in your farming business Hosted by: Suncorp Bank Ticket price: \$10	 1.30–3 pm ‘Sustainable Beef’—What does it mean, and why is it important Hosted by: Roundtable for Sustainable Beef Australia Ticket price: \$10
	3.30–5 pm Carbon, tax, and hot air ... finding answers for your business Ticket price: \$10
Friday, May 11	
Bos Taurus Room	Bos Indicus Room
8.30–9.15 am Have Australia’s commercial beef brands run out of steam? David Thomason (web based seminar) Ticket price: Free	 8 am–12 noon Suncorp Bank Milk Tooth Muster Breakfast and Forum Ticket price: \$20
9.30-11.30am Riding the Agri-Business Wave Michael Pascoe and Peter Hughes Ticket price: \$20	

Technology Room—James Lawrence Pavilion	
Tuesday, Wednesday, Thursday and Friday	
9–10 am	A hands-on look at Grazing BMP
10.30–11.30 am	Adapting to our variable and changing climate, hosted by the Queensland Government (Queensland Climate Change Centre of Excellence)
Tuesday, Wednesday and Thursday	
2–3 pm	Concerned about CSG activities? Landholder Coal Seam Gas Information Sessions, hosted by AgForce Projects
Wednesday and Thursday	
1–1.45 pm	Between a rock and a hard place... a focus on the importance of managing safety on your property and work health and safety legislation, hosted by Workplace Health and Safety Queensland

While entry to the Technology Room is free, and does not require a ticket, seats will be limited.

Hudson pear

The class 1 weed Hudson pear (*Cylindropuntia rosea*) has recently been discovered at the Willows, approximately 80 km west of Emerald.

Originally from Mexico, Hudson pear is a densely branched cactus that grows up to 1.5 m tall and 3 m wide. Stem segments are green to grey-green, cylindrical, up to 90 cm long by 4 cm wide and easily detached.

Hudson pear is readily dispersed by small stem-segments that become dislodged from the parent plant whenever an animal, vehicle or person brushes against it. The segments take root when they contact the ground.

Small infestations of Hudson pear are found in South Australia, the Northern Territory and Western Australia. In New South Wales, Hudson pear is most abundant around the opal fields of Glen Garry, Grawin and Lightning Ridge in the north western plains. Estimates of the area of New South Wales infested range from 60 000 to 100 000 hectares.

Hudson pear has been recorded at four sites in Queensland; Mundubbera, Charleville, Cracow and the latest at the Willows. All of these sites are now being actively managed by Biosecurity Queensland to prevent further spread, and hopefully eradicate it.

The impact of this pest cannot be understated. The long sharp thorns are also barbed, and will easily penetrate thick leather boots, but require pliers to be removed. The establishment of Hudson pear prevents the use of infested country for agriculture or recreation.

The Hudson pear detected at the Willows was found in a garden by a Central Highlands Regional Council (CHRC) officer. The cactus was removed from the garden and sent to Brisbane where researchers are trying to find potential biocontrol agents for this weed.

It is not known where the cactus originated from, but the early detection of this pest means that the development of another significant infestation has been prevented. The most significant of the four Queensland infestations is at Cracow, where control work is ongoing.

Hudson pear is controlled either chemically, using an overall spray or mechanically by collecting the plants and burning them.

Central Queensland landholders are asked to report any suspicious cactus. If you suspect you have seen Hudson pear, please call Biosecurity Queensland on 13 25 23.



Weaning and Worm Management

You can often save some money and time if you test weaners for worms ahead of drenching, instead of assuming they need to be drenched. If they do need to be drenched not all drenches are still efficient in controlling worms. This is one of the most important and emerging issues confronting beef producers in the management of worms.

Drench resistance

ML (macrocyclic lactone) endectocide drenches (kill both internal parasites such as worms and external parasites such as lice, mites and ticks) are commonly used in cattle to treat parasites because of their ease of application—most are injectible or pour-ons—and their persistency against important worms. When MLs are used to control cattle ticks, worms are also exposed to the chemical at levels that can cause resistance in worms to that chemical.

The repeated use of drenches from the same chemical family group can lead to worm resistance in beef cattle. This risk reinforces the importance of using integrated parasite management strategies such as paddock rotations and using different drench types each time your cattle are drenched to ensure drenches remain effective.

To avoid resistance rotate your weaner paddocks or graze weaners with adult cattle, and use oral drenches with LEV or BZ active ingredients for worm control if you are using ML products for lice, tick and buffalo fly control. The first multi-active pour-on drench product (levamisole and abamectin active ingredients) is now available in Australia, giving producers a better chance of delaying the development of drench resistance.

Be aware that there are many different brand names of drenches but only three active ingredient types, namely the BZ, LEV and ML groups. Always read the active ingredient list on the drench label before you purchase the product.

Immunity to worms

Immunity to worms can take from five months to about 18 months to develop, depending on the age at weaning and the type of worm involved. Immunity in beef cattle develops much later than in dairy cattle because of the older age of weaning in beef herds and subsequent

exposure to worms. Adult cattle are mostly resistant to worm infestation and should not require drenching. This does not apply to liver fluke infestations that are sometimes seen in the Stanthorpe and Mary River areas.

WormTest kits

You can purchase WormTest kits at local resellers or you can phone Judy at the WormBuster laboratory on 07 3255 4241. Kits cost \$33 including GST. This cost includes postage, laboratory testing and reports.

This test can be used to monitor worm burdens and to determine if stock need to be drenched. You can also use the kit to check drenches for efficacy. To do this, test young animals at drenching and then test the same animals again 7 to 10 days later.

Staff at the WormBuster laboratory, in conjunction with local beef extension advisers, are available to assist producers in monitoring the current worm situation and developing integrated management systems to suit individual properties.

Maxine Lyndal-Murphy
Principal Parasitologist
Ecosciences Precinct, Brisbane
07 3255 4264

Staff Profile

Jane Hamilton
Extension Officer (Grazing Lands)
DAFF Rockhampton
07 4936 0238



Childhood: I was lucky to have a wonderful, farm-life childhood on our family farm near Tamworth in NSW. My parents run a mixed farming operation with cattle, sheep and crops.

Career: I recently moved to Rockhampton after being based in Roma for the last four years. The focus of my work with the FutureBeef team has been grazing land management (GLM) extension and research development in GLM related projects. I went to university in Armidale (B. Rural Science Hons.) and started with the Department in Charleville, where I spent three (very dry years) before moving to Roma. I have also completed a Graduate Diploma in Education (p/t external) and really enjoy linking those teaching and learning skills into my extension work.

Interests: Cooking, catching up with friends, walking my dog, shopping, teaching and horse riding (when I am lucky enough to get home to our horses).

Holiday: Next big holiday is Europe for our honeymoon! I have never been, so am really looking forward to this holiday.

Producer Profile Lauchie & Carly Ward

Dingo district cattle producers Lauchie and Carly Ward have launched a Producer Demonstration Site (PDS) grazing trial that aims to determine the optimum inter-row leucaena planting width to maximise animal productivity from established buffel grass pasture on heavy clay brigalow soils.

The Ward family have operated their 4740 hectare property Namgooyah located 50 km north of Dingo for the past five years and concentrate on trading cattle to maintain a high degree of flexibility in their grazing business.

Working in cooperation with DAFF's Rockhampton-based extension officers David Hickey and Ken Murphy, the Ward family are keen to compare commercial livestock performance, pasture utilisation and the return on investment from leucaena planted on 18, 12 and 6 m row spacings.

David said the Meat and Livestock Australia (MLA)-funded \$20 000 three-year project had been on the drawing board since 2009 but a dry winter that year, followed by an extreme wet season last year, had put the PDS on hold until this summer season.

Lauchie has prepared three 40 ha blocks using a 3.5 m cut 7-tine Agrow plough to rip the initial rows to a depth of 25 cm.

This hydraulic tined implement was followed by a Bonnel heavy duty offset disc plough, working to a depth of 15 cm.

The Wards have hired a 187 kW powered John Deere 8400 to pull the offset disc that has successfully shattered the heavy clay clods when operating at 6.3 km/hr.

To control the buffel grass regeneration and prepare an optimum seedbed for the leucaena planting, Lauchie has followed the lead of astute Central Queensland producers and hired a 3.5 m power harrow more commonly used in the small crops horticultural sector.

"We have found that the vertically rotating knives of the power harrow working at a depth of 10 cm leaves our heavy clay soil in excellent condition for the dryland leucaena planting operation," Lauchie said.

"Dry planting is our only practical option on these heavy clays and in the event of any rain, we are prepared to apply herbicide along the prepared rows to control buffel grass competition."

A contractor will be engaged to plant the 18, 12 and 6 m rows in single and double row planting configurations within each PDS to compare plant performance and establishment costs for the Cunningham variety.



DAFF extension officer David Hickey, Rockhampton (left) discusses the Producer Demonstration Site leucaena row width grazing trial with Dingo district grazier Lauchie Ward, Namgooyah, who has set aside 120 ha to trial 6 m, 12 m and 18 m leucaena rows.

Lauchie said his initial preference was to plant 12 m and 18 m wide rows as he believed this would be a cost-effective system, providing stock with sufficient high protein supplementation from the legume to extend the seasonal productivity of the buffel pasture.

"Our brigalow country is generally a heavy clay loam that is difficult to work and there are only selected areas suitable for leucaena development because of deep melonholes," he said.

"The longer term objective is to use the leucaena paddocks in conjunction with adjoining grass paddocks to extend our growing season. Stocking rates will be based on pasture utilisation with an aim to maintain the grass cover, supplemented by the leucaena, for as long as possible."

David said that once the leucaena was established, pasture dry matter would be assessed and stocking rates would be adjusted according to the accepted feed budgeting process.

Cattle liveweights will be recorded as they move into the leucaena paddocks and reweighed as they move out in a management approach that fits the Ward family's commercial operations. This stock rotation could span just a few weeks or a number of months.

"This PDS will be measuring the leucaena benefits in terms of added dry matter and the protein advantage," David said. "Protein levels will be tested using faecal NIRS (Near Infrared Spectroscopy) sampling as the cattle go into the trial paddocks and as they come out."

Annual soil tests will assess soil nitrogen and phosphorus levels and show any soil nitrogen contribution from the leucaena to help address the on-going depletion of soil nitrogen in brigalow pasture country.