



Peer support with NB2

NORTHERN Breeding Business (NB2) is a Meat & Livestock Australia (MLA) initiative addressing the northern breeding herd issues of calf loss, low profitability and low adoption of proven management practices and technology.

The project has set an ambitious target to deliver \$20 million per year in net benefits to 250 northern beef enterprises by 2027.

Six pilot producer groups have been established across northern Australia as part of an integrated adoption and extension program, which is supported by the Department of Agriculture and Fisheries (DAF).

These producer-led groups will provide direction and insight for expansion of the NB2 project.

Each group has a producer coordinator, who determines the focus of their interactions and chooses how and when they meet.

Producers can share ideas and participate in professional development opportunities that are relevant to them and their group.

DAF beef extension officers facilitate producer groups in the Fitzroy and Burdekin catchments.

Burdekin NB2

Formed in September 2021, the Burdekin NB2 group is made up of seven businesses representing a diverse range of land types and operations.

These are all inter-generational families who want to improve efficiency to support their succession planning.

During the past year, they have received foundational training in feedbase, business and herd measurement and recording.

All these businesses have



The 2021/2022 Burdekin NB2 Group

committed to using NB2 data collection templates to allow consistent analysis over time.

"Collection of data in a consistent format on the herd, cashflow and feedbase will enable participating producers to set baselines and investigate opportunities to improve performance," DAF beef extension officer Roxanne Morgan, who co-facilitates the group, said.

"It enables us to compare apples with apples."

Burdekin NB2 meetings have been held on group member's properties, incorporating valuable guest speakers and a visit to the Signature Beef feedlot and abattoir.

At one of their recent meetings, each property delivered a presentation about their business, highlighting the key issues they wanted group input on.

This was of significant value to all, with a few common themes emerging:

- improving calving and weaning rates
- supplementation options
- off-farm investments versus expansion
- yard designs
- herd recording options for analysis.

Group members valued the opportunity to share information and seek advice from peers in a trusted setting.

Fitzroy NB2

The Fitzroy NB2 group is made up of 11 family grazing businesses, with a core focus on continuous improvement of breeder herd efficiencies and land stewardship.

Initial herd and feedbase data collation workshops set the scene for ongoing peer-to-peer breeding objective discussion within the group.

DAF beef extension officer and group co-facilitator Ryan Honor said guest speakers with expertise in reproductive technologies and animal performance analysis had inspired members to continue exploring new business opportunities.

"The passion of Fitzroy

NB2 members to consistently produce cattle suiting numerous markets from various grazing systems has been evident by the group discussions created by effective data collation," Mr Honor said.

The producers have also participated in the Grazing Resilience and Sustainable Solutions and Grazing Futures Livestock Business Resilience programs, embracing the opportunity to evaluate their land condition and future drought mitigation strategies by identifying long-term production targets for their businesses.

If you'd like to learn more visit www.mla.com.au/nb2.

Tips to help you drive fertility

TO MAXIMISE breeder performance, we're aiming for cows to conceive early in the mating period and for each cow to raise a weaner.

We need to be aware of a few biological realities.

There are 365 days in a year and the average Brahman pregnancy is 290 days.

The time between calving and a cow's first cycle is about 42 days.

This leaves 33 days, or 1.5 cycles, to get a cow back in calf if she is to calve every 365 days.

We are asking a lot and many cows can not do it, hence we get calving drift.

We need to manage both grazing and the cows to give them the best opportunity to get back in calf quickly.

Lack of breeder body condition is the most common cause of poor breeder performance.

When cows calve at the end of the dry season, their energy requirements double but feed quality is usually low.

They face a period of weight loss and require reserves of body condition to carry them until the seasonal break occurs.

Stocking rates and grazing management are most critical to ensure cows have adequate body condition at calving and to minimise weight loss during lactation.

If cows cannot consume their potential feed intake, they will always struggle to maintain condition.

Weaning is the most powerful tool after grazing management.





How do you measure fertility in beef herds?

WE KNOW breeder performance is a key profit driver in beef businesses.

To improve performance, we must first measure it so we can assess and monitor it on an ongoing basis.

Fertility calculations are complicated by the 12 to 18-month period from joining to branding and weaning.

It is the 2022 joining that produces the calves you brand in 2023.

With the branding months approaching, what should we be recording?

Pregnancy rate

The first fertility assessment to undertake is the pregnancy rate.

If we joined 500 cows in the 2021-22 mating and 430 were pregnant at the June 2022 pregnancy test, the pregnancy percentage calculation would be:

Pregnancy per cent = $(430/500) \times 100 = 86\text{pc}$.

If maiden heifers and first-calf cows are run together or with older cows, it is important to record their pregnancy test data separately.

This will make it easier to identify any problems with their performance.

Branding and weaning rates

Branding and weaning rates should be calculated off total cows joined.

For 2022-branded calves it is cows joined in 2020-21.

Branding and weaning percentage calculations are based on how many cows are present at the time.

Do not include empty cows removed at pregnancy

	2020-2021	2021-2022	2022-2023
Mating			
Mating period	15/12/20-31/3/21	15/12/21-31/3/22	15/12/22-31/3/23
Branding	5/01/2021	5/01/2022	5/01/2023
Weaning & pregnancy testing	June 2021	June 2022	June 2023
A Total cows joined	495	500	505
B PTIC cows	425	430	435
C Pregnancy % = B/A x 100	85.9	86.0	86.1
D Pregnant cows retained	425	430	435
E Calves branded		400	402
F Branding % = E/Year before A x 100		80.8	80.4
G Loss - Pregnancy test to Branding = Year before D - E		25	28
H Loss - Pregnancy test to Branding % = G/Year before D x 100		5.9	6.5
I Calves weaned		394	394
J Weaning % = I/Year before A x 100		79.6	78.8
K Loss - Pregnancy test to Weaning = Year before D - I		31	36
L Loss - Pregnancy test to Weaning % = K/Year before D x 100		7	8
M Loss - Branding to Weaning = E - I		6	8
N Loss - Branding to Weaning % = M/E x 100		1.5	2.0

testing and cow losses.

If the joining of 495-cows in 2020-21 resulted in 400 calves being branded and 394 weaned in 2022, the calving and weaning percentage calculations are:

Calving per cent = $(400/495) \times 100 = 80.8\text{pc}$.

Weaning per cent = $(394/495) \times 100 = 79.6\text{pc}$.

Foetal and calf losses

Foetal and calf losses are calculated using the number of cows retained at the previous year's pregnancy test.

Pregnant cows that are sold before calving are not included in the calculations as they did not have the opportunity to produce a calf.

Following the 2020-21 joining of 495 cows, 425 were pregnant at the June 2021 pregnancy test.

If these were all retained to calve the foetal and calf loss calculations are:

Loss - pregnancy test to branding = $425 - 400 = 25$.

Loss - pregnancy test to branding per cent = $25/425 \times 100 = 5.9\text{pc}$.

Loss - pregnancy test to weaning = $425 - 394 = 31$.

Loss - pregnancy test to weaning per cent = $31/425 \times 100 = 7.3\text{pc}$.

Loss - branding to weaning = $400 - 394 = 6$.

Loss - branding to weaning per cent = $6/400 \times 100 = 1.5\text{pc}$.

Year-round mated herds

Assessing fertility in year-round mated herds is more difficult.

It is usually impossible to calculate branding or

weaning percentages based on cows mated because, with calves being branded and weaned at each muster, it is difficult to identify the number of cows mated to produce them.

One of the many advantages of controlled mating is it enables better assessment of herd performance.

Some producers calculate branding and weaning percentages based on the cows present at the second round in the previous year.

This approach provides consistency but will not provide true branding and weaning percentages, as cows will have been sold.

In year-round mated herds where pregnancy testing is undertaken and the number of retained pregnant cows is known, foetal and calf loss

from pregnancy testing to branding and or weaning can be determined.

Conception patterns

It is also important to record foetal age and body condition scores when pregnancy testing so the conception pattern can be seen.

The conception pattern and body condition scores can help identify if disease or poor body condition may have been a problem.

Diseases like vibriosis and trichomoniasis that cause embryonic failure and early abortions can result in delayed conceptions.

Foetal ageing provides the opportunity to identify superior cows which conceive early in the joining and cull less fertile cows if numbers have to be reduced.

QUEENSLAND backs efforts to fight lumpy skin disease with new vaccines

The Queensland Government has partnered with Meat & Livestock Australia, the New South Wales Department of Primary Industries and US-based biotechnology company Tiba Biotech to create a world-first synthetic vaccine for lumpy skin disease (LSD).

A new mRNA vaccine would be a game changer, as the live virus vaccines currently available overseas cannot be used in Australia without affecting our disease-free status.

A new mRNA vaccine would have the advantages of being potentially safer with capacity for rapid development and lower-cost manufacturing, helping protect jobs in Queensland's nation-leading livestock industries.

Department of Agriculture and Fisheries (DAF) scientists are also working on a second LSD vaccine project with the Queensland Alliance for Agriculture and Food Innovation (QAAFI) at the University of Queensland.

This involves a traditional protein-based vaccine with a delivery system that releases the vaccine in cattle over an extended period.

This would provide an option for northern cattle, which are brought in only once a year.

Professor Tim Mahony from QAAFI's Centre for Animal Science said the team hoped to develop a prototype by the end of the year, using synthetically-produced materials.

As well as vaccines, early detection is also vital to manage biosecurity risks such as LSD.

Livestock owners are reminded of the importance of knowing what LSD looks like and reporting any suspicions early.

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NORTHERN MUSTER

Information for rural business in North Queensland



Getting grazing right

Expert's view of grazing strategies

BY ALISON KAIN

BRYAN Gill is a tall, quiet man with a welcoming grin and a long involvement with the central Australian pastoral industry.

His career started 40 years ago when he began working as a young man for legendary cattleman Ted Hayes at Undoolya Station.

Since then, he has been a stock inspector and advisory officer and now manages Old Man Plains (OMP) Research Station, just outside of Alice Springs.

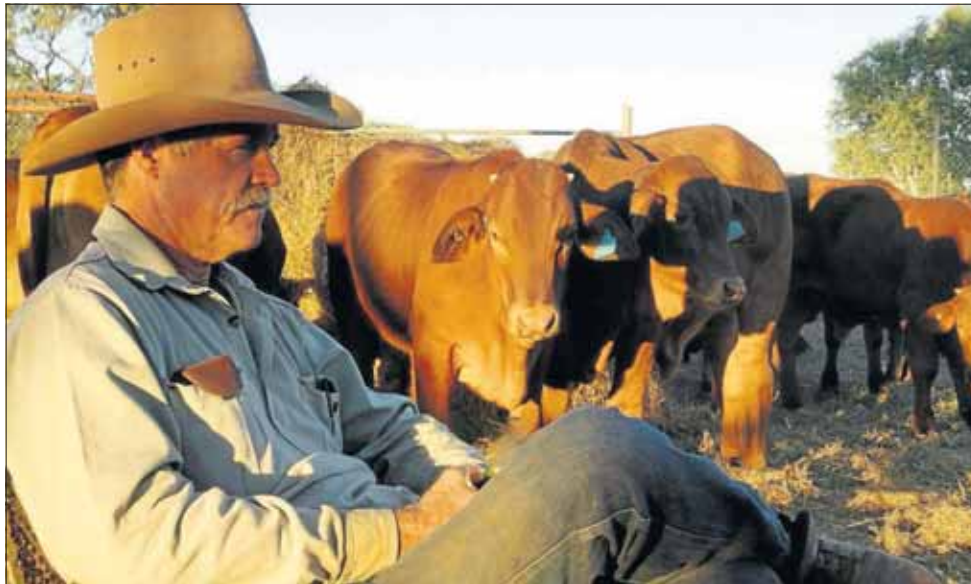
Mr Gill is well respected by local producers for his practical knowledge and hands-on experience with cattle.

For the past decade, he has been responsible for the day-to-day operations of the Quality Graze project run by the Department of Industry, Tourism and Trade.

This long-term trial is investigating grazing strategies suitable for producing premium beef in a highly variable climate.

Five of the grazing strategies are stocked according to the long-term carrying capacity, with a mix of rotation and continuous grazing, and one strategy is grazed at twice the recommended pasture utilisation rate.

Mr Gill believes getting the long-term carrying ca-



Bryan Gill, the manager at Old Man Plains Research Station, near Alice Springs, says that grass left standing in the paddock is not wasted but an opportunity to improve land condition, build up reserves of feed or finish sale stock.

capacity right has been critical to the success of the Quality Graze project.

"It has allowed for a big improvement in land condition," he said.

"Because our country is now in good condition, we get good feed from very little rain.

"We finish off sale steers, even in dry years."

Research data shows the improvement in land condition enables OMP Research Station to grow twice as much pasture as it used to.

Stocking to the long-term carrying capacity also ensures carryover feed is available from one season to the next.

Security of forage has allowed herd numbers to remain stable for the past 12 years.

This is despite OMP Research Station experiencing the wettest year and the driest three-year period on record.

Mr Gill believes science has got the numbers right. OMP Research Station runs about 350 Droughtmaster breeders and turns off about 160 30-month-old premium steers every year.

"We don't really think about what the season will be like because we know we have enough feed for our production system, even in the dry years," Mr Gill said.

"We also received really good prices when the good seasons returned because we didn't have to rebuild our herd."

If there is one thing Mr Gill could change it would be the mindset that grass left standing in the paddock is

wasted. "That leftover feed is an opportunity to improve land condition, build up reserves of feed or finish sale stock," he said.

"If we stocked up, we'd be in trouble in about three months."

Producers often worry that kangaroos will eat reserved feed.

Yet in Mr Gill's experience, that isn't the case. "There might have been two or three years of higher kangaroo numbers, but they took care of themselves," he said.

"The improvement in land condition was far more useful, because with better land condition the response to rain is that much stronger - more grass and more beef."

There is one tactic in the research trial that is looking at grazing at a rate higher

than recommended.

"When it gets dry, that paddock worries me," Mr Gill said.

"I've been out there on a bike, thinking it doesn't grow as much feed as it used to in previous years."

Cattle behaviour is of particular interest to Mr Gill.

As part of the experimental design, growing steers are often separated from birth-paddock companions when allocated to the different grazing strategies.

When mature animals are reunited for a month prior to trucking, they will re-sort themselves into groups based on their birth-paddock.

Mr Gill actively incorporates this knowledge into the production system by allowing stock time in the yards to find their companions.

He is very proud of the OMP cattle.

They have a solid reputation for good temperament and great beef.

Selecting for temperament is important, but weaner training, low-stress stock handling techniques and understanding cattle behaviour is where the real work is done.

Sale steers get an extra 'practice run' through the yards when final pre-trucking weights are recorded.

"When it comes to trucking day, they just walk up, heads down, taking their time, one after the other onto the truck," Mr Gill said.

"No jiggers, no yelling."

Stressed cattle don't tend to produce high quality beef.

So, Mr Gill works hard to keep the herd happy.

He is retiring this year but, like all good cattlemen, he is still thinking about how he might tweak the Quality Graze production system.

"I'd like to try spelling some of the continuously-grazed paddocks to see if we can improve land condition further," he said.

"We could also improve some of our yards to reduce cattle stress a bit more.

"Overall though, getting the long-term carrying capacity right means it's a pretty reliable system.

"The herd doesn't change much and we aren't constantly looking for rain.

"That's a pretty amazing characteristic for any grazing strategy."

For more information, about grazing management and the Old Man Plains (OMP) Research Station research visit futurebeef.com.au and search for 'grazing management'.

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NORTHERN MUSTER

Information for rural business in North Queensland



Meet the North West team

THERE are 35 beef extension officers within the Queensland Government's Department of Agriculture and Fisheries (DAF).

Spread across the state, they are your local source of information about all things related to land, business and livestock management.

North-West Queensland has welcomed three new faces, with Jane Evans (Cloncurry), Katie Hay (Richmond) and Zach Hick (Cloncurry) joining Megan Munchenberg (Gregory Downs).

With a diverse range of skills and experience, the team assists producers from Hell's Gate to Normanton, Camooweal to Hughenden, Boulia to Kynuna and everywhere in between.

They are highly motivated and passionate about delivering the most up-to-date research, development, education and training to North-Western graziers and agricultural stakeholders.

Jane Evans

Jane Evans, who joined DAF's North-West team in September 2021, is originally from Injune and grew up around Roma.



North-West Queensland beef extension officers Zach Hick, left, Jane Evans and Katie Hay.

After school, she worked as a station hand in the Northern Territory's Victoria River region before heading to Gattton to attend university.

Ms Evans completed a

Bachelor of Agribusiness and Bachelor of Sustainable Agriculture majoring in Livestock and Poultry Science in 2020.

With a particular interest in beef breeding, genetics and production, she worked

at a Wagyu stud near Condamine before making the move to Cloncurry.

Katie Hay

Originally from the cold climate of Armidale in New South Wales, Katie Hay grad-

uated from the University of Queensland with a Bachelor of Veterinary Technology in 2019.

After university, she secured a position with DAF's biosecurity team in Biloela.

Ms Hay transferred to the Richmond office with Biosecurity Queensland in February 2021 before joining the beef extension team in March 2022.

Ms Hay is passionate about all things beef production, including data collection, improved pastures, calf loss and herd health.

Zach Hick

Originally from a breeder property north west of Mount Isa, Zach Hick has a Bachelor of Agricultural Science and a Bachelor of Laws from the University of New England.

While studying, Mr Hick worked for the Australian Pesticide and Veterinary Medicine Authority and in the Hormonal Growth Promotant Monitoring Program before returning to North-West Queensland to join the beef extension team in June.

He has keen interests in breeder management, grazing land management, nutrition and data collection.

To get in touch with the North-West team or search for beef extension officers in your area, please visit www.futurebeef.com.au

QRIDA READY TO HELP DISASTER-AFFECTED QUEENSLANDERS IN TIMES OF NEED



WE ALL know to expect the unexpected when it comes to severe weather events in north Queensland.

But there can be some calm in knowing that when natural disasters strike, financial assistance may be available from the Queensland Rural and Industry Development Authority (QRIDA).

QRIDA natural disasters and drought manager Sherree Finney, pictured left, said primary producers impact-

ed by severe weather may be eligible for low-interest loans and grants to help them with clean-up and reinstatement activities.

"In the event of a natural disaster, one of the best things you can do is keep an eye on the QRIDA website to stay up to date on the latest disaster recovery assistance when it becomes available," Ms Finney said.

While assistance may be available, primary producers shouldn't wait for an

emergency - they should prepare and plan for when disaster strikes.

"It's critical to complete a disaster preparedness checklist so you're not caught off guard, including ensuring you have adequate insurance cover, packing an emergency kit and reviewing your emergency fund," Ms Finney said.

"You should also take steps to prepare your property, such as clearing

gutters and planning for a power outage.

"If a disaster strikes, ensure you safely take photos of any damage."

For more information about disaster preparation and preparedness, head to www.business.qld.gov.au and search for 'Natural disaster preparation for primary producers'.

To find out more about the disaster assistance available from QRIDA, go to www.qrida.qld.gov.au

DISASTER HELP

What is needed to apply

- Financial statements
- Tax returns
- Rates notice/lease agreement
- Photographs of damage
- Payment evidence
- Insurance details
- Stay up to date with current disaster assistance by visiting www.qrida.qld.gov.au

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