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Information for rural business in Central Queensland

# Grazing BMP at Beluehills

### **Recovery of perennial** grasses after drought

QUEENSLAND Country Life





Department of Primary Industries and Regional Development



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Future Beef

### Welcome to CQ Beef 36

Welcome to the autumn issue of the CQ Beef feature for 2019.

### Hi everyone,

Grass is our cheapest feed resource. It is not often more economical to substitute hay, grain, protein meal and molasses for grass-supplement maybe, but substitute, no! Unfortunately, this year the wet season was not abundant, and consequently, neither are grass yields.

Going through a pasture budgeting exercise at the end of the wet season sets you up for less stress and more marketable animals, and sets your animals up for better body condition and better conception rates next year. Many producers will say they run an eye over their paddocks and are aware of how long their feed will last, but if you've run out of feed in previous years it may be time to formalise the activity. It's come to the time of year when we can no longer expect substantial pasture growth, so if you haven't done yours already, get pasture budgeting! If you need a hand getting it done contact your local beef extension officer on the numbers provided here.

Mick Sullivan, Rockhampton, 07 4843 2623

Matt Brown, Rockhampton, 07 4843 2611

Kylie Hopkins, Rockhampton, 07 4843 2615

Eloise Moir, Biloela, 07 4808 6878

Byrony Daniels, Emerald, 07 4991 0867

Alice Bambling, Emerald, 07 4991 0837

Jim Fletcher, Mackay, 07 4967 0731

Talking about supplementation, we've got articles on dry season supplementation, reading dry lick labels and recommended stock to supplement trough ratios.

We hope you get something from this issue, please get in touch if you have any ideas about how we could improve CQ BEEF for your benefit.

**Byrony Daniels** Department of Agriculture and Fisheries Emerald 0427 746 434

### Remain vigilant against pasture dieback

Dieback is still affecting highly productive pastures across large areas of Queensland



Dieback affecting a creeping bluegrass (Bisset) pasture near Gayndah. Note the unaffected legumes throughout the affected pasture.

Dieback is initially characterised by yellowing and/or reddening leaves on affected grasses. As the condition progresses patches of pasture become unhealthy and die, reducing the amount of pasture available for stock. Dead patches are eventually colonised by weeds and sometimes legumes, if they were sown previously.

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Many districts have received less-thanaverage summer rainfall, especially in southern and central Queensland, and there have been fewer reports of dieback than in previous years. Despite this, dieback is still active and graziers need to be vigilant in maintaining assessment of pastures and reporting new outbreaks (see contact details at the end of this article).

Recent research commissioned by Meat & Livestock Australia (MLA) indicates the leading potential cause of dieback is a mealybug. However, experiments have yet to confirm this.

Results of this research, including a fact sheet on the mealybug, are available on the MLA website at mla.com.au/research-anddevelopment/Grazing-pasture-management/ pasture-dieback.

Further, graziers are urged not to spray pastures with insecticides. There are no chemical registrations available for mealybug control in Queensland pasturesconsequently spraying for this purpose is illegal. In addition, insecticides have a significant negative impact on beneficial insects.

The Queensland Government, through the Department of Agriculture and Fisheries (DAF), is assisting the beef industry with this issue by:

- supporting graziers with diagnosis and management options
- supporting industry-led activities
- updating graziers with information through media and various forums
- developing a smartphone app to document dieback incidences
- instigating field research trials.

A field research trial. located at Brian Pastures research facility near Gayndah, has started and aims to diagnose the cause(s) of dieback and assess a range of management options, including re-seeding with alternative grass species or legumes.

The trial has been scientifically designed with randomised and replicated treatments where experts explore a range of causal factors. It will continue as long as is needed to find answers. Some treatments have started, however others are waiting for rainfall. Results will be made public once available.

Graziers who are affected by dieback, or have concerns, are encouraged to contact the DAF Customer Service Centre on 13 25 23, their local beef extension officer, or myself if they want further information.

Stuart Buck Department of Agriculture and Fisheries Rockhampton 07 4843 2605 Stuart.Buck@daf.qld.gov.au

### A word on lick troughs

Lick troughs don't need to be elaborate. Drums cut with slits, old tractor tyres with the side wall cut out, or hollow logs that let water drain are handy options for feeding loose licks.

When feeding molasses, the base of troughs should be fitted with a form of grip (e.g. weldmesh) in case an animal falls in. Molasses mixes also require enough trough space to prevent bullying. Several troughs spread apart are more effective than one long trough. A rough guide is a maximum of 50 head to a 350–450 litre trough or a maximum of 80 head to a 500-750 litre trough.

When feeding weaners protein meal or pellets, aim for about 20 cm of space per head.

Dry lick and phosphorus supplements don't require the same space because the low intakes mean animals don't spend as much time at the trough.

A safe guide when feeding any supplements is to ensure that the trough is big enough so all stock can get access and there's enough supplement on offer and also to minimise the number of times the trough needs to be re-filled.

### **Editorial committee** Byrony Daniels, Michael Sullivan (DAF)

### Enquiries

Byrony Daniels Phone: 07 4991 0867 Mobile: 0427 746 434 Email: Byrony.Daniels@daf.qld.gov.au

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### **Business direction** determined after Grazing **BMP** accreditation

Matt and Kelly Vince have owned Beluehills outside of Calliope for nearly 10 years. The 226 ha property consists of two land types; narrow leaved ironbark woodland and softwood scrub, which have been extensively developed for more efficient grazing.

Matt and Kelly participated in the Grazing Best Management Practice (Grazing BMP) program, which is a free, voluntary online tool designed to help landholders improve the economic, environmental and social sustainability of their grazing enterprise. The program supports producers to assess their management practices and identify opportunities to improve business performance. Matt and Kelly completed the Grazing BMP modules and achieved accreditation in 2018.

### Monitoring land condition

Following the program, Matt and Kelly started forage budgeting and using the ABCD land condition assessment framework to monitor land condition. This allows them to objectively monitor their stocking rates and assess carrying capacity ensuring sustainable pasture utilisation and optimal landscape health.

The VegMachine ground cover reports provide a robust perspective of landscape health. Used in conjunction with land condition, forage budgeting and rotational grazing, the VegMachine ground cover reports allow Matt and Kelly to monitor their grazing strategies and stocking rates accordingly.

### **Planning for the future**

The accreditation process motivated the Vinces to develop a business plan and a whole property plan that includes business and personal goals, natural resource goals and future development.

Matt and Kelly wanted to critically assess and determine the most appropriate cattle enterprise for their business. They engaged economists who conducted several economic scenarios using the Breedcow, Dynama, Bullocks and Cowtrade software packages.

These programs plan and evaluate profitability and financial management of extensive beef cattle enterprises so that cattle producers can evaluate the economic impact of a change in grazing practices.

Currently Beluehills runs a breeder herd, sending all the weaners to the saleyards at weaning and buying in replacement breeders as required. This situation was modelled using the Breedcow program.

A second scenario changed the business focus to buying the weaners from the breeder operation at 230 kg live weight, to keep and fatten, then sell to saleyards at 350 kg live weight. The Bullocks program was used to analyse this system with a separate spreadsheet for the heifer and steer portion of the herd due to their differing growth path and market price.

A third scenario was completed in the Bullocks program that involved trading steers. Lastly, a fourth scenario was modelled that consisted of selling existing breeding stock and using the available capital from the sale to purchase steers, then continuing as a trading operation.

These scenarios enabled Matt and Kelly to analyse options and make decisions on the enterprise that would best suit them.

They then set a firm direction for their business and established business and personal goals accordingly. Cash flows, profit and losses as well as a statement of position were also completed as part of the process.

Matt and Kelly believe that going through Grazing BMP accreditation has benefited their business management approach with a solid plan for the future.



Matt Vince from Beluehills outside Calliope.

### Grazing BMP

The Grazing BMP program has been delivered in the Fitzroy region since 2009 and has engaged more than 780 grazing businesses managing more than 4.9 million hectares of grazing land. Grazing BMP, supported by the Queensland Department of Environment and Science, is a partnership between Department of Agriculture and Fisheries, Fitzroy Basin Association (FBA) and AgForce. To find out more visit bmpgrazing.com.au

### **VegMachine**

VegMachine.net is a free and simple-tooperate website designed to help primary producers measure and understand changes in the health and productivity of their grazing land. It uses world-leading satellite data sets to evaluate an entire property, a particular paddock, or even a small patch within a paddock.

Ground cover, a specialty analysis service provided by VegMachine, is an important indicator of the health and productivity of grazing land. Land that maintains ground cover is generally healthier, erodes less, captures more rainfall and ultimately grows more grass. As ground cover fluctuates from season to season, VegMachine can help land managers to see beyond these seasonal fluctuations to better understand the impacts of their land management strategies.

### Herd management software

The Breedcow and Dynama programs help cattle producers to identify:

- the most profitable age of turnoff
- the best selling strategy when forced sales are required
- the most profitable balance between heifer culling rate and mature cow sales.

Breedcow and Dynama are based on four budgeting processes:

- 1. Comparing the likely profitability of the herd under different management or turnoff systems (Breedcowplus program).
- 2. Making forward projections of stock numbers, sales, cash flow, net income, debt and net worth (Dynamaplus program).
- 3. Deciding what to sell when the plan goes sour or what to buy when there is an opportunity (Bullocks and Cowtrade programs).
- 4. Evaluating long-term investments in herd or property improvement to determine the rate of return on extra capital (Investan program).

You can download Breedcow and Dynama for free from the DAF website.

#### Matt Brown

Department of Agriculture and Fisheries Rockhampton 0428 104 248 Matt.Brown@daf.qld.gov.au NG/

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FutureBeef

## Reading a dry lick label—how to know what it provides

Have you ever looked at a dry lick label and been completely lost? You wouldn't be the only one!

This article attempts to demystify dry season supplement labels, bear with me... there is maths involved. The key focus for dry season licks is protein, which can be listed on labels in a number of ways. The total crude protein percentage comprises protein from **non-protein** nitrogen sources such as urea, and true protein from products such as protein meals.

You can calculate the total protein percentage in any feed by multiplying the percentage of nitrogen in the feed by the constant 6.25.

#### For example:

- Urea is 46% nitrogen so urea is 287% crude protein equivalent (46% x 6.25 = 287%).
- Gran-Am or Ammonium sulphate is 20% nitrogen and 126% crude protein equivalent  $(20\% \times 6.25 = 126\%).$
- Cotton Seed meal is 6% nitrogen and 37% crude protein equivalent ( $6\% \times 6.25 = 37\%$ ).

How does this help us decipher a nutrition label?

Using the label below as an example, we can surmise that the 10% urea is providing 28% of the protein (10% urea x 287% crude protein). Ammonium sulphate is providing 12.6% protein (10% ammonium sulphate x 126% crude protein). The total crude protein per cent from these two sources is 41.3% (28.7+12.6%) and this is the equivalent crude protein figure.

Dry Lick analysis (as-fed)	
Total crude protein and equivalent crude protein (minimum)	48%
Crude Protein (minimum)	7%
Equivalent crude protein (minimum)	41%
Urea	10%
Sulphate of Ammonia	10%
Salt (maximum)	40%

The protein meal or grain (true protein) in the mix provides the additional 7% crude protein.

### Table 1: FeedCalc analysis of supplements:

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Supplement	Feed cost	Crude	Intake to supply	Cost of supplying	
	(\$/t)	protein	150 g crude protein/day (g/hd/day)	150 g crude protein/day	
		(%)		(\$/hd/month)	
Uramol	1,318	86	174	6. 90	
30% urea dry lick	830	98	152	3. 79	
10% urea dry lick	836	48	313	7.84	
Liquid supplement	270	17	852	6.90	

### Protein ambitions

We should aim for protein intakes of 150 g/hd/ day for breeders and 75 g/hd/day for dry and growing cattle. With the dry lick analysis example provided, an intake of 313 g/hd/day is required to provide 150 g protein a day (150 / 0.48 =312.5 g).

Class of cattle	Crude Protein intake		
Breeders	150 g/ hd/day		
Dry and growing cattle	75 g/hd/day		

Protein supplements provide rumen microbes with additional nitrogen enabling a larger and more active microbe population. This increases the rate of digestion and enables higher pasture intakes. Protein supplements can increase pasture intake by up to 30%, which needs to be considered in your pasture budget.

### **Comparing supplements**

The Table 1 (above) is taken from the FeedCalc spreadsheets, which we use to analysis supplements.

It shows the supplement intakes required to supply 150 g crude protein per day. With the liquid supplement, an intake of 852 g/day is required compared to 152 g/day for a 30% urea lick. The cost column shows the cost of supplying 150 g crude protein per day for each product. Feeding costs are determined by the cost per tonne of the product and the protein content.

It is important to also consider the energy and phosphorus content of supplements. Dry licks, blocks and liquid supplement are low in energy. If cattle require energy, it can only be supplied by fortified molasses, whole cotton seed, grain or protein meals. FeedCalc can also be used to

assess the energy and phosphorus content of supplements.

### Lick intake—its key information

It is very important to monitor lick intakes otherwise we really don't know the actual amount of a nutrient being supplied and at what cost.

Knowing actual supplement intake enables calculations of nutrient intake per day and the cost to be made. If intakes are too low the supplement may have to be made more palatable or alternatively less palatable if intakes are above the target.

### Calculating lick intake

Calculating lick intake is relatively easyrecord what you've put out and divide it by how many animals are in the mob and how many days it lasts.

Lick intake = amount of lick put out

No. of animals x days the lick lasted

### Things to keep in mind when feeding a dry lick

It is advisable to satisfy any salt cravings to avoid cattle gorging on the lick. Feed salt for a week and observe intake, if the intake is greater than 200 g per head per day keep feeding salt until the intake drops.

If lick intake is high and the dry lick includes a protein meal, remove the protein meal and replace it with additional salt. Protein meals in a dry lick can help soak up some moisture.

If you need more lick label revision, the FutureBeef YouTube page has a series of videos on the subject.

Byrony Daniels Department of Agriculture and Fisheries Emerald 0427 746 434 Byrony.Daniels@daf.qld.gov.au



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# Recovery of perennial grasses after drought

Our palatable, productive, perennial (3P) grass pastures in Central Queensland (CQ) are suffering the effects of dry conditions with decreasing health and vigor and/or the ingress of other plants. In addition, bare patches can expand and join due to preferential grazing.

Grazing trials have been monitoring the crown cover of 3P grasses (desert blue, blackspear and Mitchell grass) across CQ. The crown cover is the area of living material at ground level and is the best estimate of grass tussock health and vigor. In CQ, 3P pastures typically have crown covers of 2–4 per cent.

A plant with large crown cover has a big root system, a large number of growing points and a large storage capacity for carbohydrates, which means that the plant is capable of responding to rain and producing useful forage. It has a low death rate during drought providing a competitive advantage against undesirable plants.

### Historical impact of drought on crown cover

Grazing trials conducted at Charters Towers and Julia Creek in the early 2000s give an insight into how that drought stressed pastures. Both the Mitchell grass and the desert bluegrass had a substantial decrease in crown cover over twelve months during 2002 to 2003, from 2.5 per cent to 0.5 per cent.

The drought caused crown cover to reduce regardless of the stocking rate or whether it was spelled. However, stocking rate affected the rate of recovery over the next seven years-crown cover recovered to 1.5 per cent with a moderate stocking rate compared with 0.5 per cent with a high stocking rate. A similar trial conducted near Calliope showed the same response to drought with blackspear and forest bluegrass.

### **Invading grasses**

Invading grasses, including Indian couch, wiregrasses and rat's tail grasses, can have a competitive advantage over 3P grasses because of their low palatability, large seedbank, their ability to spread by runners, or a combination of these characteristics, particularly during and coming out of a drought.

2P grasses, such as hairy panic and windmill grasses, can also spread in the pasture during drought because they set seed more readily and have a large viable seedbank. Mountain wanderrie can increase because it is very longlived and mostly not grazed. Golden beardgrass



Desert blue establishing into a pasture that is dominated by Indian couch

is palatable but has a large underground stem

with protected growing points enabling longevity. When invading grasses have the opportunity to

establish and increase in a pasture it can be very difficult to revert to a 3P dominated pasture.

### Soil fertility and condition

Indian couch has a smaller root mass than 3P grasses and needs greater cover levels to enhance infiltration. Litter cover is very important for enhanced soil surface conditions and increasing infiltration with greater benefits when the litter starts to incorporate into the soil surface. For Indian couch, litter cover levels and incorporation into the soil surface are low until aboveground biomass levels exceed 1000 kg per hectare.

Soil fertility and soil condition also play a role in the health of 3P grasses. Soils in good condition have the capacity to absorb and store rainfall, to store and cycle nutrients, to provide appropriate habitat for seed germination and plant growth, and to resist erosion. Fertile soils with good surface condition ensure the least stress on 3P grasses during drought and enhance drought recovery.

### Perennial grass recovery

Ground cover is critical for the health of 3P grasses regardless of the condition of the pasture.

Broadleaved forbs, Indian couch and other 2P and increaser grasses often make an important contribution to ground cover and begin the process of improving soil surface condition, infiltration and nutrient cycling. 3P grasses need an opportunity to establish into a pasture where they are not dominant. This may occur through drought/fire/disturbance resulting in death or weakening of the 2Ps, increaser grasses and tree layer. If a viable seedbank of 3Ps is present, and some good growing conditions ensue, then a change in composition can favor the 3Ps.

A study near Charters Towers showed what appeared to be a full recovery of pasture yield and composition after eight years of moderate grazing and wet season spelling. However, the paddocks still had numerous bare areas 5-20 m across. These areas were patch grazed by cattle and had higher levels of runoff and nutrient movement. Ground cover from annual grasses, forbs and litter helped these patches recover and 3P grasses established at the downslope edge of the patch where there may be better soil moisture, nutrient levels and a soil surface more conducive for seedling establishment. The pastures will need sequential favorable seasons to continue recovery.

### **Managing pastures**

Regardless of the condition of the pasture, good ground cover at the end of the dry season needs to be the key priority. For Indian couch, you must retain a minimum residual pasture of 500 kg per hectare at the end of the dry season. Stocking to long-term carrying capacity, adjusting stock numbers to the amount of forage available and wet season spelling can be achieved through a number of grazing systems.

As the Fitzroy component of the Northern Grazing Demonstration Project, a paddock scale demonstration and case study on Ametdale Station, St Lawrence, aims to improve land condition and carrying capacity on Indian couch areas using these management practices. There is a field day planned for August 2019.

Thank you to lan and Penny MacGibbon from Ametdale for their cooperation and sharing their knowledge. The Department of Environment and Science and the Department of Agriculture and Fisheries provide funding for this project. Go to the FutureBeef website for updates.

### Paul Jones

Department of Agriculture and Fisheries Emerald 07 4991 0815 Paul.Jones@daf.qld.gov.au



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### Future Beef

# Getting the best bang for your buck with your dry season supplements

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Feeding cattle can be an expensive exercise. As the onset of the dry season is upon us, now is a great opportunity to take a close look at your supplementation strategy and the options available to determine which will be the most cost and nutrient effective.

During the dry season, crude protein is the primary limiting nutrient as protein levels in the pasture decline. Cattle will lose condition if protein deficiency is not addressed. Feeding a protein supplement will not completely fill the protein deficit of either breeders or growing cattle but it will reduce the weight loss. High protein supplements are usually the most cost effective as higher intakes are required with low protein supplements. Later in the dry season energy usually becomes limiting, particularly for lactating cows.

Body condition is an important part of managing the dry season protein and energy deficiencies. Cattle in good condition may not require supplementation or feeding for as long. In many situations good body condition and providing dry season protein supplements can avoid the need for expensive energy supplements. On phosphorus deficient country, animals' phosphorus requirements should also be considered.

Pasture intake decreases in the dry season as poorer quality feed takes longer to digest. Protein supplements increase rumen microbe activity increasing dry matter feed intake by up to 30 per cent. It is critical that the stocking rates are managed to ensure adequate pasture is available until the season breaks.

Priority should be given to lactating cows as they have the highest nutritional requirements. Breeders should be in a body condition score of three or better at calving to achieve good re-conception rates. Consequently, avoiding excessive dry season weight loss is critical for breeder performance. Weaning is the most critical part of managing body condition because it has a substantial impact on weight loss.

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# Key points

- Dry season supplementation will increase pasture intake by up to 30%. Ensure stocking rates in paddocks can sustain this increase.
- Feed a protein supplement to priority animals to avoid crisis feeding later in the year.
- Once you start, keep the feed up to them to maintain adequate intake and prevent gorging.

Weaning can be expected to reduce dry season weight loss by 13 kg/month, likewise dry season protein supplementation can reduce weight loss by 7 kg/month. Under poor seasonal conditions early weaning may be required but in many situations the timing of weaning can make a big difference to breeder condition i.e. weaning in May versus July.

Growing cattle have much lower nutritional requirements than breeders and may maintain body condition on good quality country throughout the dry season. Compensatory gain in growing cattle is also a factor that needs to be considered when deciding which mobs to supplement.

It is important to ensure that the supplement you use is providing an adequate amount of protein in a cost effective manner. The FutureBeef YouTube page has a series of videos on analysing lick labels to help you understand what is actually in your lick. Feedcalc is a Department of Agriculture and Fisheries program which enables producers to determine what the required intake of a certain supplement is to meet the nutritional targets of



different classes of cattle and the associated cost. A target of 75 g/hd/day of crude protein for dry cattle and 150 g/hd/day for breeders is used. Feedcalc provides a quick objective evaluation of supplement options.

It is also important to know how much supplement is being consumed by cattle. This can be calculated relatively easily if the amount of supplement fed is recorded. Supplement intake and supplement composition can be used to determine if cattle are consuming enough supplement to achieve the target protein intake and calculate the cost.

Caution must be exercised when introducing cattle to urea licks. Feeding salt first, or if the country is phosphorus deficient a mix of salt and a phosphorus supplement, reduces the risk of gorging. Start on a lower urea percentage and increase gradually to allow cattle to become accustomed to urea. There is a greater risk of gorging under poor seasonal conditions if cattle are poor or supplementation is started late.

If you would like to have an in depth look at your feeding strategies and current supplements using Feedcalc, contact your local Beef Extension Officer.

Eloise Moir Department of Agriculture and Fisheries Biloela 0436 666 290 Eloise.Moir@daf.qld.gov.au

### Is your registration with Biosecurity Queensland up-to-date?

### A message from Queensland's Chief Veterinary Officer, Dr Allison Crook.

A new, online customer portal is now available to manage your biosecurity entity registration.

Registration is a critical part of effective biosecurity management in Queensland. It enables Biosecurity Queensland to trace animal movements to determine the origin and spread of a pest or disease, and allows us to contact you quickly and directly in an emergency.

Entity registration works with the property identification code (PIC) system. When an application for entity registration is made, the PIC that relates to the land where the animals are kept will be issued. When the registration requirements commenced on 1 July 2016, anyone who held a PIC was automatically registered as a biosecurity entity. This means if you own any cattle, sheep, pigs, goats, other livestock or a horse, you may already be registered.

If you held a PIC on 30 June 2016, or if you've registered as a biosecurity entity since then, you can now access the Biosecurity Entity Registration Portal to manage your registration and renewal.

If you don't already have an online portal account, the first step to gain access is to check if you're registered. Once you're logged in, you need to review and update your contact details if they've changed. This is an important step so we can contact you in the event of an emergency situation and email you registration renewal reminders.

From mid-May 2019, you'll also be able to use the online portal to renew your registration and pay the fee if it applies. The fee is currently \$136.80 every three years if you keep livestock and applies if you meet the Australian Taxation Office ruling of carrying out the business of primary production as a result of owning your animals.

Check if you're registered and update your contact details at qld.gov.au/ BiosecurityRegistration

If you need help, or to find your nearest Department of Agriculture and Fisheries customer service office, please call our Customer Service Centre on 13 25 23 between 8 am and 5 pm Monday to Friday. You can also email us at info@daf.qld.gov.au.

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Australian Wool

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## Leading Sheep

Plan to scan and scan to plan

FLOCK TALK

Dry or wet years, it's always a good time to think about scanning. This edition of *FlockTalk* has scanning on the brain, looking at the merits of scanning and how to use the information in the best possible way.

Firstly, hear from Blackall wool grower, Ben Banks, who says that pregnancy scanning can lift flock fertility by 10 to 15 per cent. Western Rivers Veterinary Group also discuss scanning with an emphasis on how to know what a "normal" lamb marking result is for your flock, how to use this information and what sort of fertility problems it can highlight.

Keep an eye out for upcoming events around the traps, we've got technology and fencing, and nuts and bolts reproduction days on the cards, for both our existing sheep producers and those needing the tools to enter the sheep industry.

We've also added some great resources to our website recently with a booklet on Electronic Identification (EID) detailing producer and expert tips on the practical ins and outs of implementing EIDs in your flock and videos on the crucial considerations for weaning in dry times—have a look now to get ahead of the game. Head to leadingsheep.com.au for these resources and more.

Andrea McKenzie Editor

Acting Leading Sheep project manager Department of Agriculture and Fisheries

# Scanning: key to increase in flock fertility

A Blackall wool producer believes introducing a pregnancyscanning program is an investment that can lift flock fertility by 10 to 15 per cent annually and help fine-tune ewe management.

Ben Banks and his wife Oona manage a 46 500 hectare family property, Rivington, west of Blackall, where they run 25 000 Merinos when the season permits.

For close to a decade the couple have also operated a contract pregnancy-scanning business, processing around 100 000 head of sheep annually.

With buoyant wool prices and growing industry optimism thanks to wild dog fencing, Mr Banks said breeding flocks were becoming increasingly valuable.

"Improving the fertility and productivity of your own flock is the most cost-effective way to boost your sheep numbers," said Mr Banks.

The western Queensland producer said he had used pregnancy scanning as an integral part of his own operation in recent years to lift production and in turn bolster profitability.

"I think scanning is one of the most underutilised resources especially in central-western Queensland, where there is so much potential for improving management of pregnant ewes," he said.

"The information from scanning can assist you to make more informed decisions when it comes to management. Central-western

### Editorial enquiries

Andrea McKenzie Phone: 07 4530 1262; Mobile: 0428 109 620 Email: andrea.mckenzie@daf.qld.gov.au

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### **PRODUCER SNAPSHOT**

Producer: Ben and Oona Banks Property: Rivington, Blackall Property size: 46 500 ha Livestock: 25 000 Merino ewes

Queensland is a harsh pastoral environment, but by identifying pregnancy status, we can tailor nutrition and husbandry management programs so we end up marking more lambs."

He said pregnancy scanning also allowed producers to draft ewes into mobs of multiple or single bearing ewes, as well as culling infertile animals, which improved flock efficiency and ensured feed was being utilised by the most productive animals.

"Twinning ewes can be run in smaller mobs and fed to meet their extra nutritional requirements. Alternatively, if you opt to sell a scanned-in-lamb ewe they generally make around \$20 a head more than a station-mated female," Mr Banks said.

"Meanwhile single ewes can be run in larger mobs and dry ewes can be run like wethers or sold."

Within his own operation, Mr Banks said he had become increasingly focused on scanning for multiple pregnancies, so more productive ewes were managed effectively to ensure they delivered lambs on the ground.

"Since we started scanning every year, we have been able to improve our flock's fertility, because we know what our ewes are really producing," he said.



Ben Banks

"For example, when we first started scanning at Rivington, in the initial year we found we had about 75 per cent of ewes in lamb, so we were able to identify and cull infertile females.

"The following year we did the same thing, and by keeping the productive ewes and culling the non-performers we were able to lift our average to around 85 to 90 per cent scanned-in-lamb."

He said in real terms introducing a regular pregnancy-scanning program allowed him to lift flock fertility by 10 to 15 per cent within one year.

"This is something that other producers could also do, because essentially it is about having more information to make better-informed management decisions," Mr Banks said.

"Regardless of mob size, that sort of improvement, in terms of knowing what ewes are fertile and what they are producing for you, can make a significant difference to your bank balance at the end of the day.

"To me it makes sense to know what your ewes are doing and while it might cost 60 cents per head, the benefit is you increase the number of lambs on the ground each season and you are better able to prepare for the lambing season.

"I think everyone should get into it and make more out of your sheep. You've got to make every single animal count and they're worth so much money now that spending a few extra cents on scanning them is worth it."

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### FLOCK TALK



# Data underpins flock scorecard

Having the ability to assess the pregnancy status of ewes is a key tool for sheep and wool producers to not only help inform management decisions, but also create their own flock scorecard and identify any problems early.

That's according to Western Rivers Veterinary Group partner, Dr Tim Gole, who undertakes flock pregnancy scanning for clients in Queensland and New South Wales (NSW).

"An important question from producers is 'what is a "normal" lamb marking result and how do you know if there is a fertility or other health issue impacting your flock's productivity?'," Dr Gole said.

"Pregnancy scanning is essential to answering this question and I think of it as a measurement, management and forecasting tool.

"Scanning data is important because if you've got great conception rates but a poor lamb marking result, you can quickly work out where the losses are occurring. This gives you a very different insight to just putting the rams in with the ewes and waiting until lamb marking to see the result.

"The main benefit of scanning is the ability to identify the pregnancy status of ewes and allocating nutritional resources efficiently according to need.

"Identifying the pregnancy status of ewes is a powerful management tool as it allows you to put in place measures to influence lamb survivability, which is directly related to birthweight and in turn, ewe nutrition. This is particularly important for twin-bearing ewes.

"Every producer should be undertaking ewe body condition scoring at scanning time. It's easily learnt and producers can undertake this themselves giving very cost-effective data collection.

"If a twin-bearing ewe's body condition score is 2, her lamb survivability is likely to be quite low at under 50 per cent. However, if you take her up to a body score 3, you can increase lamb survivability rates to well over 60 per cent.

"In contrast, for a single-bearing ewe, if you take her body condition score from 2 to 3, the change

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in expected lamb survivability is only likely to be a couple of per cent.

"Identifying your twin-bearing ewes and treating them differently is the best return on investment for feeding or pasture management."

### **Control the controllable**

Dr Gole said the best time to undertake pregnancy scanning is usually 80 to 90 days after joining.

"Knowing the pregnancy status of a flock is an effective risk management tool because if you've had a really poor joining, it's better to know 90 days after the rams went in than 150 or 170 days after," Dr Gole said.

"If you get a poor scanning result, you can work your way back from scanning to assess the likely impacting factors.

"There are a number of factors to consider, and the first should be body condition scores. Comparing the scores of each ewe at scanning to their scores at joining can yield valuable insights.

"Producers should also look at nutrition because there's a direct correlation between nutrition and conception rates.

"External factors can also play a role, so review the calendar and examine climatic conditions at joining, particularly heat."

Dr Gole said producers should also look at their ram team and investigate any possible diseases that can impact fertility, such as ovine brucellosis.

Pre-joining ram examinations are typically undertaken at least six weeks prior. If producers are achieving good scanning results but a low lamb marking result, disease testing can be undertaken.



Dr Tim Gole, Western Rivers Veterinary Group, teaching vet student Andrew Pegg about scanning

### Top 5 benefits of pregnancy scanning

- · Powerful measurement, management and forecasting tool
- Early identification of fertility or other health issues impacting your flock's productivity
- Allows you to manage the nutrition requirements of single and twin-bearing ewes to maximise lamb survivability
- Can help identify possible diseases in your ram team that may be affecting fertility
- Producers should examine flock nutrition, possible diseases and their ram team management to help identify any fertility issues highlighted by pregnancy scanning

Key diseases behind lamb losses and late abortions can include ovine vibriosis, a campylobacter infection; toxoplasmosis, which is associated with feral cats; and pestivirus.

### Setting benchmarks

Dr Gole said scanning data helps producers set their own benchmarks.

"When you start generating data from your own flock, it's always a challenge, particularly for wool producers, to identify what's normal for your flock," Dr Gole said.

"You've got the classic rubber band—there's reproductive performance on one side and wool production on the other. If you select constantly for heavy wool cutting sheep, it comes at the expense of reproductive performance.

"That's why I think generating your own results is beneficial because it allows you to compare like with like and set benchmarks.

"At scanning time, you can look to budget and do cost-benefit analysis and see where big gains can be made. "There were some studies done at Trangie Agricultural Research Centre that found a massive difference between the top 25 per cent and bottom 25 per cent in terms of your flock, and the big difference came in the number of lambs reared. The research found a \$436 difference in lifetime value, with most of that figure based on net reproduction rates.

"For the data it gives you, it's rewarding. There has been some really big uptake of pregnancyscanning programs in western NSW, because lamb production as sale of offspring makes up such a significant proportion of income now."

Keep an eye out for AWI and Leading Sheep's Picking Performer Ewes workshops, that cover many of the concepts in this article such as the dollar difference between top and bottom performers and the impact of ewe condition score on lamb survival. Or get in touch to request one in your area. For more information about pregnancy scanning, including a list of pregnancy scanners in Queensland, visit leadingsheep.com.au and search 'scanning' or 'pregnancy scanners'.

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