



**CO BEEF**  
Information for rural business in Central Queensland

13 25 23 futurebeef.com.au



# Marketing options explored

RUSSELL and Bronwyn Brunton have owned their property, Frogs Hollow at Theodore, since 2015 and currently background 250 steers on 590 hectares.

Depending on seasonal and market conditions, approximately 250 flatback weaner steers (ranging from 220 to 250 kilograms) are purchased during the winter months from local saleyards.

The steers are rotated through four paddocks of pastures and forage crops and gain up to 1.2kg per day until they reach approximately 320kg, when they are then moved into leucaena paddocks.

Studies have found that steers can gain up to 0.7kg per day when they graze leucaena and sown grass pastures.

The Bruntons use the leucaena to keep the cattle growing in the dry season when the grass hays off.

After grazing on leucaena pastures in winter and spring the steers are prepared for sale in early summer.

A sale weight of 380 to 420kg is ideal for the business, as the steers can be



Russell and Bronwyn Brunton, Frogs Hollow, Theodore.

directly marketed to various Queensland feedlots.

Russell and Bronwyn aim to sell by January, so the paddocks can be spelled in preparation for the next season's steers.

They undertake regular weighing to monitor cattle performance, and this assists with cattle and grazing management, and planning sales.

Due to the successful performance of their cattle on

leucaena, the Bruntons are interested in establishing more, but wanted to understand the economic implications of doing so.

They contacted the Queensland Department

of Agriculture and Fisheries (DAF) for assistance in undertaking an economic analysis of the current and potential profitability of their operating strategy.

DAF economists assessed

production and trading options and confirmed that gross margins were maximised by grazing steers on a leucaena-based pasture and turning them off at a feeder weight of 380-420kg.

Sustainable land management is also important to Russell and Bronwyn.

DAF Beef extension officers helped them develop a land management plan focused on remediating degraded pastures and riparian zones through infrastructure additions such as fencing and watering points.

The Bruntons are now considering the construction of riparian fences and adding more watering points in paddocks with degraded areas to spread out grazing pressure and remediate areas of erosion.

By seeking specialist assistance through DAF, the Bruntons have been able to make informed decisions and business improvements based on the best advice for their property.

■ Ryan Honor, Beef extension officer, DAF Rockhampton, 0436 802 069.

## ICONIC BREEDCOW AND DYNAMA HERD BUDGETING TOOL AVAILABLE ONLINE



THE Breedcow and Dynama herd management program has been updated and is now available online.

Developed in 1988 by Bill Holmes, formerly a principal agricultural economist with the now Queensland Department of Agriculture and Fisheries (DAF), the program was designed for graziers and advisers.

"There have been six major updates to this herd budgeting tool since it was developed over 30 years

ago and this year, we have moved the platform online," DAF grazing economist Tim Moravek said.

The Breedcow and Dynama package is used to assess choices for the management of beef cattle herds run under extensive conditions.

It presents budgeting processes, adapted to the special needs of extensive beef producers.

Breedcow and Dynama can be used for four key

herd budgeting processes:

1. Comparing the likely profitability of the herd under different management or turnoff systems (Breedcowplus).
2. Making forward projections of stock numbers, sales, cash flow, net profit, debt and net worth (Dynamaplus).
3. Deciding what to sell when the plan goes sour or what to buy when there is an opportunity (Bullocks and Cowtrade).

4. Evaluating investments in herd or property improvement to determine the rate of return on extra capital, the number of years to break even and the peak debt (Investan).

"Improved usability, information sharing and help guides are included and the online tool improves the ability to be helped remotely by agricultural economists based in regional Queensland."

### HERD BUDGETING

#### Breedcow and Dynama update

- Online training courses and workshops are planned towards the end of the year and anyone interested should call 13 25 23.
- For further information contact your local beef extension officer or visit [breedcowdynama.com.au](http://breedcowdynama.com.au).

**Allflex** Livestock Intelligence™

## DNA SAMPLING SIMPLIFIED

with the **ALLFLEXTSU** (TISSUE SAMPLING UNITS)

- Easiest way to collect a quality sample
- Vials fit in standard lab well plate (96 vials)
- Efficient and cost effective
- Available with paired NLIS and management tags

Questions? 1300 138 247 or [customerservice@allflex.com.au](mailto:customerservice@allflex.com.au)

[www.allflex.com.au](http://www.allflex.com.au)

**65 YEARS** AND READY FOR MORE.



13 25 23 futurebeef.com.au



# Giving nitrogen a boost

**R**ESearchers at The University of Queensland are investigating how fire and grazing can be managed to optimise nitrogen inputs by biocrusts to improve the productivity of grazing lands in northern Australia.

In the research - funded by Meat & Livestock Australia - biocrusts are being put through their paces at the Kidman Springs fire experiment 400 kilometres south of Darwin (NT Department of Primary Industry and Resources) and the Wambiana Grazing Trial at Charters Towers in north Queensland (QLD Department of Agriculture and Fisheries).

## What are biocrusts?

Biocrusts are the 'living skin' on the surface of the soil and are made of many tiny organisms including cyanobacteria, fungi, green algae, bacteria, lichens, liverworts, and mosses.

They grow when it's wet or dewy and become inactive when it's dry, just like plants.

## Why do we care about biocrusts?

They stabilise the soil surface by intertwining with soil particles to bind them together, preventing erosion from wind and water.

They photosynthesise and fix carbon - algae, cyanobacteria, lichens, liverworts, and mosses are all green and photosynthesise just like plants. The carbon they pull out of the air is incorporated into the soil and enhances soil carbon.

They fix nitrogen! Most cyanobacteria fix nitrogen out of the air just like legumes do. They use the nitrogen to



Biocrusts are the 'living skin' on the surface of the soil and are made of many tiny organisms including cyanobacteria, fungi, green algae, bacteria, lichens, liverworts, and mosses.

grow but store any excess nitrogen they fix in a slimy layer around their cells.

When it rains, much of this plant-available nitrogen enters the surrounding soil and is available for pastures.

In the dry season the biocrusts dry out and partly disintegrate.

This nutrient-rich biocrust is incorporated into the soil as organic matter with early wet season rains.

The amount of nitrogen that biocrusts fix every year is similar to the amount of nitrogen fixed by native legumes in our grassy tropical savannas.

Soil fertility is a major limitation to pasture growth in tropical savannas, but it doesn't pay to add fertilisers at these extensive scales.

We are testing if we can manage grazing and fire to

## BIOCRUSTS

- Biocrusts cover 12 per cent of the earth's land surface and fix 7pc of the terrestrial carbon and 45pc of the plant-available nitrogen.
- At Kidman Springs in the Victoria River District and Wambiana at Charters Towers, up to 70pc of the ground cover is biocrusts.
- Savanna grasses have higher growth with biocrusts, probably because they benefit from the extra nitrogen fixed by the biocrusts.

maximise the natural carbon and nitrogen inputs by biocrusts into soils and enhance soil fertility and productivity in tropical savannas.

## Where are biocrusts?

They are in the top one to two centimetres of the soil, usually covering the bare ground spaces between plants.

Biocrusts are found all over the world from freezing Iceland and Antarctica to hot deserts and savannas.

In tropical savannas biocrusts are dominated by cyanobacteria and liverworts.

## What do they look like?

In Northern Australia biocrusts often appear as dark staining on the soil surface in the dry season (top left) and dark green slimy films during the wet season (top right).

## But wait, aren't soil crusts a bad thing?

There are two types of soil crusts. Living biocrusts are distinct from dead physical crusts that form on degraded soils.

Physical soil crusts can inhibit water infiltration and plant growth.

Living biocrusts enhance soil moisture, soil fertility and plant growth.

## What effect do fire and grazing have on biocrusts?

Biocrusts in Australia's tropical savannas, like our native vegetation, have evolved with fire and hence are adapted to fire.

Fire can enhance biocrusts by removing litter, trees and shrubs that would otherwise compete as ground cover, yet you need the right amount of fire; not too much, not too little.

Biocrusts on burnt sites at Kidman Springs regrew just as well after fire as those on unburnt sites.

During the wet season burnt biocrusts on alluvial soils grew faster than unburnt biocrusts.

Grazing can potentially open spaces for biocrusts by reducing plant cover, nevertheless, trampling by hooved animals is not something Australian ecosystems have evolved with, so our biocrusts are quite susceptible to heavy trampling.

At the Wambiana Grazing Trial, biocrust cover was higher and healthier with moderate grazing than with heavy grazing.

## How can we manage grazing to benefit biocrusts?

During the dry season biocrusts dehydrate and become dormant.

The carbon and nitrogen they fix is broken down and recycled by other organisms in the biocrust, and becomes incorporated into the soil and available to plants.

We suspect that spelling over the wet season while biocrusts are actively growing and grazing during the dry season when they are dormant, will not only benefit palatable plants, but also biocrusts, allowing them to maximise their growth and nitrogen fixation.

For more detailed information on biocrust, visit [futurebeef.com.au](http://futurebeef.com.au) (search for 'biocrust').

■ Robyn Cowley, Northern Territory Department of Primary Industry and Resources, 0419 829 493.

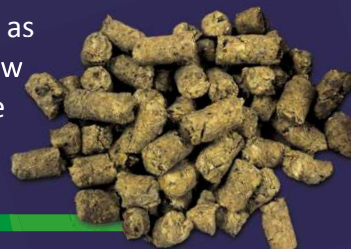
■ Wendy Williams, The University of Queensland, 0418 246 001.



## New feed option for beef producers

### CORN GLUTEN FEED PELLETS (CGFP)

Rich in protein, CGFP is primarily used as cattle feed, providing a high energy, low fat feed source that is highly digestible and rich in crucial amino acids.



Supplied ex Townsville

Available bulk or 1 tonne bulk bags

Milled by ADM

Michael Vaughan 0427 308 317  
Manager, Central & North Queensland

Craig Wade 0417 820 388  
CQ Commodities (Agent for ADM)



ADM is one of the world's leading grain processors and stockfeed manufacturers, supplying quality stockfeed products from our Townsville storage facility.



# How to make dry season supplementation work

DRY season supplementation is a common practice to help cattle handle poor quality dry season pasture.

Cattle performance is affected by the combination of reduced feed intake due to lower digestibility of the pasture and lower nutritive value i.e. protein and energy.

The cost of feeding has risen sharply in recent years due to increases in the cost of products such as molasses, grain, protein meals and whole cottonseed.

Supplementation can be a valuable tool but needs to be carefully managed for a cost effective result.

## Cattle need grass

Cattle production relies on the ability of cattle to economically utilise pasture of varying quality.

Supplying non-protein nitrogen to help cattle utilise poor quality grass is relatively easy and cheap, but supplying roughage or large amounts of energy, because pasture is limiting has become very expensive.

The long standing dry season strategy of feeding 2kg of M8U per day now costs \$15-\$20/head/month in central Queensland.

Using supplements to maintain excessive grazing pressure is detrimental to pastures and land condition.

## What can a supplement achieve?

The marked increase in nutrient requirements of cows once they calve presents an annual nutritional challenge (Table 1).

The substantial protein

	Pasture only		Pasture + dry season lick	
Pasture intake (kg/day)	7		8.4	
Lick intake (g/hd/day)	0		150	
	Protein (g/day)	ME (MJ/day)	Protein (g/day)	ME (MJ/day)
<b>Nutrient requirements</b>				
Dry cow – last trimester	570	60	570	60
Lactating cow – calf to 4 months	911	80	911	80
<b>Nutrient intakes</b>				
Pasture	333	44	400	53
Lick			150	
<b>Total intake</b>	<b>333</b>	<b>44</b>	<b>550</b>	<b>53</b>
<b>Nutrient deficits</b>				
Dry cow – last trimester	237	16	20	7
Lactating cow – calf to 4 months	578	36	361	27

Table 1. Nutrient requirements, intakes and deficits for a 450 kg breeder grazing low quality dry season pasture (Crude protein 4.8pc, Dry matter digestibility 47pc).

and energy deficits faced by lactating cows mean that dry season protein supplements can only minimise weight loss.

Commonly used dry season protein supplements contain very little energy (Table 2).

Animals cannot physically consume sufficient to achieve a useful energy intake.

To supply a useful quantity of energy, high energy feeds such as protein meals, whole cottonseed, fortified molasses, or high grain mixes are required.

## Class of animal and target supplement intake

The target protein intake

Feed	Crude protein (%)	Metabolisable energy (MJ/kg)
Commercial liquid supplement	20	3.8
30% urea lick	100	1.1
10% urea block	34	5.8
Canola meal	35	9.0
Whole cottonseed	21	13.0
M8U	25	8.1

Table 2. Protein and energy content of common supplements (analysis on as fed basis).

for dry season supplementation of breeders is 150g/day and for growing cattle 75g/day.

Where breeders are fed high energy supplements due to poor seasonal conditions, the target energy

intake is 15-20 MJ ME/day.

Weaners under 160kg require a palatable high energy and true protein supplement such as:

- Weaner meals 500-1,000 g/day
- Protein meals 500 g/day

- Fortified molasses 1,000 g/day.

## Ease of management

The practicality of supplements must also be considered.

Liquid supplements can appear good value but if intakes cannot be controlled costs will be much higher than expected.

Licks with low urea and high levels of protein meal and or grain can also have intake control problems.

Loose lick composition can be adjusted to achieve the desired nutrient intakes at reasonable cost.

- Mick Sullivan, Principal beef extension officer, DAF Rockhampton, 0428 104 374.

## Managing breeder body condition is critical for effective supplementation

Because supplying large amounts of energy for lengthy periods is un-economic and dry season protein supplements can only reduce weight loss, breeders require body condition reserves to handle the period from late pregnancy to the seasonal break.

Breeders in store condition or better (Body condition score 3 plus) at calving, will in most situations achieve good conception rates if the seasonal break is not too late.

Stocking rate must be the first consideration, animals need to be able to consume their potential pasture intake and maximise diet quality by selection rather than having to consume whatever is available.

Weaning is the next consideration as it reduces breeders' energy requirements by around 50 per cent.

Early weaning is a proven strategy on light country and in dry years. In many situations, more timely weaning as an example, May versus June is all that's needed to improve breeder body condition.

Controlled mating is valuable because it prevents cows calving too soon and enables calves to be weaned before feed quality declines too much.

In year round mated herds, the timing of musters is critical to reduce the number of cows lactating for long periods in the dry season.

Segregating breeders into calving groups can assist weaning management and reduce supplement costs.

- Mick Sullivan, Principal beef extension officer, DAF Rockhampton, 0428 104 374.

**Fabrication and replacement of genuine Benmic parts**  
**Mobile logbook services and repair and road worthy certificates**  
**Comprehensive feedlot maintenance & design**  
**Roll changes for all brands of feed mills**  
**WHS consultation**



LEADING SHEEP



FLOCK TALK

13 25 23  
leadingsheep.com.au



Great potential to integrate sheep and lambs

# The benefit of diversification

THERE is great potential for farmers in closely settled areas to integrate sheep and lambs into their mixed farming operations, with diversification and effective management key to driving profitability, particularly in drier times.

That's according to Stuart and Pru Barkla, who together manage their 160-hectare property, 'Mt Molar' Clifton, Queensland, where they currently run 130 breeding ewes, 200 goats and a lamb trading enterprise.

"Diversification has been key to the sustainability and profitability of our enterprise, offering a more balanced business and giving us the opportunity to better manage risk," they said.

"Integrating sheep production in our business involved investing in a good set of sheep yards and completely fencing the boundary with an exclusion fence.

"Due to consistent dry seasons in our region, our sheep production has enabled us to maintain our business throughout this drought and continue to optimise the use of our land and pasture through rotational grazing



Stuart and Pru Barkla, 'Mt Molar' Clifton, say that diversification has been key to the sustainability and profitability of their enterprise.

in conjunction with supplementary feeding."

The Barklas said management decisions around how to optimise livestock production significantly impact productivity and profitability in

mixed farming enterprises.

"You must ensure you have the capacity and strategies in place to mitigate risk of mortality to your livestock, for example protecting your flock from feral animals and

dog attacks," they said.

"We participate regularly in 1080 baiting programs, which assists in both the control of feral animals and protects our Australian native animals and birds.

"Although living in these areas provides easy access to assisted feeding and other resources, producers need to look for ways to optimise their business and ensure the safety of livestock, from



Producers looking to get into sheep can learn from Australia's industry experts via the ongoing H Series of webinars featuring information from across sheep and wool production topics.

exclusion fencing to ensuring sheep genetics are suited to the region.

"If you're considering diversifying your enterprise into sheep production, seek professional advice so you have a better understanding of your business's potential, to guide your future management decisions."

## Time to take stock of your weaning options

WITH BOM issuing a LaNina watch, variable summer rain likely and much of Queensland still in drought, livestock producers are urged to maintain flexibility in their businesses and take stock of their management options for weaning lambs.

Milly Nolan, extension officer with the Queensland

Department of Agriculture and Fisheries (DAF), said producers need to be aware of management strategies that can be used to minimise stress and in turn, mitigate risk of weight loss, mortalities and tender wool.

"When looking at weaning management options, the live weight of the lamb

should be the key consideration, with a higher weight resulting in a greater chance of survival and therefore success," Milly said.

"Early weaning for one, decreases feeding costs through targeted nutrition and allow for greater flexibility in ewe management decision-making and earlier

implementation of worm control programs in lambs.

"If early weaning is done in the yards, it can help ensure that lambs are given the best feed, allowing weaning to occur when lambs are at even lighter live weights.

"Compared to traditional methods, yard weaning has shown to minimise lamb

weight loss, reduce stress through quicker adaptation to ewe separation, and allow for closer monitoring for flock health."

Leading Sheep has released nine short clips recorded from the 'Weaning in Dry Times' webinar, visit [leadingsheep.com.au](http://leadingsheep.com.au) and search 'weaning in dry times'.

To find out what tools are available to help wool producers manage varying seasonal conditions, contact [leadingsheep@daf.qld.gov.au](mailto:leadingsheep@daf.qld.gov.au).

Leading Sheep is an important partnership between DAF and Australian Wool Innovation, and is supported by AgForce.

### AUSTRALIAN MADE SHEDS BUILT WITH AUSTRALIAN MADE STEEL

- ✓ 100% AUSTRALIAN BLUESCOPE STEEL
- ✓ 100% AUSTRALIAN MADE
- ✓ 100% AUSTRALIAN FAMILY OWNED

ABN HOLDERS ONLY



**TOUGH TRIPLE** ONLY **\$13,860** INC GST



9M x 15M x 4.5M (30' x 50' x 15')  
Open front shed in large 5M bays for better storage.

**GREAT OPENINGS** ONLY **\$30,400** INC GST




15M x 27M x 5.1M (50' x 90' x 17')  
So popular and such great value. Add an end wall for \$3,400 or an extra bay for \$4,510.

**PERFECT INDUSTRIAL** ONLY **\$44,450** INC GST



13M x 27M x 5M (43' x 90' x 16'8")  
Versatile industrial building. Ideal for workshop, storage or manufacturing. Colorbond included.

**BIG DEEP & HIGH PLUS** ONLY **\$57,980** INC GST



18M x 36M x 5.7M (60' x 120' x 19')  
Wide and high openings for large machinery or hay.

**AUSSIE LEGEND** ONLY **\$23,370** INC GST



13M x 22.5M x 5M (43' x 75' x 16'8")  
Open in the gable ends for taller machinery or more hay. Add an end wall for \$2,540 or an extra bay for \$4,210.

**MANUFACTURING HIGH GRADE SHEDS IN QLD, NSW, VIC, SA, WA & TAS** CALL 1300 559 668 OR VISIT [WWW.NOWBUILDINGS.COM.AU](http://WWW.NOWBUILDINGS.COM.AU)

TREVOR 0431 597 160 | JOHN 0437 699 111 | JAMES 0413 104 820

**NOW BUILDINGS**  
Australia's Leading Wholesale Shed Company

Images are from the Now Buildings range and are for illustration purposes only. Imperial measurements are approximate. Extras pricing in bold is applicable at the shed purchase stage only. Extensions for existing sheds POA. WA and NT slightly extra. Delivery extra. Now Buildings will not be responsible to honour these prices once the total allocation has been sold. E&OE. Prices are Region A, Terrain cat. 2. Reg B available at slightly extra. Prices are based on collection from one of our many depots, delivery is available at an extra charge in most areas.