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Planning pasture burns

Move to follow more traditional cultural methods of burning to reduce fuel loads.

After a fire, stock should be kept out of pastures for a period long enough for the plants to develop leaves at least 10 centimetres high or go to seed.

GRAZIERS burn for many reasons, including improving access to green leaf by removing old rank material and controlling woody regrowth.

Most of our native and sown grasses lose quality fairly rapidly toward the end of the growing season.

By the end of the winter or dry season, crude protein levels are typically very low especially if there have been several frosts.

Property owners in southern Queensland often see September as a time to burn pasture.

Given the catastrophic fires in recent years, there has been a move to follow more traditional cultural methods of burning to reduce fuel loads early in the season and preserve flora and fauna.

If we look at the long-term history of our pasture species, most native species are adapted to handling regular fire.

For example, black spear grass has the ability to bury its seed below the soil surface to protect it from fire.

Other native grasses, such as kangaroo grass and Queensland bluegrass, have been found to be 10 per cent more likely to germinate from seed after fire due to chemicals in the smoke and ash.

Things to keep in mind when burning pastures:

- reduce the risk of uncontrolled summer fires by burning off extra fuel
- remove dry unpalatable grass to allow animals access to higher quality new growth
- control weeds both woody and broadleaf
- change pasture composition.

The type of fire will markedly affect the outcome achieved.

A slow, cool fire after a significant rainfall event can be beneficial to reduce moribund pasture and alter pasture composition.

Burning after rain slows the fire, and if the ground cover is still damp, it will remain after the fire to protect the soil. These cooler fires are often patchy in nature, which can be beneficial for flora and fauna.

In contrast, a hot fire on a dry day can scorch the soil surface leaving it bare. Often the recovery time in this situation for pasture can be long-term.

Arming yourself with weather information such as temperature, humidity, dew points and wind direction is critical to ensuring a safe burn.

Most land types in Queensland now have recommended burning guidelines to ensure maintenance of a healthy ecosystem.

Intervals of burning range from every two to three years in a speargrass pasture to exclusion of fire in vine tree scrubs and rainforest.

Where fire is being used for retarding the growth of woody weeds, a hotter than normal fire is needed, and it may take several seasons before enough fuel is available for such a fire.

> Given the catastrophic fires in recent years, there has been a move to follow more traditional cultural methods of burning to reduce fuel loads early in the season and preserve flora and fauna.

Generally, eucalypts need to be smaller than 30 centimetres high to be controlled by fire.

For changing pasture composition, it has been found that in speargrass pastures, burning strategically every three to four years helps control the invasion of pasture by coarse unpalatable wiregrasses.

It's important to remember that fires can have many detrimental effects if used too often. Burning on an annual basis can severely reduce the amount of ground cover that provides soil protection from erosion and loss of habitat for soil microflora to cycle nutrients.

Managing pastures after fire is also important. Stock should be kept out of pastures for a period long enough for the plants to develop leaves at least 10cm high or go to seed.

Plants which are continually eaten down straight after a fire lose vigour quickly. The plants are unable to photosynthesise and build up root reserves and size, which dictates how much the plant can ultimately produce for the season.

A short-term gain in stock condition, by grazing recently burnt pasture, is quickly lost as the pasture in the long-term produces less forage. Landowners should avoid burning too large an area on their properties as a dry spell after burning can cause feed shortages.

Only burn what you can afford to do without. In contrast, if only small areas are burnt, cattle will concentrate on those areas, damaging regrowing plants. If burning is a management tool for your property it must be part of a long-term plan keeping in mind the need to comply with permit guidelines and notify neighbours.

- Damien O'Sullivan, senior extension officer, Department of Agriculture and Fisheries, (07) 4182 1817.

More information:

- ruralfire.qld.gov.au - Permits, current fire maps.
- https://qld.gov.au/environment/plants-animals/plants/ecosystems/fire-management - Regional ecosystems information with fire frequency.
- http://fireandbiodiversity.org.au/ - Information on all aspects of fire in South East Queensland.
- http://bom.gov.au/australia/meteye/ - information on estimated temperature, humidity, wind direction and speed for the next seven days.

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Be on the lookout and front foot with Pimelea

FOLLOWING on from recent winter rain and cooler temperatures across south and south-west regions of Queensland, producers are advised to be on the lookout for Pimelea to ensure they are on the front foot with management. There are three toxic Pimelea species most commonly found throughout grazing pastures, which can cause significant economic losses to production if not managed effectively. Impacts on production begin to occur when pastures are not readily available or when Pimelea grows within pastures.

The main species in grazing pastures are:

- Pimelea elongata
- Pimelea simplex
- Pimelea trichostachya.

Understanding the species on your property is useful for management. Cattle do not generally consume Pimelea when it is green due to the plant's strong odour. The odour disappears when the plant dries off, which is when issues can arise, as flowers and seed heads contain large levels of the toxin and can be consumed mistakably in pastures. Pimelea can be also be consumed via ingestion of soil or water containing fragments or seeds, and inhalation of dried fragments.

Understanding your pastures and cattle (introduced cattle are more susceptible), and identifying Pimelea species and impacts to animals allows for effective management. There is currently an APVMA permit (number 13549) for spraying small areas of Pimelea. Other management options include strategic grazing or removal of animals from paddocks when there is risk of consumption of Pimelea plants.

Figure 1. Pimelea trichostachya plant. Photo courtesy of Jenny Milson, DAF.

When signs of Pimelea poisoning are observed, it is paramount to remove stock and get them on to quality, non-Pimelea infested pastures. This can assist in recovery if impacts have not progressed too far.

Symptoms can include:

- diarrhoea
- reduced appetite and depression
- rough coat/condition
- oedema (swelling due to build-up of fluid) of the head, brisket and abdomen
- increased respiration rate and heart rate
- a reluctance to move (during exertion sudden death can occur).

Pimelea-affected cow showing signs of oedema and loss of body condition.

A Meat & Livestock Australia (MLA) funded, University of Queensland and Department of Agriculture and Fisheries (DAF) project has been undertaking research aimed at combating the impacts from toxicity. Research has been conducted on:

- rumen bacteria
- rumen absorbents
- bentonite
- biochar and heat-activated biochar.

A three-month, 30 animal pen trial has recently been completed. The final trial data, blood and rumen samples are in the process of being analysed. Keep up-to-date with the Pimelea research updates via MLA.

Anecdotally, producers have been feeding both bentonite and biochar to cattle. Some producers observed animals in the paddock consuming bentonite more readily than biochar.

More information can be found at futurebeef.com.au, search 'Understanding Pimelea poisoning of cattle'.

- Thank you to Diane Ouwerkerk (DAF), Mary Fletcher (QAAFI) and Marie Vitelli (AgForce) for their input into this article.

Drought is an enduring feature of the Australian landscape. It has significant economic, social and environmental impacts.

Major drought reform for Queensland producers

A major reform to Queensland's drought assistance will help Queensland primary producers improve their management of future droughts.

A range of proactive measures including tailored training, grants and loans will be open to primary producers without needing a drought declaration across a broad range of agricultural industries.

The new drought assistance will be available for application from late 2021 through the Queensland Rural and Industry Development Authority (QRIDA).

The Queensland government's Drought Relief Assistance Scheme (DRAS) will continue for this current drought.

Drought-declared producers can continue accessing DRAS support or move to the new measures.

DRAS will be phased out as local government areas come out of drought.

Watch for regional forums explaining the new drought assistance later this year.

Some of the new drought assistance measures are jointly funded through the Australian government's Future Drought Fund.

For more information about the assistance, visit daf.qld.gov.au/drought or phone 13 25 23.

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Choosing the right bull

Have a well planned breeding strategy

Bulls may not be around forever; however, their genetics could potentially influence your herd production for the next 10 years.

WHEN it comes to choosing a partner, you typically don't throw caution to the wind and choose any person who catches your eye!

You have to understand what you're looking for in a partner, identify deal breakers, consider the longevity of the relationship and make sure their genetics are what you want to include in your future family.

The process for choosing a partner is the same when choosing a bull for your herd; you need to make sure they end up with the best possible bull for them!

A little homework can go a long way when selecting your next herd bull. Here are our top four tips for selecting premium bulls:

Long-term profitability

The bull may not be around forever; however, his genetics could potentially influence your herd production for the next 10 years.

It is essential to have a well-planned breeding objective strategy to ensure the profitability of your enterprise based on your chosen target market. Depending on the target market to which you are catering for, there will be different key performance indicators which you will want to select.

Genetics, genetics, genetics

Meeting the family is usually a pretty big deal, and it gives you the opportunity to scope out the genetics of their breeding line! Estimated Breeding Values (EBVs) are a great tool to help you identify what traits align with your breeding objectives.

EBVs give the buyer an objective comparison between bulls from a range of studs and information regarding the genetic contribution a bull will make to a herd.

EBVs are a prediction of the likely performance of the progeny and becomes more precise with greater numbers of progeny data entered into the database. Utilising EBVs in conjunction with a Bull Check Evaluation will ensure you are maximising your investment.

Balance and deal breakers

Let's talk about compromise! While not impossible, you do limit your options if you aren't willing to compromise on some traits.

Before sale day, it is essential to balance the traits of bulls and females to decide which are most important to meeting your breeding objective. You need to decide if the fault in each prospective bull is going to be a deal breaker and consider the price you are willing to pay. Bull selection is all about the homework!

Fertility

The Bull Check Evaluation is imperative to make sure that your bull can efficiently and effectively pass on his genetics in a short mating window. This approved veterinarian assessment evaluates the structure, conformation and functionality of the entire bull, including the semen.

It is important to note that while a BullCheck examination indicates that a bull will produce calves, it doesn't provide information about what traits he will pass on to his progeny. Used together, EBVs and BullCheck results should enable you to objectively rank bulls in a sale from most to least preferred.

It is easy to be carried away at an auction with your list of criteria based on your breeding objective and the price you are willing to pay for each category.

Doing some homework before a sale should equip you with all the information to make sure you make the best bull-buying decisions to achieve your breeding objective.

For more information on selecting the right bull for your herd, visit futurebeef.com.au

How to graze cattle on mulga

DEPARTMENT of Agriculture and Fisheries beef extension officers recently delivered a series of Sensible Supplementation workshops throughout the Mulga Lands in south-western Queensland for GrazingFutures. The workshops were adapted to suit the specific challenges of cattle grazing mulga (*Acacia aneura*) including:

Protein availability

Mulga has a crude protein level of 10-14 per cent. However, only 30-40pc of this protein is available to the animal due to condensed tannins within the leaf. It is important to supplement cattle with either urea or Gran-Am in the early dry season to address the protein shortfall.

Sulphur (S) deficiency

Mulga is inherently low in S, meaning the more mulga cattle eat, the more deficient in S they become. A growing season lick should have at least 2pc S (supplying 0.6-1.2g S/day for a breeding female) and a dry season lick should contain 3-6pc S (supplying 5-10g S/day for a breeding female).

Phosphorus (P) deficiency

The Mulga Lands are characterised as being P deficient. Cattle of different liveweight and status (e.g. maintenance, growing, pregnant, lactating) have different P requirements in their supplement. On P deficient country, a 400kg steer at maintenance requires about 3g P/day in the supplement, compared to a 400kg wet breeder which requires about 10g of P/day in the supplement.

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