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## **Beeftalk 50th issue**

Beeftalk also celebrates its 21<sup>st</sup> birthday

## Protect your cattle from lead poisoning

**Biosecurity reminders** 



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# Welcome to **Beeftalk 50**

The *Beeftalk* newsletter celebrates its 50<sup>th</sup> edition and 21 years of providing "Beef talk" to southern Queensland graziers.

We have had a changing of the guard in our Toowoomba pasture team. We thank Brian Johnson and Joe O'Reagain for their valuable contributions to pasture research in southern Queensland. Brian is renowned for his pasture legume knowledge and has helped countless graziers with pasture establishment advice. We wish Brian all the best in his retirement (and most likely observing pastures all over Australia in his travels). Joe is widening his perspectives with a stint in England.

To fill their shoes we welcome Tiago Silva and Andrew McLean. Tiago comes from a beef property in Brazil with a background in intensive grazing systems research. Andrew hails from a mixed farming background in the Burnett and has worked with the Department of Agriculture and Fisheries at Hermitage, Leslie and Gatton Research Stations.

Have you done some training recently? Investing in training reaps great rewards and has been identified as a critical success factor for leading grazing businesses. Meat & Livestock Australia (MLA) are offering producers the new and improved EDGEnetwork production packages. The five newly reviewed EDGE packages are Business, Grazing fundamentals, Grazing land management (GLM), Nutrition and Breeding. The training packages aim to enhance grazers' knowledge and skills to improve sustainability, productivity and profit. Two Business EDGE workshops are planned for March 2018 (Charleville 5-6; Goondiwindi 8–9). To register contact lan McLean on 0401 118 191 or ian@ babusiness.com.au. For more information on the EDGE packages please visit www. mla.com.au/extension-training-and-tools/ edgenetwork or contact Jane Wightman, MLA, on (07) 3620 5232 or jwightman@ mla.com.au.

Happy reading
The *Beeftalk* team.

## Beeftalk 50<sup>th</sup> issue

# Not only is this the 50<sup>th</sup> issue, but *Beeftalk* also celebrates its 21<sup>st</sup> birthday.

To celebrate, team members from across the ages gathered in Kingaroy to swap old stories and even sing around the camp fire.

We are proud to know that *Beeftalk* newsletter has been providing valued information to beef producers for 21 years. It all started with the Department of Primary Industries and south east Queensland Regional Beef Research Committee initiating the newsletter as a cost effective way to connect with the large number of cattle owners and agribusiness in South East Queensland (SEQ).

It combined four smaller regional beef newsletters for more efficient production and greater distribution. At an early meeting, beef officers Dave Daniel, Russ Tyler, Damien O'Sullivan and others debated its name until the administration officer called out from the next room... "Stop your fussing boys, just call it *Beeftalk*".

For 17 years *Beeftalk* was mailed biannually to 10,000 addresses in SEQ. In Spring 2013 *Beeftalk* transitioned to a triannual feature in the Queensland Country Life (QCL) newspaper with approximately 21,000 papers distributed across southern Queensland.

Now covering east to west Queensland, sheep information is also included with *Flock talk* contributed by the DAF Leading Sheep team at Charleville. *Beeftalk* collaborates with sister FutureBeef newsletters, *CQ BEEF* (in QCL) and *Northern Muster* (in *North Queensland Register*), to cover all of Queensland.



Newsletter team members and family celebrate Beeftalk 21st.

### Biosecurity reminders

#### Protect your cattle from lead poisoning

Cattle deaths from lead poisoning continue to be reported. One of the main sources identified in recent cases has been old tractor batteries ploughed into paddocks.

Other sources of lead poisoning can be from cattle accessing dumps, old homesteads, out buildings, abandoned vehicles, old floor linoleum and old lead paint. You can prevent the loss of valuable stock by recycling batteries, fencing dumps and keeping paddocks clean.

## Are you using hormonal growth promotants in your cattle?

It is a requirement to permanently identify cattle treated with hormone growth promotants with a triangular hole punch in the middle of the off ear (the animal's right ear).

To find out all your legal obligations, search 'Queensland legal requirements for growth promotants' in your browser or call 13 25 23 to talk with your local Biosecurity Queensland officer.

## Preventing pimelea poisoning

Department of Agriculture and Fisheries (DAF) researchers are working in new research projects with colleagues from Queensland Alliance for Agriculture and Food Innovation (QAAFI) at the University of Queensland and Queensland cattle producers to find ways to prevent pimelea poisoning in cattle.

Pimelea are native, herbaceous plants from inland Australia. Three toxic species include *Pimelea simplex, Pimelea trichostachya* and *Pimelea elongata*.

These species contain a toxin called simplexin and are particularly toxic to cattle, causing seasonal cattle deaths, reduced weight gain in surviving cattle, and lost productivity due to large areas of pasture being considered too risky for grazing.

Producers can help with this research by collecting plants while they are abundant on their property and sending them into your local DAF office or to the Natural Toxins Laboratory in Brisbane.

The DAF research team has recently been in western Queensland collecting plant and rumen fluid samples on properties where pimelea was present and cattle badly affected. If you're interested in providing some plant samples from your property, we'd love to hear from you.

For more information about the Pimelea toxin project, and to discuss sample collection and guidelines, please contact Diane Ouwerkerk on (07) 3708 8391 or email diane.ouwerkerk@daf. qld.gov.au.



Pimelea simplex in Quilpie area (Jenny Milsor





Pimelea trichostachya in Blackall area

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# **Seasonal decision dates**

Short-term weather forecasts can be frustrating, particularly when none tell you what you want to hear. For planning, historical climate data is much more useful. It shows us patterns of when pasture is likely to be actively growing during the year and helps us to identify key decision dates for pre-emptive management decisions.

#### What drives tropical pasture growth?

Rainfall alone does not drive pasture growth, so wet season doesn't always equal growing season. Tropical pasture plants need sufficient soil moisture, plant-available nutrients and an average daily temperature above approximately 14°C to grow.

#### Soil moisture

You need enough rain to infiltrate the soil down into the root zone. If it runs off the surface then it will not grow pasture. Heavy clay soils need much more water to wet up than light sandy soils. Pasture responses to rain are slower on heavy soils and faster on light soils.

#### **Plant-available nutrients**

More fertile soils, such as clay loams, with a bigger pool of nutrients, will keep pastures growing for longer than less fertile sands. Towards the end of a good growing season, when most of the available soil nutrients have been used by pasture plants to grow new leaf and stem, plant growth rate slows down and the plants quickly go to seed. In a well-managed grazing system, most nutrients within plants cycle back into the soil where soil microbes such as fungi and bacteria convert them into a form that plants can use again.

#### Average daily temperature

Our tropical grass species have a critical average threshold of approximately 14°C for growth. Optimal plant growth occurs with average daily temperature in the mid-20s. If you live in southern inland Queensland prone to cold winter nights, it's unlikely that there will be much grass growth in winter, even with good soil moisture. Any winter growth is typically in the form of temperate winter herbage rather than tropical grasses.

#### Seasonal decision dates

Given these key drivers of pasture growth, by examining historical climate data we can generate a broad pasture growth profile for different locations. In north Queensland, no or low winter rainfall is the primary limit to pasture growth.

In southern Queensland where historically it is common to get some winter rainfall, low temperature regulates the length of the growing season. Land type and soil fertility in different locations will then shorten or lengthen the climate-driven growing season.

For example, at Jandowae, temperature typically limits tropical grass growth between mid-April and mid-September.

Rainfall in September is typically low, so even if the temperature is high enough, there is little pasture growth. Historically, the probability of season-breaking rain at Jandowae increases significantly from September to October and we would probably see conditions right for the start of the growing season in late October.

The start of the growing season is called the **green date** and is when temperature, soil moisture and soil available nutrients are sufficient to initiate significant pasture growth.

For the first few weeks after the green date, there is typically not enough new pasture growth to sustain liveweight gain in stock.

They still depend on last season's growth for gut fill and they are likely losing weight as they chase the new pick.

It is not until almost a month or so later when the pasture plants are well into phase two of growth that there is sufficient bulk for animals to sustain liveweight gain on the new season growth. This is what we call the **production point** and it is the time you should pasture budget towards to have enough feed from last season, not the green date.

The growing season ends when the pasture plants have matured and start to move into a dormant phase.

This is initiated by declining soil moisture, soil fertility and decreasing daily temperature. In southern inland Queensland this is generally

driven by a decline in temperature towards the middle of autumn.

This means that the bulk of your pasture grows in less than six months of the year and the rest of the year you are essentially managing a standing haystack. In northern and western Queensland, the growing season is even shorter as sufficient season-breaking rain is unlikely to fall until around December.

First decision date: mid-way through your growing season

### Second decision date: end of your growing season

If you get to mid-way through the typical growing season (usually in January) and you haven't had a break of season, then you know there is much less growing time to accumulate pasture bulk compared with an earlier start to the season. This is your *first decision date* and your first opportunity to review the stock you have on hand and offload any surplus animals while the market is typically still strong.

The **second decision date** is at the end of the growing season, in mid-Autumn. The pasture you have on hand at this point is what you have to work with over the dry season, until the next production point.

Winter rain will initiate herbage growth adding quality to the diet (so stock productivity might be good), but it is very high in moisture and doesn't add a lot of quantity.

At this point if you do a forage budget and estimate there isn't enough pasture to last the stock you have on hand, you need to make a plan to either reduce numbers or secure feed to get the core herd through until the next production point.

If it does rain after you have decided to offload some stock, what are the consequences? Your country gets a rest, you can accumulate some pasture and you can buy in stock when other people are being forced to offload. If too many stock and it doesn't rain...!?

Jill Alexander from Applied Ag delivers Grazing fundamental EDGE workshops

### Beware weeds in fodder

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#### Caution is needed to prevent weeds being introduced with fodder. New weed infestations can be expensive to manage and may poison stock.

With the introduction of the *Biosecurity Act 2014* on 1 July 2016, everyone dealing with fodder (e.g. growers, harvesters, transporters, vendors, storage and users) must meet their General Biosecurity Obligation to not spread seeds of any weed species. Biosecurity Queensland encourages the use of documentation such as the Australian Fodder Industry Association Ltd's Fodder Vendor Declaration Form.

A new guide *Reducing weed risks from fodder* aims to help producers reduce the risk of spreading weeds. It highlights tools to assess weed risks when sourcing fodder and suggests simple strategies for reducing weed risk during fodder transportation, storage and feeding out.

When bringing fodder onto your property ask your supplier for a fodder vendor declaration. If not available, ask:

- What plant species, including weeds and seeds, are known to be in the fodder?
- Where was the fodder grown or sourced from and what are the major weeds in that area?

Regular checks for early detection and eradication is the easiest and cheapest way to control weed incursions.

Download a copy of *Reducing weed risks from* fodder from www.publications.qld.gov.au.  $\sqrt{2}$ 

#### **Editorial committee**

Roger Sneath, Damien O'Sullivan, Felicity McIntosh, Rebecca Farrell, Megan Gurnett, Tracy Longhurst (DAF) and Carli McConnel representing the South East Queensland Regional Beef Research Committee.

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# Pasture dieback in Queensland

#### Pasture dieback is a poorly understood condition that causes unthrifty growth and death of otherwise productive pastures.

It affects a range of sown and native grasses in north Queensland, Mackay-Whitsunday, central Queensland, Wide Bay-Burnett and south east Queensland regions. It has been observed across a range of soil types and landscape locations (ridges, gullies, gentle and steep slopes).

Stock avoid grazing affected areas. The lost carrying capacity impacts enterprise productivity and is a major concern for the Queensland grazing industry. The occurrence of pasture dieback has accelerated in recent years, however it has been reported in the early 1990s in central Queensland buffel grass pastures.

#### **Symptoms**

Pasture dieback only affects grasses. Symptoms are similar across different species. Affected plants generally display these characteristics:

- Yellowing and/ or reddening of leaves, starting with the oldest leaves first
- Stunted, unthrifty plants with reduced leaf, tillers, height and seed-head size
- Reduced root system and grass density
- Individual plants can be affected, but more commonly small patches or larger paddock scale patches can occur across the landscape
- Death of plants in patches that are subsequently colonised by broadleaf weeds, legumes and (rarely) annual grasses.



Bisset creeping bluegrass showing initial symptoms of dieback i.e. reddening of leaves in high biomass clumps.



Bisset creeping bluegrass fully affected by dieback.

Known grass species affected includes:

- Buffel (primarily in cultivars Gayndah and American (or USA))
- Creeping bluegrass (cultivar Bisset)
- Sabi grass (cultivar Nixon)
- Pangola
- Paspalum
- Signal and para grass
- Setaria (cultivars Kazungula and Purple Pigeon)
- Rhodes (cultivar Callide)
- Panics (Green, Gatton, Guinea, Bambatsi)
- Native pastures such as black spear-grass, forest blue-grass and golden beard grass.

#### **Current area affected**

Approximately 120 landholders have reported pasture dieback on their properties, with patches of pasture affected across about 35,000ha (see table). The actual area affected is likely to be significantly higher due to not all reports being captured by DAF and because many graziers may not realise they have pasture dieback.

#### Pasture dieback is different to rundown

Pasture rundown is reduced growth over time due to the tie-up of soil nutrients, primarily nitrogen. Growth and quality gradually reduces over time, however plants remain alive. Large areas can be uniformly affected, for example whole paddocks, properties and districts.

Conversely, pasture dieback is unthrifty or dead patches throughout relatively well grown pasture (in more severe cases whole paddocks can be impacted), and these patches can occur very quickly e.g. during one summer season. Ultimately, plants in these patches die and these dead areas may then be colonised by broadleaf weeds and legumes.

#### What can be done about pasture dieback?

Research has not identified the cause(s) and so it is difficult to know how to control dieback. Some graziers have tried options to restore pasture productivity, such as burning, fertilising, renovating (+/- seed), different chemical or biological sprays and changing grazing management. To date none have been effective. A word of caution; many chemical sprays, for example fungicides and insecticides are not registered for use on pastures in Queensland, so be aware that any off-label use of a product is illegal.

#### What is being done?

Since mid-2015 Department of Agriculture and Fisheries staff (pathologists, agronomists and extension officers) have conducted site visits, soil and plant sampling and laboratory analyses to better understand the problem.

Results to date have been inconclusive. Two forums in Biloela and Moura in March 2017 provided the DAF team further insights into the scale of the problem. Meat & Livestock Australia (MLA) has initiated research to try to understand and find solutions to the problem. MLA are asking affected graziers to fill in an online survey to report the occurrence of dieback. Search for 'pasture dieback' on www.mla.com.au.

This article was reproduced from the pasture dieback factsheet. For more information contact DAF on 13 25 23, or your local DAF office.

#### Stuart Buck

Department of Agriculture and Fisheries, Rockhampton Phone: 07 4843 2605

Carly Johnstone Department of Agriculture and Fisheries, Biloela Phone: 07 4808 6887

#### Queensland regions with areas affected by pasture dieback (June 2017).

| Region                        | Area known to be affected (ha) | Predominant grass               |
|-------------------------------|--------------------------------|---------------------------------|
| North Queensland (Tablelands) | 81                             | Signal (cv. Basilisk)           |
| Mackay/Whitsunday             | 460                            | Digitaria sp. (cv. Pangola)     |
| Central Highlands             | 6,345                          | Buffel (cvv. American, Gayndah) |
| Dawson and Callide Valleys    | 26,787                         | Buffel (cvv. American, Gayndah) |
| Coastal Fitzroy               | 481                            | Creeping blue (cv. Bisset)      |
| Burnett                       | 423                            | Creeping blue (cv. Bisset)      |
| Brisbane and Lockyer Valleys  | 44                             | Creeping blue (cv. Bisset)      |
| Total                         | 34.621                         |                                 |

#### Partnering together to strengthen Western Queensland's grazing industry

GrazingFutures is a new four-year project working with industry partners to promote a resilient grazing industry across western Queensland.

The GrazingFutures project brings new opportunities and new faces to the west. These new team members bring a wealth of knowledge and experience around animal production, grazing land management and business planning.

Andrea Wiles at Charleville, Jane Tincknell at Longreach and Robert Caird at Mareeba have joined the Department of Agriculture and Fisheries (DAF) to help bolster local extension teams that serve western Queensland grazing businesses.

Andrea is a vet by trade and has worked in New South Wales, Queensland and Northern Territory where she developed her understanding of common animal health issues facing producers and their impact on production.

Jane is a rangelands enthusiast, having spent the past 20 years in a variety of roles within grazing businesses or supporting them via community or government agencies.

Rob has a strong finance background and was an agribusiness consultant working with beef producers in Far North Queensland prior to his new role with the GrazingFutures project. Rob has a comprehensive understanding of key production, profitability and sustainability drivers of the North Queensland beef industry.

GrazingFutures is managed by DAF with a strong collaborative approach with partners. Many activities are led by partners such as AgForce or NRM groups. For example in the central west:

- AgForce and DAF collaborated to bring mapping workshops to the region
- Desert Channels Queensland and DAF, along with graziers, developed a grazing and weed management planning tool and workshops, and
- Rural Financial Counsellors worked with producers to build financial and business knowledge and provided relevant training, such as using Excel and financial software.

The GrazingFutures project has been made possible, thanks to funding from the Queensland Government's Drought and Climate Adaption Program (DCAP) and a partnership with Grazing BMP.

GrazingFutures will deliver a range of research, development and extension projects, improve seasonal forecasting and provide tools and systems that will support producers in their decision-making.

Keep an eye out for GrazingFutures events in your local area or call a team member if you have any ideas for resilience building activities.

To find out more about DCAP and GrazingFutures visit www.daf.qld.gov.au or www.longpaddock.qld. gov.au or call a DAF extension officer through the Customer Call Centre on 13 25 23

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# Getting to know your soils

Healthy soils are the foundation of productive grazing enterprises so it's important to understand what keeps them healthy.

The productive capacity and resilience of a soil depends on its physical, chemical and biological characteristics and how you manage them.

Understanding the strengths and vulnerabilities of your soil and land types will help you make better decisions regarding grazing and infrastructure development.

For example, are your soils sodic? Sodic soils are easy to identify and must be managed carefully because they will erode extensively if exposed to the surface.

Seven simple tests you can do on property are:

- 1. type and depth
- 2. texture
- 3. sodicity
- 4. colour
- 5. pH
- 6. salinity
- 7. water infiltration.

In addition, soil samples can be sent away for nutrient analysis.

#### Soil type and depth

Digging a posthole, trenching for a pipeline or a roadside cutting provide an opportunity to look at your soil profile. If you notice that there is a distinct difference between the surface soil and the subsoil, then this is what is known as a texture contrast soil or duplex soil. Soils that slowly get heavier as you look down the profile are called gradational soils; and soils that look and feel the same from top to bottom are called uniform soils. When you are looking at your soil profile, take note of the depth of soil available for root growth. Did you hit rock or a hard clay pan?

**Soil texture** is due to different proportions of sand (large particles), silt (medium) and clay (fine). You can test texture by taking a small handful of soil, wetting it, working it up into a ball, then ribboning it out between your thumb and forefinger as far as possible.

The higher the clay content the further it will ribbon. For example, clays will ribbon out to 50–75 plus mm, clay loams 40–50 mm, loams 25–40 mm, sandy loams 15–25 mm and sand

0–15 mm. If you can see different layers in your soil profile, test the texture in each layer. Soil texture influences how well your soil can store moisture and nutrients.

#### Sodicity

Place small clumps of soil taken from varying depths into water to see if, and how quickly it 'melts' and the water becomes cloudy (dispersive and easily erodible) or maintains its structure and the water stays clear. If you have dispersible subsoil, be very careful with earth works not to expose it and risk extensive erosion.



Dispersion test with small clumps of soil in water

#### Colour

Colour is largely due to the parent material and organic matter content. Usually a darker layer near the surface is due to organic matter. The more organic matter, and hence carbon, the better as it improves nutrient supply, soil structure, biological activity, water infiltration, holding capacity and resilience. Maintain productive perennial pastures and legumes, wet season spell paddocks and adjust stock numbers to keep good ground cover and soil carbon. Pale coloured soil usually indicates lower organic matter and nutrient status. Mottled colours indicate poor drainage or waterlogging.

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pH test kits can be bought from your local hardware or landscaping shop to test the level of soil acidity or alkalinity. Soil nutrients are generally most available when the pH is around neutral. High or low pH can cause specific mineral deficiencies or toxicities.

#### Salinity

Salinity can also be measured by DIY soil test kits you can buy. Salinity is also measured in soil samples sent for laboratory testing. Just because you cannot see signs of salt on the surface, it doesn't mean your pastures aren't being limited by salinity. High levels of salts within the profile will restrict the rooting depth and prevent plants from extracting water and nutrients from the soil.

#### Water infiltration

Put an open cylinder (a coffee tin with the ends cut out works well) on the ground and time how long it takes for water you pour in it to disappear. The more organic matter, plant roots and cracks in the soil, the quicker the water will disappear and the better the infiltration will be.

#### Sampling soil to determine nutrient status

Soil samples help you assess fertiliser requirements for pasture improvement, for example incorporating legumes. They also help you identify the causes of differences in plant growth and to measure the impact of management changes over time.

Significant changes in soil nutrient levels in extensive pasture systems typically take years to occur, unless sudden, intensive management changes are made. For example, blade ploughing for sucker control will significantly change the availability of soil nutrients such as nitrogen, sulphur and phosphorus for some time.

However if the soil is not disturbed, measuring changes in soil nutrient levels following improved grazing management will usually only be possible after several years. Sampling frequency depends on the reason for collection, however every five years should be long enough to track changes over time.

#### What soil parameters should you measure?

You can measure many different soil parameters—the selection will depend on your specific needs. The top six things to measure changes in soil health over time, in the top 10 cm of the soil profile are: organic carbon, total nitrogen, phosphorus, sulphur, trace elements (zinc, manganese, copper, iron) and cations (calcium, magnesium, potassium, sodium).

If you suspect there are subsoil issues, you'll need deeper samples. The parameters measured at depth are typically water soluble nutrients such as nitrate-nitrogen, sulphur, salts (chloride and electrical conductivity) and cations (calcium, magnesium, potassium, sodium).

#### How to sample

Soil sampling usually requires specific equipment so it is generally done by experienced people, however you can do this with a little knowledge and adequate equipment. Extract soil samples using an auger, soil tube or spade from the surface of the soil to a depth of 10cm. Remove leaf litter and organic matter from the surface before taking soil cores.

It is best to ask a professional soil scientist, agronomist or your analytical laboratory to be sure that you take the appropriate numbers of soil samples, at the right time, depth, and place and store them correctly to give meaningful results. You'll need clean equipment, good labelling and records. It is important not to take samples from different soil types and mix them together for a single sample. Sample each soil type separately.

#### Soil laboratory analysis

When getting soil phosphorus tested, specify the Colwell (or bicarbonate) extraction method. This analysis is required to indicate the full nutrient requirements of pastures. Use laboratories that are accredited with the National Association of Testing Authorities (NATA) and therefore comply with the Australian Standard ASISO/IEC 17025-2005, 'General requirements for the competence of testing and calibration laboratories'. Queensland laboratories can be found on the Australasian Soil and Plant Analysis Council (ASPAC) website www.aspac-australasia.com.



Soil testing.

#### Source and further reading

www.bmpgrazing.com.au Grazing BMP modules, Soil health

www.futurebeef.com.au/resources/projects/ grazing-bmp/grazing-bmp-soil-health-moduleresources  $\sqrt{1-1}$ 



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### Ten things you can do now to manage GRT

Giant Rat's tail grasses (GRT) are invasive grasses that can reduce pasture productivity, out-compete desirable pasture grasses and cause significant degradation of natural areas. They are often referred to as weedy Sporobolus grasses. They have low palatability when mature, are difficult to control and can quickly dominate a pasture, especially following overgrazing or soil disturbance. They can affect cattle health and productivity, including finishing times, weaning percentages and weights.

Four species of introduced Sporobolus grasses are invasive plants in Queensland. These are declared as Restricted Matter under the *Biosecurity Act 2014*. Everyone has an obligation to minimise risks of transporting, growing or spreading these rat's tail grasses:

- giant rat's tail grass (Sporobolus pyramidalis and Sporobolus natalensis)
- American rat's tail grass (*Sporobolus jacquemontii*)
- giant Parramatta grass (Sporobolus fertilis).

Research currently underway to help improve our understanding and management of GRT include projects investigating:

- the effectiveness of residual, selective flupropanate herbicide in low/light and high/ dense GRT infestations (plant biomass) and if fertiliser applied after treatment improves pasture competition
- the best combination of herbicide, application methods, competitive pastures, fire and fertiliser to manage GRT
- flupropanate run down in different soil types and the impact on GRT seedlings
- biological control options including naturally occurring / endemic diseases and pests of GRT

While there is still no silver bullet for GRT, ten things you can do to manage it are:

- If you are not sure if you have GRT, send plant samples of suspected GRT grass to the Queensland Herbarium for positive identification. It can be difficult to pick introduced GRT species from native GRT species, and nearly impossible to distinguish between the introduced GRT species.
- 2. Control isolated plants and stop seeding. The cost of prevention is far less than ongoing costs of GRT control.

- Contain the spread of GRT by making 10 to 20 metre buffers along roadways, waterways and inside property boundaries. Always practice property, vehicle and equipment weed hygiene. Avoid moving through GRT areas when seeds are sticky, after rain or heavy dew. Only use reliable sources of fodder, pasture seed and equipment hire.
- Apply the correct calibrated dose of flupropanate for effective GRT control — 1.5 grams per square metre for granular and 2 millilitres per litre for liquid flupropanate. Too much will kill many of the surrounding competitive pasture grass. Too little will not kill GRT tussocks.
- 5. When spot spraying with glyphosate at a rate of 20ml per litre, trickle it down into the centre of the GRT tussock to prevent damaging nearby beneficial, competitive pasture grass. Wick wiping can selectively apply herbicide to GRT with minimal damage to nearby beneficial pasture species
- 6. Abide by grazing withholding periods when applying herbicides. Fourteen days for spot spraying and four months for broadacre or aerially applied flupropanate. Slaughter and milking withholding periods are 14 days on clean feed after grazing in a flupropanatetreated paddock. Check herbicide label for withholding periods for lactating cows and goats. Glyphosate has no withholding period.
- Budget for ongoing GRT follow up for many years. The residual activity of flupropanate treated areas only lasts two to three years, whereas GRT seed lives for more than eight years.
- 8. Quarantine cattle for seven days to prevent the spread of GRT seed into clean areas.
- Promote pasture competition to control GRT. Pasture grasses with runners are more effective than tussock grasses in outcompeting GRT. Be aware of plant-back periods for certain improved pasture seeds after applying flupropanate herbicide.
- 10. For cost effectiveness consider the option of cultivating and forage cropping for three years in suitable areas of arable land infested with dense GRT.
- Adapted from Marie Vitelli's article in the September edition of AgForce's ENVOY magazine.

# A framework for effectively monitoring pasture and cattle performance

#### The Department of Agriculture and Fisheries' Brian Pastures Research Facility, located in south east Queensland, has been in operation since 1952.

It has facilitated a vast amount of research over its lifetime, with a large focus on pasture and grazing research in earlier years. More recent projects include phosphorus mobility in female beef cattle, and fertility genetics focussed on improving the reproductive performance of beef cattle in northern Australia.

As part of its role as a DAF facility that benchmarks grazing best management practices, a framework has been put in place to monitor cattle performance and grazing management.

Cattle performance measurements recorded include; changes in herd body condition, diet quality, and diet digestibility (through faecal sample analysis). The paddocks that are grazed during monitoring are assessed for pasture composition, estimated pasture yield (kg/ha dry matter), and per cent green pasture.

A forage budget is conducted at the end of the wet season to determine pasture yield estimates and land condition. This information, in conjunction with animal performance and pasture monitoring paints a clear picture of how the facility is performing with regards to pasture availability, pasture quality, and cattle performance from one season to the next.

From this data, calculations are made to determine safe stocking rates on different land types on the property, and decisions such as supplementation and paddock rotation intervals can be supported. This in time can be compared over a number of years to support future management decisions.

The animal and pasture assessments can be easily performed in conjunction with other property management practices, linking to weaning weights, conception rates, and other cattle performance indicators. This may provide an explanation of both positive and negative changes in cattle performance. This framework can be used by graziers as a valuable support tool for making management decisions on property, gaining a more in depth understanding of how their pasture and cattle are performing.

#### Jo Campbell

Department of Agriculture and Fisheries Brian Pastures Beef Research Facility Phone: (07) 4161 4007 joanne.campbell@daf.qld.gov.au



Baseline recording while checking troughs on Brian Pastures

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Have you thought about a career in the sheep

The first is a story about a young shearer from

Barcaldine, who is now running his own shearing

team. Andrew Ross gives his tips for becoming a

shearer and why he loves it and reckons others

In the second story, Dave Owens talks about how

he turned his dream of owning his own property

into a reality. And in particular how he set up his

own crutching team to finance the property and

Hopefully these two stories will inspire you to get

involved in the sheep and wool industry – who

On another note members of the three regional

Leading Sheep committees met in Charleville a

couple of months ago to identify their priorities

for Leading Sheep's future. This information was

presented to the project advisory panel who used it (as well as other sources) to determine the

vision, objectives and targets of a 'new' Leading

these meetings and to the many others across

Queensland who provided their feedback via a

are appreciated and were used to shape the

this space for more details about the future

You can connect with Leading Sheep on

Nicole Sallur, editor, Leading Sheep project

Facebook and join our mailing list at

manager and senior extension officer

Department of Agriculture and Fisheries

priorities for Leading Sheep.

www.leadingsheep.com.au.

phone or on-line survey. Your thoughts and ideas

direction of Leading Sheep going forward. Watch

Thanks to all those who were involved in

and wool industry? This edition of Flock Talk focuses on a couple of different ways you too

can get involved in the industry.

should try shearing.

give him cash flow.

knows you may just love it!

ers of the regional Leading She

future priorities of Leading Sheep

Sheep project.



## FLOCK TALK



Queensland Government

#### **Barcaldine tradie** Leading Sheep swaps wood for wool - equipping progressive and thriving producers for the future

Barcaldine's Andrew Ross is candid when asked why he became a shearer. It was about money, and he jokingly adds, proving to his mum he could endure the heat and hard work.

The young tradie from western Queensland was a qualified cabinet maker before he opted to follow in his father's footsteps and become a shearer. He hasn't looked back since.

He is one of a growing number of young people joining the wool industry as sheep make a comeback across the state.

"I took a break from cabinet making to work in the sheds for my parents' contracting business," he said.

"Then, a couple of New Zealand shearers who were working in the team started to teach me to shear and I really enjoyed it.

"So I asked Dad if I could work in the shed as a shearer and he happily offered me a shearing job in his team. Mum wasn't quite as keen on the idea, she didn't think I would handle working in the heat."

But in the two years since he stepped on the board he hasn't seriously thought about returning to his first trade.



Andrew Ross from Barcaldine loves being a shearer and encourages anyone who is interested to give it a go.

"When sheep numbers started falling a decade or so ago so did the jobs in the industry, but now as sheep numbers increase so are the opportunities for employment, particularly because there aren't that many shearers around now," Mr Ross said.

"The drought had a big impact on sheep numbers, but good winter rain and the construction of exclusion fencing to protect sheep from wild dogs, has resulted in more sheep coming back into the region.

"More shearers are needed here right now. In the past we have had to split into two teams to meet the demand from industry and it is looking like it will reach that stage again."

Shearing is not just another job for the young western Queenslander, who says the 'social' environment of the shed makes it more than a workplace.

"I really enjoy it as a job. You are meeting new people all the time and there is a great sense of satisfaction when you complete one shed and head on to the next.

"I also like the travel: you are shearing in a new environment, a new place, every week.

"People come from all over Australia and even across the world to work in the sheds so you make new connections from anywhere."

Then there is the issue of economics: the former tradie says working as a shearer pays 'significantly' better than cabinet making.

"You just can't beat the money and because shearers are low in numbers in the industry at the moment they are in demand, so the job security is great."

It is one of the reasons he has become a quietly spoken advocate of the industry.

"If you have a good work ethic and want to give it a go and get involved there are a lot of job opportunities. Just in our team alone, we are always looking for rouseabouts or wool pressers to fill in.

#### Why try shearing?

- Increasing job opportunities as sheep numbers rise.
- Shearing can pay more than conventional trades, like cabinet making.
- Shearers are in demand so job security is high.

"They can be long, hot days, but doing a job well and being paid well can be very rewarding."

He has now taken over his parents' team and is committed to encouraging others to get involved in the industry.

"I am loving it. It is a great industry to be a part of and if anyone out there is interested I would really recommend giving it a go."

Watch this short video (2mins 40secs) to hear more from Andrew Ross about why he recommends anyone giving shearing a go: http://bit.ly/2fZeuyH

#### **Editorial committee**

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Queensland Government

## **Right starter business can help you buy your** own rural property

Like a lot of young people working in rural industry, Longreach's Dave Owens dreamed of buying his own property. Today his dream is a reality thanks to some strategic business ventures.

The western Queensland sheep and wool producer advises others with the same life goals to be prepared to start in businesses with a quick monetary turn-over, like shearing, sheep trading and selling wool.

Today he owns Somerset, a 10,000ha grazing property, 70kms south of Longreach, running up to 8000 Merino ewes. For the past nine years he has also operated his own contract crutching team travelling and working throughout western Queensland.

He admits managing two businesses at once could be challenging, but he credits an ability to juggle a hectic schedule with helping him achieve his goal of buying his own property.

"There are so many opportunities to get ahead in the wool industry. Before I bought my own place, I was trading sheep because they were affordable and were a more reliable option than cattle - there has always been money in them," Mr Owens said.

"If you start off creating quick turn-overs through sheep trading, shearing and selling wool it can help you get ahead and it was these businesses that helped me make enough money to buy Somerset.

"When I first bought Somerset it was a low input property with nearly every paddock having

#### Three tips for buying your own property

- Start in a business with a quick, monetary turn-over, eg shearing, sheep trading
- Be prepared to continue to work off-farm
- Be an effective record keeper, and develop your financial knowledge.



Longreach's Dave Owens turned his dream of buying his own property into a reality by starting out in a business with a quick monetary turn-over.

access to an open water source. So this meant I was able to keep travelling away with my contracting business, because I could be gone for five to six days and know the sheep had access to water.

"It also meant I had a profitable off-farm business. The income I was receiving from contract crutching gave me a quick cash flow and having that second income meant the bank took me seriously. It also allowed me to develop and make improvements on Somerset, which meant I could grow that side of my business financially."

When it came to property ownership, Mr Owens said a focus on improving sheep production rates proved a key driver to increasing profitability. He is also a staunch advocate of

effective record keeping, both on-property and in the office.

"From the start it is important to keep an eye on costs: you need to crunch hard numbers. It's also a good idea to speak to someone else in the business who has had some experience and tips for keeping on top of expenses," he said.

"For example, when I first started out, I spent a lot of time with stock on agistment before I realised the finances weren't working out for my business. If you're going to get into the agricultural game, work out your numbers and finances first. It can make a major difference to success or failure, especially when you are first starting out."

At a personal level he said operating multiple businesses has also allowed him to spread risk to a certain extent and there was an upside to juggling the roles of sole producer and running a contracting team.

Looking forward, Mr Owen has plans to continue to improve his Merino flock and expand his property portfolio. And his advice for those weighing up a future in agriculture?

"To get ahead you really have to love the industry. It's a tough environment but can pay off if you work smart."

Watch this short video (4mins 28 secs) to learn more from Dave Owens about owning his own property and running a contract crutching business: http://bit.ly/2guJPK2



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