



Beeftalk

Taking stock of your future

Prime news and views for beef producers of south east Queensland

in this issue

- 2 Spring is sprung and the weeds have come
- 2 Hunt is on for Siam weed
- 3 Chilean needle grass – a Class 1 pest
- 4 Prickly pear – Identification and control
- 5 Responsibilities of owning livestock
- 6 The role of forestry in Grazing Land Management
- 8 Breeds for grain fed markets
- 9 Sampling your water supply
- 10 Ageing cattle by teeth
- 10 Handy garden hints
- 11 Big head in horses grazing tropical pasture grasses
- 12 NLIS – campdrafts, rodeos, sporting events and shows
- 13 Swill feeding – threatens livestock industries and lifestyle!
- 14 Cattle tick control strategies south east Queensland
- 15 Water quality for livestock
- 16 Management of pastures for horses
- 16 Water requirements for livestock
- 17 Your channel to influence beef RD&E
- 18 Options for submitting a voluntary PMAV
- 20 Training – It's worth the effort
- 20 New Farmbis training program commences
- 21 Water medication – a guide for beef producers
- 21 'Stocktake' Balancing supply and demand
- 22 Timely tips
- 23 More than feeling down
- 24 NLIS correct tag placement is essential

Issue 20 Spring/Summer 2005

editorial

July 1st saw the introduction of NLIS and, much like the predictions about the 'millennium bug', the implementation went fairly smoothly with only minor hiccups. We have been made aware of some problems with animals developing severe infections around their NLIS tag. This appears to be related to the positioning of the tag. The back page of this issue shows the tagging position that has caused problems and also shows the correct position.

The introduction of NLIS has again made us aware that everyone who owns one or more cattle is in the beef industry and needs to be aware of the responsibilities of owning livestock.

We hope that we will get an early break in the season. While this would be welcome it can bring some problems, particularly weeds. In this issue we have a number of articles on weed management.

Since our last issue, we have had some changes in the Beeftalk team. Felicity McIntosh, who was the team leader, has taken 12 months leave and in August gave birth to William Joseph. We also farewell Jim Viner, who was the producer representative on the team for many years. It was great to have Jim as a team member for his down-to-earth, yet innovative approach to the industry, as well as his cheery personality.

Jim's place on the team has been filled by Carli McConnel from "Mt Brisbane", Esk. We know from past experience that Carli will be a very valuable team member.

We have also been joined by Tim Biggs. Tim is a beef extension officer based at Gatton Research Station. Tim has been very involved with NLIS implementation particularly in the area of getting information out to producers.

Recent tests indicate that Russ' recover from surgery is going very well – as indicated last issue, all due to early diagnosis. In this issue we continue our series on rural health with an article "More than feeling down".

Good reading!
The Eds





Spring is sprung and the weeds have come

In past editions we have seen how the Spring break is variable in its timing. Often when we get an early Spring break, or have carry-over moisture from useful winter rain, weeds are quick to establish. This is especially the case if the previous growing season was a poor one and ground cover is reduced.

Many of the herbaceous weeds are quick to establish in these conditions. Also, our pasture grasses, particularly the natives, are slow to respond and have trouble competing with the flush of weeds.

Now is a good time to be particularly vigilant for weeds.

In this edition of *Beefstalk* we have three weed articles. Two of them cover weeds that are currently not well established in the region, but which have the potential to become serious problems. The articles on Siam weed and Chilean needle grass are well worth reading.

The usual suspects (GRT, parthenium, fireweed, groundsel, blue heliotrope etc) should not be ignored. If you are not sure about a particular plant, it pays to have it identified. You can do this by contacting your local agribusiness, shire weeds officer, NR&M Land Protection Officer or DPI&F office.

To help identify a plant you'll need to supply sufficient material. This

includes leaves and stems and, whenever possible, flowers, fruit and/or seeds. Also describe the environment and soil type where the plant was growing, and how large the plant is (if it's too large to bring in a complete sample). If you suspect it is a declared plant, secure the sample carefully in a bag to prevent seed spread.

The sample needs to be kept as fresh as possible. Keeping a sample in a plastic bag in the fridge for a few days is an option. Leaving a sample in a plastic bag at room temperature will encourage mould. Mould can quickly spoil a sample.

Alternatively, the sample can be safely dried by placing it between several sheets of newspaper on a flat surface and placing a heavy weight on top.

Hunt is on for Siam weed



The Department of Natural Resources and Mines (NR&M), with the support of other state governments and the Australian Department of Agriculture, Fisheries and Forestry, will coordinate a new pest plant survey to establish the full extent of Siam weed (*Chromolaena odorata*) within Australia.

Siam weed is an erect or sprawling shrub, forming dense tangled thickets up to 6 m high when growing in the open or up to 20 m as a climbing vine. Its leaves are almost triangular with a distinctive 'pitchfork' three-vein pattern and can emit a pungent odour when crushed.

Siam weed's flowers range from white to pinkish mauve and occur

in clusters of dense tasselled heads similar in appearance to blue top and billy goat weed. Flowering usually occurs in May to July, and occasionally also in September and October if conditions are suitable.

Siam weed infestations are currently known to exist in the Tully, Townsville and Thuringowa areas of north Queensland. At present these infestations are being controlled with an aim to eradication.

Siam weed has the potential to spread south along the entire Queensland coast and into northern New South Wales as well as west and north across to the Northern Territory, north-western Western Australia and most of the west coast of Australia.

A native of Central America, Siam weed is thought to have arrived in Australia in contaminated heavy equipment, freight or pasture seed. It is easily spread via

people, machinery and animals. Agricultural and horticultural production, forestry plantations and World Heritage Sites are potentially at risk. The plant is toxic to stock.

The intent of the survey is to establish the extent and size of infestations within Australia in order to take the necessary steps to control this highly invasive species.

If you think you have Siam weed on your property or suspect you have seen it in any location, please report it by calling toll free 1800 084 881 or complete a report online at www.weeds.org.au

Further identification materials can be viewed online at www.nrm.qld.gov.au/pests and www.weeds.org.au

Further information:

Frank Fox
Principal Project Officer
Phone: 0409 989 603

Chilean needle grass – a Class 1 pest

Chilean needle grass is native to South America and was first recorded in Australia about 70 years ago. It is very invasive, can form pure stands and tolerates drought and heavy grazing, giving it the potential to replace existing grass species. Detection and identification are difficult, especially when it is not flowering

Most infestations are in pastures and native grasslands in south-eastern Australia. However an infestation at Clifton on the Darling Downs has been subject to council control measures.

Chilean needle grass is relatively unpalatable when flowering and reduces farm productivity by displacing more desirable pasture species. Heavy infestations can decrease productivity by as much as 50 per cent. It also injures stock and downgrades wool, skins and hides with its long, sharp seeds.

The needle-like seeds can be spread by sticking to clothing, livestock and vehicles and in the workings of mowing and earth-moving equipment.

Description

Chilean needle grass, named for its sharp, pointed seeds, is a perennial tussock-forming grass which grows in dense clumps up to one metre tall. This species of grass is long-lived, very hardy and can produce flowers in its first season. Flowers and seeds are produced from September to February. Seeds are 8-10 mm



Chilean needle grass tussock

long, pale brown when mature, enclosed in 16-25 mm long purple bracts (glumes), and have a 60-90 mm long tail (awn) which is usually bent twice. It can produce more than 20 000 seeds per square metre; the resulting seed-bank can persist for many years. Seedlings grow quite slowly but have a very high survival rate.

Between the seed head and awn is a small raised crown (corona). The corona is the most distinctive feature of the plant and is absent from native spear grasses.

In addition to normal seeds, Chilean needle grass produces hidden seeds in the nodes and base of flowering stems. These 'stem-seeds' account for about one-quarter of total seed production. Stem seeds are self-fertilised and enable the plant to reproduce despite grazing, slashing and burning.

Leaves are 30 cm long and 1-5 mm wide, flat and strongly ribbed on their upper surface, with edges that are rough to touch.

What should I do

If you think you might have found Chilean needle grass, please send a sample to the Queensland Herbarium for identification and



In flower



Seed with glumes still attached

contact your Local Government Weeds Officer or the Department of Natural Resources and Mines on 1800 999 367. (See the Editorial in this issue about collecting weed samples.)

Chilean needle grass is a Class 1 pest under the Land Protection (Pest and Stock Route Management) Act 2002 and, as such, is a high priority target for eradication from the state. Land owners must take reasonable steps to keep their land free of this pest.

Early detection of potentially invasive plant species is vital for protecting Queensland's multi-billion dollar agricultural industries and our unique natural environment.

Further information:

Department of Natural Resources and Mines

Website: www.nrm.qld.gov.au

Queensland Herbarium

Brisbane Botanic Gardens

Mt Coot-tha

Mt Coot-tha Road Toowong

QLD 4066

Phone: 07 3896 9326

Email: Queensland.Herbarium@epa.qld.gov.au

Prickly pear – Identification and control

The introduction and spread of prickly pear plants throughout Queensland and New South Wales is one of the great environmental invasions of modern times. Prickly pear species were introduced into pastoral districts in the 1840s. By 1900, over 4 million hectares in Queensland and New South Wales were infested with prickly pear, and by 1925 the pest had invaded over 24 million hectares. Control costs were prohibitive and the only effective herbicide at the time was hazardous, so many landholders abandoned their land.

Research for biological control agents commenced in 1912, and in 1914 cochineal insects were released to control one of the minor prickly pear species. Successful control occurred within a few years, prompting renewed efforts to identify biological controls for other types of prickly pear. These efforts resulted in the control of the major pest species of prickly pear by the moth *Cactoblastis cactorum*. By the mid 1930s prickly pear in general was no longer a major problem, although several prickly pear species are still minor weeds.

Identification

Prickly pear is a general term for several plants in the

Cactaceae family, including species of *Opuntia*, *Nopalea*, and *Acanthocereus*. All these plants originate in the Americas. The term 'prickly pear' relates to the fruit, which is often spiny and pear-shaped. Plants are normally leafless succulent shrubs. Stems are divided into segments (pads or joints) that are flat and often incorrectly called leaves. Young shoots have true leaves, resembling small fleshy scales, which fall off as the shoot matures.

Flowers are large, normally seen during spring, and can be yellow, orange, red, pink, purple or white depending on the species. Prickly pear fruits vary between species and are red, purple, orange, yellow or green.

Areoles (spots with clusters of spines) are found on both the pads (joints, segments) and fruit. In addition to spines, areoles often have clusters of sharp bristles, called glochids, and tufts of fibre called 'wool'. Each areole contains a growing point which can produce roots or shoots.

Control

A strategy of integrated control procedures has proved most effective. *Cactoblastis* was originally spread manually by distributing egg-sticks or larvae. *Cactoblastis* moths lay chains of eggs called egg-sticks on prickly pear pads twice a year during the periods of January-February and September-November. The egg-

sticks are distinguished from spines by their segmented and curved appearance.

There are several cochineal insects which affect only specific prickly pear species. It is essential to know which prickly pear you wish to control to ensure you obtain the correct biological control agent for that species.

Tiger pear cochineal kills individual clumps; it does not spread far without assistance, but it is easy to multiply quickly after collection. In a covered bin, place a small amount of pear which is infested with tiger pear cochineal with a number of uninfested pear pads (collected with tongs) for a few weeks, preferably in Spring. At the release site, place infested pads in close contact with the uninfested prickly pear plants.

Mechanical control using machinery is difficult because prickly pear pads can easily re-establish. A hot fire is an effective control method for dense prickly pear infestations. Before burning, consult your local fire warden, land protection officer or extension agronomist to ensure this practice is suitable for your pasture and land management situation.

Further information about herbicides available for controlling prickly pear in Queensland can be obtained from Pest Series Facts sheets from www.nrm.qld.gov.au or www.apvma.gov.au

Welcome to new Beeftalk Team Member - Tim Biggs.

Tim is a Beef Extension Officer based at the DPI&F Gatton Research Station.

Tim has spent most of his working life within the rural industry in various capacities. His family owned a sheep and cattle enterprise in the Surat district where he had a good grounding in livestock husbandry. Tim spent some time working for Australian Country Choice as a chiller assessor before spending two years travelling through UK, Portugal, Canada and

USA. On return to Australia, Tim undertook a Bachelor of Applied Science at the University of Queensland (Gatton) and graduated in 2000. Since taking up duties at the DPI&F, Tim has worked as a dairy extension officer, rural water use extension officer and a research technician before undertaking his current position.

Responsibilities of owning livestock

If you own livestock, no matter how many, you must be aware of certain legal requirements and responsibilities. The introduction of the National Livestock Identification System (NLIS) has again emphasised this.

Property registration

If you own cattle, sheep, pigs, goats, buffalo, camelids (camels, llamas, alpacas) or more than 100 poultry, your property must be registered with the Department of Primary Industries and Fisheries. When the property is registered it will be issued with a Property Identification Code (PIC), which is used on many documents relating to the property and livestock on that property.

Welfare

If you own livestock you are legally responsible for their welfare. The main considerations are that animals have adequate food, water and shelter.

Codes of practice for the welfare of most species of livestock have been developed. Copies of these codes of practice are available free from <http://www.publish.csiro.au/nid/22/sid/11.htm> or by calling the DPI&F Call Centre.

Identification

Branding

Branding is the legal method of establishing ownership of a number of species of livestock, principally cattle and horses. All cattle over 100 kg liveweight are legally required to be branded before sale.

National Livestock Identification System (NLIS)

From 1 July 2005 all cattle leaving a property for any

destination must carry a NLIS device – either an electronic ear tag or a rumen bolus. All livestock movements have to be recorded on a national database which is administered by Meat and Livestock Australia (MLA). Contact your local DPI&F office to order tags and find out your responsibilities under this national system.

Tail Tags

These tags carry the PIC. They must be applied to the tail of all animals going to sale or slaughter. They are used to trace cattle to the property of origin.

NB: Some exemptions apply to the use of both NLIS devices and tail tags. Your local Stock Inspector can advise on these exemptions. Tail tags and NLIS devices can be ordered by contacting your local DPI&F Office.

Livestock Production Assurance (LPA)

When cattle, sheep and lambs, bobby calves and goats are sold, they must be accompanied by an LPA form. It is important to know that there are two LPA forms for cattle – one for EU-accredited cattle and another for all other groups. This form identifies the animals being sold and details their husbandry history, specifically the use of growth promotants, withholding periods for veterinary chemicals and vaccines, and feeding in relation to any possible contamination.

These forms must be signed by the owner or the person responsible for the husbandry of the cattle. Random audits are carried out to ensure the



information on these forms is correct.

LPA forms are available from Meat and Livestock Australia (MLA) phone 1800 683 111 or website www.mla.com.au/lpa

Further information

Contact your local DPI&F Office or the Call Centre: Phone 13 25 23

A poster titled "Get the facts on NLIS for cattle" from Queensland's Department of Primary Industries and Fisheries. It features a photo of a cow and various logos. The text includes: "NLIS (Cattle) is mandatory from 1 July 2005 (phase-in conditions apply)", "Obtain the guide to NLIS from your local DPI&F or QGAP office or visit www.dpi.qld.gov.au/nlis", and "If you run one or more head of cattle, sheep, goats, buffalo, deer, camels, llama, alpaca, or 100 or more poultry, make sure you update your property registration details with DPI&F now." It also provides the contact number 13 25 23 and the Queensland Government logo.

Queensland the Smart State

Get the facts on
NLIS for cattle

NLIS (Cattle) is mandatory from 1 July 2005
(phase-in conditions apply)

Obtain the guide to NLIS from
your local DPI&F or QGAP office
or visit www.dpi.qld.gov.au/nlis

If you run one or more head of cattle,
sheep, goats, buffalo, deer, camels, llama,
alpaca, or 100 or more poultry,
make sure you update your
property registration details with DPI&F now.

For more information call the DPI&F Call Centre on
13 25 23

Queensland Government
Department of Primary Industries and Fisheries

The role of forestry in Grazing Land Management

Native forest on private land is a valuable but often underrated and poorly managed resource. To sustainably manage a forest you need to understand its ecology and know how it should be harvested, thinned and managed. To maximise returns, you also need to know your forest products and how they can be marketed.

Introduction

Queensland has a long history of private native forest (PNF) management. Extensive areas of freehold land retain forest cover, as either original forest or developing regrowth stands. For example the Mary River catchment has an estimated 160 000 ha of forest with commercial species as dominants. Forest cover in the Burnett catchment is estimated to be more extensive. This represents a valuable resource for forest owners and the processing industry.

Commercial native forests are predominantly based on eucalypt forests, in particular spotted gum/ironbark forests. Most timber harvested from private land is for sawlogs; poles, girders and round timbers are other common products. There is little accurate information on amounts of farm timber, such as posts and rails, harvested from private land but it is an important market and is increasing in value.

Two major issues affecting the future value and management of forests on private land are

1. the State-wide Forests Process, and
2. the soon-to-be-introduced Code of Practice for Native Forest Management on Private Land.

Both of these mean the role and management of private native forest will be increasingly important.

Benefits of trees

The economic benefits of retaining trees and forest depend on

1. the potential productivity of the forest, and
2. how well it is managed.

As in other agricultural enterprises, potential productivity relates to factors such as soil type, fertility and rainfall. Growth rates on some less productive sites may make investing in forest management on these sites uneconomic. In contrast, growth rates on productive sites may approach or exceed one cubic metre of sawlog/hectare/year which, at current royalty rates, represents a potentially lucrative addition to a farming enterprise.

In relation to management input, timber production is no different from other farming enterprises with factors

such as stocking rates, quality of the retained growing stock and use of fire all influencing productivity.

Forests play a role in property and landscape sustainability. They help prevent rising ground water, a major factor in dryland salinity. They provide shade and shelter for livestock, cycle nutrients from deep in the soil profile and, in association with ground cover, prevent soil erosion. Forests provide habitat and play an important role in biodiversity conservation.

Know your forest

Forests are generally described by their species composition (eg. spotted gum/ironbark forest) but it is important to recognise that most forests are a mix of several species and age or 'growth' classes. Managing a eucalypt forest requires a sound understanding of the growth habits of the key species. Young vigorous regenerating growth has the potential to grow rapidly in height and diameter providing it is free of restrictive competition.

Tree size generally indicates tree age, but small suppressed trees may be as old as or older than large dominant trees. Trees are suppressed by competition, usually by being 'overtopped' by other trees. Once suppressed, eucalypts do not regain their initial potential growth rates, even after the overtopping trees are removed. In a poorly managed forest, suppressed trees are often left following harvest. In turn, these trees will suppress other younger trees from growing through. Suppressed trees seldom produce a commercial product.

As a manager, it is important to promote the productive potential by retaining trees based on

- Species – while it is important to maintain species mix, some species are more commercially valuable than others
- Form – keep trees that have a long straight bole and are free of defect
- Vigour – keep trees which have a large actively growing crown
- Spacing – retain trees for best spacing to minimise competition.

Equally important is recognising when a tree has reached optimum market potential to provide the best \$ return.

Harvesting

In Queensland most native forests are 'selectively harvested'; only a portion of trees are harvested at any one time. The harvest interval in eucalypt forests depends on harvesting intensity. In most cases it varies between 10 and 30 years.

A well-managed harvest ensures that trees that have reached their commercial potential are removed and that defective or suppressed trees are thinned to provide adequate growing space for the next 'crop' of retained trees. Important issues in a harvest include

- retaining good quality growing stock in an optimal spatial arrangement to maximise growth,
- thinning from 'below', removing the worst trees first, and
- protecting trees to be retained from damage during the harvest operation.

Marketing

As for any other agricultural crop, marketing is crucial to maximising returns from native forests and relates to

- knowing what the market wants and what products you have,
- obtaining a number of prices from different purchasers, and
- cutting the products to maximise their value.

Value can be added to these products if you cut and snig yourself, provided you have the skills to do so. This is referred to as a 'ramp' sale. Approximate returns taken from known sales to sawmills are given in Table 1.

Table 1 – Approximate product price from past and current timber sales (Source – Private Forestry Southern Queensland)

Product	Price
Sawlogs	\$60–100/m ³ , up to \$120/m ³ at ramp
Girders	from approx. \$200/m ³
Poles	12.5m heavy – \$96 (D line 33.3 cm)
Piles	\$7.70/lineal metre
Rounds	up to \$7/lineal metre
Veneer	\$220/m ³

Thinning and regeneration

The productive potential of a forest is maximised by managing the future growing stock effectively. In dry eucalypt forests regeneration is generally already present in the form of 'suckers' or lignotubers which grow in response to gaps from harvesting or through lack of fire or grazing pressure.

When regeneration becomes very dense, trees suffer severe competition and the stand may become

Table 2 Guide (approximate) for spacing eucalypts for optimal growth rates

Tree size	Spacing
Larger trees (30 cms DBH +)	10 - 15 metres
Smaller trees (10 – 20 cm DBH)	5 - 7 metres

moribund and have very low growth rates. In these cases, regeneration needs to be thinned using chemical or mechanical means. Trees generally require space to grow; the bigger the tree the more space required (Table 2).

Very dense regeneration has a negative impact on pasture production. Where regeneration is predominantly one species it contributes little to biodiversity and wildlife habitat.

Fire

In many grazing enterprises fire is used to maintain the grassy understorey for grazing cattle and to control 'regrowth'. Similarly, fire is an important management tool in native forests. However the frequency and intensity of fire needed to manage a forest may differ from the fire regime used to manage native pasture.

Research in dry forests shows that a balance between controlling regrowth and maintaining plant diversity can be achieved with fire frequency of between 2 and 5 years. Too frequent fires impact on soil nutrients with nitrogen and phosphorus levels at risk in lighter (sandy) soil types.

Very intense fire will damage trees either at the butt or in the crown and can result in lost growth and reduced productivity. A fire scar at the butt is a common entry point for disease and pathogens. Fire damage to the butt section may also reduce potential log length and eventual product value.

Best practice in relation to multiple outcomes can be achieved by alternating fire intensity (hot and cool burns) and aiming for a 'patch' or 'mosaic' burn pattern.

Planning and training

As in all agricultural enterprises, best results are achieved by planning. Timber production needs to be balanced with other enterprises, such as grazing, to achieve the best outcomes. Harvests should be planned and relate to market demands. Timber production has a bright future and incorporating good planning will ensure the best financial returns.

The skills required to sustainably manage a native forest take some time to develop. Training is currently available to help landholders to develop these skills and produce a native forest management plan.



Further information:

Dave Taylor

DPI&F, Gympie

Phone: 07 5482 0875

Email: dave.taylor@dpi.qld.gov.au

Or

Sean Ryan

Native Forest Program Manager

Private Forestry Southern Queensland

Phone: 0428 457 322 or 07 5483 6635

Breeds for grain fed markets

People often ask which breed is best for which market. Although there is wide variation within breeds, some breeds do have characteristics of particular interest to particular markets. The most important thing is to identify your customers, ask them their specifications, and then use their feedback and your records to see how well you meet their specifications. This will identify areas for improvement.

Feedlots are realising it is unreliable to select on 'breed alone' when targeting specific traits. Research is demonstrating that individual sire identification will be of the utmost importance when sourcing cattle in the future. This is particularly evident in the marbling trait.

In the past decade grain feeding has more than doubled, now making up more than 30 per cent of total beef production. The Australian Feedlot Directory summarises breed features of interest to the feedlot sector in the following table.

Breed type and performance for the lot feeder

Breed group	Weight gain	Carcase yield	Marbling
British	**	*	***
European	***	***	*
Bos indicus derived	**	**	**
Brahman	*	**	*

LEGEND: * below average ** average ***above average

For markets such as the domestic and short-fed Japanese markets (shorter feeding times of 70-120 days), the main issues are weight gain and carcass yield, provided the cattle finish well. The shorter feeding programs are more flexible in their breed requirements. Most breeds and crosses are acceptable, with a leaning towards crossbred cattle

with some European and/or *Bos indicus* blood for their above average muscling and yield without unnecessary waste.

Comparatively, for the long-fed (B3) Japanese market (200-300 days) the meat quality characteristics (mainly marbling) are the dominant requirement, so British breed cattle are preferred by the major feedlots despite the disadvantages in yield and live weight gain. Angus, Murray Grey, Shorthorn and Wagyu are generally preferred for the long-term feeding programs for the Japanese and Asian markets requiring marbling.

Points to remember with breeds for feedlots

- British breeds and their crosses are widely accepted.
- European crosses of up to 50 per cent with British breeds are increasing in popularity and acceptance.
- *Bos indicus* cattle are generally unsuitable for long fed, high quality export markets.
- *Bos indicus* cattle are suitable as feeders for the short-term domestic and medium-term export markets.

Of course, feedlots focus on growth and carcass performance. Breeders must first optimise fertility, followed by growth and carcass performance.

Source: The Australian Feedlot Directory, 2nd Edition ALFA, Wesfarmers Dalgety.



Further information:

Roger Sneath

DPI&F, Dalby

Phone: 07 4669 0808

Email: roger.sneath@dpi.qld.gov.au

"Those who are successful look for what they want in life; and when they can't find it, they move forward to create it. Truly successful, happy and fulfilled people are those who are willing to do all the things that others were unwilling to do."

Sampling your water supply

The chemical or biological composition of your water supply can adversely affect crops, soils, humans, animals, and equipment. Having your water supply analysed before using it for stock, domestic or irrigation purposes is strongly recommended.

The accuracy of a water analysis very much depends on how the sample is taken and treated and how much time elapses between sampling and analysis.

Collecting the sample

The most suitable bottles for containing samples are polyethylene or glass, and should hold one litre. Polyethylene bottles are available from water testing analysts, chemists and certain retail outlets. Soft drink, milk or chemical containers are not acceptable because residues are likely to remain in them, even if they have been washed out.

Before taking the sample, rinse out the bottle three times in the water to be sampled (except in the case of sterile bottles used for bacteriological sampling). Fill the bottle to the top with as little air as possible remaining, and seal tightly. Label all samples properly with details of the source, date of sampling, your name and address, and the intended use of the water.

Surface water samples

For flowing water, collect water from mid-stream and mid-depth to obtain a sample that is representative of the entire flow in the stream or channel. Make a note of the condition of flow in the stream (volume and/or velocity of flow etc) as this often influences the quality of water at different times of the year.

For still waters such as lakes, reservoirs and dams, take samples away from the water's edge and at a depth that represents normal pumping depth.

Stratification (thermal and chemical layering of the water body due to seasonal changes and chemical content) can significantly affect results.

Groundwater samples

When sampling water from bores and wells, firstly remove the 'stale' water lying inside the casing. This 'stale' water may not be representative of the water from the aquifer. Remove about three times the volume of the well or casing storage before taking the sample. Take note of the pumping rate, the water level and the time of sampling after pumping has started.

Some bores may draw water from several aquifers. Should samples from different depths be required, specific techniques must be used. Refer to your water analyst for these techniques.

Where to send samples

It is always best to make arrangements for analysis before taking samples, to make sure you meet the testing agency's requirements for sampling, handling and transport.

Queensland Health

Queensland Health will test the suitability of water for human consumption. This testing includes bacteriological and chemical analyses. The testing is done by Queensland Health Scientific Services, Coopers Plains, Brisbane. Arrange for analysis before carrying out sampling. Further information is available by phoning 07 3274 9111 or on their website at www.health.qld.gov.au/qhps

Local authorities

Not all local authorities offer a water testing service. Where this service is available it is usually confined to domestic use. Contact your local authority.

Landcare and catchment care groups

Some of these groups offer water testing services. This testing is often linked to projects on monitoring water quality in local water courses.

Private companies

Samples collected for any purpose can be analysed by private companies, which may be listed in the yellow pages of your local telephone book. You can also search for accredited testing laboratories at the website of the National Association of Testing Authorities, Australia (NATA): www.nata.asn.au

Other contacts

Fact sheets on water and other topics are available from Natural Resources, Mines and Energy (NRM&E) offices and service centres or can be downloaded at www.nrm.qld.gov.au/factsheets

Instructions for sampling water and other resources can also be downloaded from the Natural Resource Sciences Chemistry Centre website at www.nrme.qld.gov.au/science/labs/sampling.html

You can also contact NRM&E on 07 3896 3111 or toll free (outside Brisbane metro) 1800 803 788 or email enquiries@nrm.qld.gov.au

Further information:

Tim Biggs

DPI&F, Gatton

Phone: 07 5466 2215

Email: tim.biggs@dpi.qld.gov.au

Ageing cattle by teeth



This is a two tooth animal. There are 2 large teeth with smaller milk teeth on either side. Note that you count the permanent teeth on the lower jaw. The upper jaw has no teeth – only a dental pad.

Age is an important consideration in livestock trading because many markets have age limits. Age of beef cattle at slaughter is strongly related to tenderness and meat colour.

Counting the number of permanent incisor teeth is the most common method of determining age in cattle. (MSA grading uses bone ossification, which is assessed on the carcass in the meat works. Obviously this method cannot be used on live animals.)

Cattle, like many animals, start life with baby or milk teeth. From about two years of age these teeth are replaced with permanent teeth. Permanent teeth erupt in pairs starting with the centre pair. A tooth is considered to have 'erupted' when it has broken through the gum. A pair is considered to have 'erupted' when the first tooth of a given pair has broken through the gum.

The age of an animal is often referred to by the number of permanent teeth. An animal with only milk teeth is called a 'milk tooth', an animal with 2 permanent teeth is a '2 tooth', and so on until an animal with a full set of 8 permanent teeth is said to be an '8 tooth' or 'full mouth'.

The range in age at teeth eruption is enormous. It varies from beast to beast due to individuality, breed, nutrition and climatic influences. Cattle that exhibit early sexual maturity (puberty) have teeth eruption at younger ages than late maturing cattle. British-bred cattle have tooth eruption at younger ages than Brahman cross cattle.

A guide for estimating cattle age (in months) by dentition.

Teeth	Breed	Average Age at Eruption (Months)	Range in Age at Eruption (Months)
2 Tooth	British cattle	24	21-27
	Brahman cross	26	23-29
4 Tooth	British cattle	31	26-36
	Brahman cross	33	28-38
6 Tooth	British cattle	38	32-44
	Brahman cross	41	35-47
8 Tooth	British cattle	46	39-54
	Brahman cross	51	43-58

From this table you can see that a beast with four permanent incisor teeth could be as young as 26 months or as old as 38 months.

In spite of this inaccuracy, dentition (or teeth counting) is still a useful way to assess cattle age.



Further information:

Russ Tyler

DPI&F, Brian Pastures Research Station, Gayndah

Phone: 07 4161 3726

Email: russ.tyler@dpi.qld.gov.au

HANDY GARDEN HINTS

Weed killer

4.5 litres (1 gallon) white vinegar (10% acidity, 20% acid)

1 cup table salt

1 tablespoon dishwashing liquid

Remove approximately 2 cups of vinegar from the container, pour in the salt and dishwashing liquid, return to the container. Close the lid and shake to mix. Transfer to a spray bottle as needed.

This mixture works as well, if not better, than commercial chemicals and is much cheaper. Spray it on weeds in the heat of the full sun. Be careful, it will kill whatever you spray it on!

White Oil

1 cup vegetable oil

1.5 cups water

1 teaspoon dish washing detergent

Mix in a blender. Use in place of commercial product.

Big head in horses grazing tropical pasture grasses

Big head is a condition of horses and donkeys caused by a calcium deficiency. The condition is usually associated with introduced tropical pasture grasses. It occurs when oxalates in the grass bind calcium and prevent the horse from absorbing it. Cattle and sheep are not normally affected because rumen bacteria break down oxalates, freeing the bound calcium.

The signs of big head include:

- lameness – animals appear stiff in the joints and have a shortened gait
- ill thrift – loss of condition on pastures which look nutritious
- swollen jaw bones – upper jaws, lower jaws or both.

Some or all horses on a pasture may develop big head. The disease can develop within two months of horses being grazed on hazardous pastures but commonly takes six to eight months. Mares and foals are more susceptible than stallions and geldings, but all can suffer from the disorder.

Which grasses are hazardous?

Cases of big head have occurred on introduced tropical grasses including buffel, green panic, setaria, kikuyu, guinea grass, para grass, pangola, signal grass and purple pigeon grass. The hazard is greatest when these grasses provide all, or almost all, of the available feed. There is no record of the disease being caused by native grasses, introduced temperate grasses (such as rye grass) or the sorghums. Safe tropical grasses include Rhodes grass, the paspalums, the couches and creeping blue grass.

How can big head be prevented?

Use native pastures where possible. Horses shouldn't graze hazardous pastures for more than one month. You can graze horses on these pastures if they have access to other 'no risk' pasture.

If only hazardous grasses are available, encourage the growth of a legume component in the pasture to provide a source of oxalate-free feed, and provide a calcium and phosphorus supplement.

Mineral and supplement mixtures which will provide the required amount of calcium and phosphorus for horses include:

- 1 kg of low cadmium rock phosphate mixed with 1.5 kg molasses
- 1 kg of a mixture of one third ground limestone and two thirds dicalcium phosphate (DCP) mixed with 1.5 kg molasses.

Either of these mixtures should be fed to each horse once a week. The molasses is used as a carrier and attractant. Do not be concerned if your horses eat their week's supplement in 1 or 2 days. It contains enough mineral to last them the full week. You may divide up the weekly amount and feed each day if you wish.

Twenty kilograms of good quality lucerne hay will provide approximately the same amount of calcium and phosphorus as the above mineral mixtures. Other mineral mixes which provide a calcium:phosphorus ratio of 2:1 can be used but are likely to be more expensive than rock phosphate or ground limestone and DCP.

Can big head be cured?

The lameness and ill thrift can be cured. The swelling of the jaws may not fully disappear if the animal is severely affected. Affected animals should be fed double the amount of mineral supplement outlined above for at least 6 months to replace the mineral lost from their bones.

Source: McKenzie, R.A. (1994) Plant poisonings of horses in Australia. Proceedings of the 16th Bain-Fallon Memorial Lectures, Australian Equine Veterinary Association, Sydney. Edited by TM Dyke. Pages 1-56.

The same information is also available in Horse Sense – the Australian guide to horse husbandry (1992) by Peter Huntington and Fran Cleland, 310 pages. See the section 'Tropical pastures and "big head"' (page 65).

Further information:

Dr Ross McKenzie

DPI&F

Yeerongpilly

Phone: 07 3362 9432

Email: ross.mckenzie@dpi.qld.gov.au



NLIS - campdrafts, rodeos, sporting events and shows

From 1 July 2005, all campdraft, rodeo and show grounds or arenas must be registered with DPI&F and have a property identification code (PIC). If the ground or arena does not already have a PIC, the committee should contact your local stock inspector to obtain the necessary registration forms and a PIC.

Agricultural shows

All cattle (excepting bulls that are two years or older on 1 July 2005) attending an agricultural show for the purpose of showing or sale must be identified with an approved NLIS device and the movement reported to the NLIS database. The details of all untagged bulls at a show or show sale will need to be reported to the NLIS database as a mob-based movement.

Campdrafts, rodeos and sporting events

Mob-based movement

Under phase-in arrangements in place from 1 July 2005 to 30 June 2006 and with approval from DPI&F's Chief Inspector of Stock, cattle moved solely for sporting events do not need to be individually identified and recorded, providing they return to their home property within five days. However this type of movement must be entered on the NLIS database as a 'mob-based movement'. The following information will be required:

- number and class of cattle
- PIC of home property (the 'from' PIC)
- PIC of ground/arena (the 'to' PIC)
- waybill number
- date of movement.

The movement from the property to the sporting event and the movement returning to the property are classed as two movements and each must be recorded on the database.

When the cattle have returned to their home property, the same information as for the movement away from the home property must be sent to perform the return transfer. The 'from' and 'to' PICs for the transfer home must be reversed.

If the cattle arrive home within 72 hours of leaving home, the two transfer reports to the database can be made together. If the cattle do not return to the home property within the 72 hour period, a report

is required within 48 hours of each of the two movements.

Committees hosting events requiring mob-based movements should apply to DPI&F's Chief Inspector of Stock for approval. The application must include:

- the period of time in which the cattle will be moved from their property to the sports ground and back to their property
- the number of cattle
- the class of cattle
- the PIC of the properties supplying cattle
- the PIC of the grounds/arena.

Applications must be lodged on the 'Mob Based Movement Application Form' which can be completed on-screen or printed and filled in by hand and sent to the Principal Inspector, Biosecurity, DPI&F at the following centres: Townsville, Longreach, Rockhampton, Toowoomba and Yeerongpilly.

Application forms are available at www.dpi.qld.gov.au/nlis or from your local DPI&F office.

Note: These arrangements for mob-based transfer to and from campdrafts, rodeos and other sporting events will change after 30 June 2006.

Movements requiring NLIS devices

However in the following circumstances cattle moving to and from sporting events must have an NLIS device applied prior to the movement and the devices read with full NLIS identification and database transfers:

- when the cattle return to the home property after more than five days
- when the cattle move from the ground/arena to a PIC other than the home property.

If the cattle are away from their home property for more than five days, they must have NLIS devices applied prior to any movement and these must all be read. The movements to and from the ground/arena must then be entered on the NLIS database within 48 hours of completion of the individual movements.

Where cattle are individually identified, a single reading may be sufficient to provide the information necessary for the database transfers.

Further information

Local DPI&F stock inspectors and beef officers

DPI&F Call Centre on 13 25 23

DPI&F NLIS website: www.dpi.qld.gov.au/nlis/

NLIS helpdesk on 1800 654 743

NLIS website: www.nlis.com.au

Swill feeding – threatens livestock industries and lifestyle!

All Queenslanders, whether living in rural areas or cities, need to be aware of the devastation that could be caused by feeding animal-derived food scraps (meat or imported dairy products) to livestock, i.e. pigs, poultry, cattle, sheep and goats.

Feeding animal matter or 'swill' to livestock is illegal because it can introduce exotic diseases such as foot and mouth disease (FMD) to our animal industries.

The outbreak of FMD in the United Kingdom in 2001 was caused by a person feeding food scraps to pigs. The end result of this careless action was the slaughter of millions of animals, significantly reduced farm incomes, and negative effects on the whole British economy. The flow-on effects to tourism and businesses in the rural communities and associated cities was enormous and is still being felt.

The foot and mouth virus occurs on every continent except Australia, North America and Antarctica. The devastation and cost of an outbreak in Australia would run into billions of dollars and shut down our export markets immediately.

Swill is any food (or food scraps) containing animal matter, or vegetable waste that



Do not feed food scraps containing any meat or imported dairy products to livestock

has been contaminated by animal matter. Animal matter is any meat or meat product (including fish, kangaroo and chicken meat) and imported dairy products.

Food or food scraps containing animal matter from any source, such as leftovers from restaurants, hospitals and domestic households, must not be fed to any livestock. Even vegetable oils that have been used to cook meats could harbour viruses and are regarded under the law as animal matter. Used cooking oil must not be fed to livestock unless it is first strained to remove all particles of solid matter and heated at 70 degrees Celsius for at least 20 minutes. Grain, bread and vegetable waste from bakeries and markets may be fed to livestock provided they have not come into any contact with animal matter (meat or imported dairy products) at any time and if free of chemical residues.

All commercially prepared 'meals' of animal origin i.e. blood meal, meat and bone meal, meat meal, bone meal, fish meal and poultry meal **cannot** be fed to ruminants (cattle, sheep, goats etc). Animal meal and stock food containing animal meal can continue to be fed to horses, pigs and poultry as these animals are not ruminants.

It is important for everyone to take an active stance against swill feeding and help protect 'our way of life'. Never permit the feeding of swill to livestock and report those who do to your local DPI&F office or the Disease Watch Hotline 24 hours a day on 1800 675 888.

Further information

Local DPI&F Stock Inspector,
or

DPI&F Call Centre 13 25 23, or
'Swill feeding', DPI&F Note
at [www.dpi.qld.gov.au/
health/3579.html](http://www.dpi.qld.gov.au/health/3579.html)

Cattle tick control strategies – south-east Queensland

Economic impact

The cattle tick (*Boophilus microplus*) is a serious economic pest of the Queensland cattle industry. If left unchecked, this external parasite can significantly reduce cattle liveweight gain and milk production. This tick is also responsible for transmitting three blood-borne 'tick fever' organisms which cause sickness and death in cattle.

In addition to lost production, other major costs are incurred in controlling the tick:

- treatment facilities
- chemical controls
- labour required for mustering and handling cattle.

Cattle ticks can be controlled to varying degrees with resistant cattle breeds, strategic chemical treatments, the cattle tick vaccine (TickGARDPLUS), pasture spelling, or combinations of these methods.

Implementing a strategic program

Planned strategic treatment programs are an efficient means of limiting the impact of the cattle tick. For any program to be effective, it must consider:

- the life cycle of the parasite
- known population rises or fluctuations
- climatic influences that affect the parasite's survival.

An effective program requires a coordinated plan that will give maximum control with the least number of treatments.

The ultimate success of any treatment program will depend on:

- using a chemical that will kill ticks in the locality e.g. no chemical resistance present
- effectively and correctly managing the treatment facilities and equipment e.g. adequate wetting, calibration, chemical concentration, correct dosage
- treating all cattle (including calves where recommended)
- strictly adhering to recommended treatment intervals
- maintaining property security – stock-proof fencing that prevents contact between treated and tick-infested stock.

Control program options

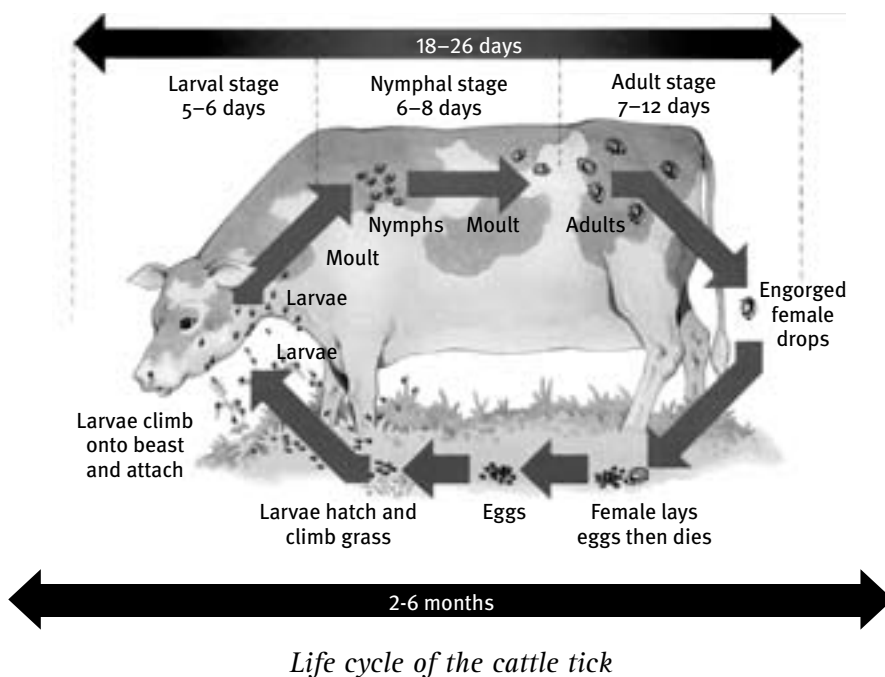
Dairy cattle

- Dip or spray – 6 treatments at 3 week intervals commencing in October.
- TickGARDPLUS can be used in addition to dip or spray treatments. TickGARDPLUS treatments should be given at 10 to 12 week intervals throughout the year (Primer required).

- TickGARDPLUS as above plus 2 appropriate macrocyclic lactone treatments (e.g. ivermectin, doramectin, moxidectin) at recommended intervals starting October.
- Do not use Acatak or Wintix on cattle which are producing or may in the future produce milk for human consumption.

Beef cattle

- Dip or spray – 6 treatments at 3 week intervals commencing in October.
- Acatak or Wintix – 2 treatments at 12 week intervals commencing in October. (Do not use Acatak or Wintix on cattle which are producing or may in the future produce milk for human consumption.)
- TickGARDPLUS treatments at 10 to 12 week intervals throughout the year (Primer required.).
- May use a macrocyclic lactone (e.g. ivermectin, doramectin, moxidectin) at start of season in place of 1 dip or spray.
- Tick Fever vaccination is recommended.



Enhanced control options or eradication

Producers wishing to achieve enhanced levels of tick control or undertaking eradication should discuss treatments and the various available options with their local Stock Inspector. Programs may be tailored to suit individual herds and local conditions and include strategies such as destocking and pasture spelling.

Pasture spelling period

If pasture spelling or destocking is to be used effectively to eradicate cattle ticks in south-east Queensland, the paddock or property must remain free of all stock for a minimum period of nine months, from 1st October through until 30th June. At the end of this period, introduce a small group of tick free sentinel or test cattle. After a period of 3–4 weeks, examine these animals to gauge the effectiveness of the program.

Remember, many factors will affect the success of destocking or spelling a paddock as a means of controlling cattle ticks:

- Destocked means 'remains free of all stock'.
- Condition of the perimeter fencing – is it really stockproof? Increased pasture growth will result in pressure on the fencing from outside stock.

Follow safety precautions

- Always read the product label carefully.
- Observe all safety requirements for handling chemicals and disposing of unwanted chemicals and containers.
- Use products only as directed.

Avoid chemical residues

- Read the product label.
- Adhere to Withholding Periods (WHP) and Export Slaughter Intervals (ESI).



**A withholding period (WHP) is a domestic, legally-binding requirement. It is the minimum period of time that must elapse between the treatment of an animal and the slaughter of that animal or collection of its milk for human consumption.

**An export slaughter interval (ESI) is the recommended interval between the treatment of an animal with a veterinary chemical product and the slaughter of that animal for export into a market that has different statutory requirements for residues in meat to the Australian domestic market.

Further information:
Contact your local DPI&F Stock Inspector for further advice.

Water quality for livestock

The suitability of water for stock depends on a number of factors: type, age and condition of animal; climate; and composition of pastures and feed. Below is a guide to the maximum salinity levels certain stock may tolerate without adverse effect.

Type of Stock	Total dissolved ions milligrams/litre
Poultry	3000
Pigs	5000
Milking cows	5000
Dry dairy cows, horses	7000
Beef cattle	9000
Sheep	10,000

Even if the salinity is within limits, specific ions such as fluoride, magnesium, sulphate, bicarbonate and so on can cause health problems, such as loss of condition, scouring, teeth decay and gastrointestinal problems.

The concentration of salts in water can increase through evaporation. So if a water supply has concentrations near the upper limit you may need to take steps to reduce evaporation. Some water quality problems can be overcome by mixing poor quality water with better quality water. Seek advice if this is an option for you.

Queensland's natural waters, particularly groundwater supplies, contain variable amounts of salts. For this reason it is wise to have a sample analysed. However if the water is not sampled and processed correctly, the analysis may not be a true indicator of its quality (see article on 'Sampling your water supply').



Further information:

Tim Biggs

DPI&F, Gatton

Phone: 07 5466 2215

Email: tim.biggs@dpi.qld.gov.au

Management of pastures for horses

Horses are hard on pastures. Unlike cattle, horses have upper incisors and mobile lips which enable them to selectively and heavily graze pastures. 'Horse' pastures are easily recognised because they have alternating areas of heavily and lightly grazed pasture. This pattern is referred to as 'lawns' and 'roughs'.

A large proportion of the Australian horse population is owned and managed on small land holdings ranging from one to four hectares, many of which become seriously degraded by continuous grazing by horses. This is likely to result in 'horse sick' pastures, soil erosion and compaction, and severe soil mineral imbalances by nutrient transfer between grazed 'lawns' and dunging 'roughs'.

Many commercial beef properties also run their horses in designated horse paddocks. Problems similar to those on small holdings can occur in these pastures.

The owners of small land holdings face the greatest challenge in achieving a desirable level of pasture feeding, simply because they lack adequate land area and/or have too many horses to allow paddocks to be rotated effectively enough to prevent degradation. In these cases it is invariably better to confine individual horses to small yards and to maximize the

pasture area available on the remainder of the land.

The pasture area should be subdivided with temporary fences and individual horses allowed a period at pasture each day, either singly or in company, depending on paddock size and the nature of the individual horses. As with larger holdings, paddocks should be rotated on a regular basis to avoid overgrazing and to allow the pasture to recover.

Cattle can be used to even out the grazing in horse paddocks, especially if used in rotation on a seasonal basis. This may also aid in breaking parasite cycles. Fire also has a role in native pastures.

Through careful pasture management, each horse may have the benefit of pasture feeding while the grazing impact on the pasture base is kept at an acceptable level. The length of the grazing period and the number of horses grazed can be adjusted according to seasonal conditions to maintain the pasture resource.

During periods of drought or slow pasture growth, it may be necessary to exclude horses from the pasture areas completely.

Source: Feeding horses in Australia: A guide for horse owners and managers by John R. Kohnke, Dr. Frank Kelleher and Dr. Penny Trevor-Jones. RIRDC Publication No. 99/49. 242 pages.

This book is available for sale from DPI&F offices for \$36.10, or free off the web!

Water requirements for livestock

The amount of water livestock consume is subject to considerable variation. Consumption depends on the type, age and condition of the animal; available fodder; climatic conditions; and the quality of the water. The following table provides a guide to the amount of water various classes of livestock might be expected to consume each day.

Further information:

Tim Biggs DPI&F, Gatton
Phone: 07 5466 2215
Email: tim.biggs@dpi.qld.gov.au

Type of livestock	Average daily consumption	Peak daily consumption
Sheep		
nursing ewes on dry feed	9	11.5
mature sheep on dry pastures	7	8.5
mature sheep on irrigated pastures	3.5	4.5
fattening lambs on dry pastures	2.2	3
fattening lambs on irrigated pastures	1.1	1.5
Cattle		
dairy cows in milk	70	85
dairy cows dry	45	60
beef cattle	45	60
calves	22	30
Horses		
working	55	70
grazing	35	45
Pigs		
brood sows	22	30
mature pigs	11	15

Your channel to influence beef research, development and extension (RD&E)

The south east Queensland Beef Research Committee provides an avenue for producers to raise issues they believe the industry should be addressing.

It is one of ten such committees across northern Australia who maintain links with various funding bodies including their founders, Meat and Livestock Australia, through the Northern Australia Beef Research Council.

Their functions are mainly

- To identify regional and district issues that may be solved by research, development, education, extension and training
- To assess the relative importance and potential benefits to the region of solving these issues
- To disseminate research results to the region and to provide feedback on the adoption of new technologies
- To assist in developing project proposals.

The committee has been responsible for initiating several RD&E projects, including your own *BeefTalk* newsletter. A representative of the committee (Carli McConnel) sits on the newsletter's editorial committee.

Members of the committee are drawn from across south-east Queensland so that issues are representative of all parts of the region and feedback to industry is effective. Members sit on the committee for defined terms of two three-year periods and vacancies currently exist in the Gympie and Beaudesert regions.

Current members are:

Jim Cross, Chairman, Nanango	07 4162 4890
Gordon Slack, Gayndah	07 4161 1324
Max Boothby, Eidsvold	07 4165 0852
Cam Hughes, Brooweena	07 4129 9222
Hazle Marland, Miriam Vale	07 4156 7570
Carli McConnel, Esk	07 5426 0169

If you would like to discuss industry issues or would like to become a member of the committee for your region, please call one of the committee members.

The committee also encourages other interested producers to attend meetings to air their issues and find out what the committee is doing.

South east Queensland Beef Research Committee member profiles



Carli McConnel

'Mt Brisbane', Esk

Region: Brisbane Valley

Industry involvement:
AgForce member, South East Qld Pest Advisory Forum member, on the National Parthenium Weed Management Group,

National Director of the Droughtmaster Society, Editor of *Droughtmaster* newsletter, member of *BeefTalk* newsletter editorial panel.

Industry issues and passions:

- for industry people to be informed, well educated and up to date with technologies
- for education to reduce the risk of disease outbreaks and residues in beef.



Jim Cross

'Garthowen', Nanango

Region: South Burnett

Industry Involvement:
AgForce member, South Burnett Grazing Network (BeefPlan Group) member, Representative on the

Northern Australia Beef Research Council and Northern Beef Project Industry Committee, agricultural trainees employer with Kingaroy and Dalby Ag Colleges.

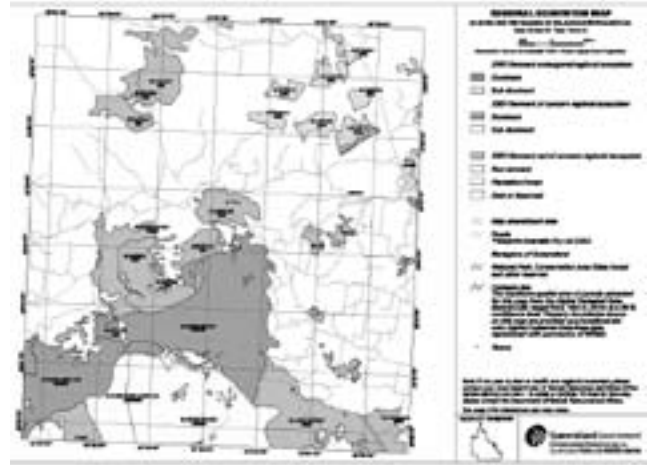
Industry issues and passions:

- to support the quest for new knowledge and technologies and their uptake by industry
- to take advantage of the vast pool of industry knowledge that exists
- to take a positive approach to the industry's future and promotion
- to encourage and support young people into the industry.

Options for submitting a voluntary PMAV

In *Beefstalk* 10 we explained how a voluntary Property Map of Assessable Vegetation (PMAV) can provide security and peace of mind when managing regrowth in areas that are not classed as remnant vegetation. Basically it allows you to 'lock in' the non-remnant (coloured white on a regional ecosystems map) areas of your property and to do so at the property scale rather than at a district or regional scale.

The flow chart outlines your options for preparing a PMAV and/or correcting the regional ecosystem mapping on your property.



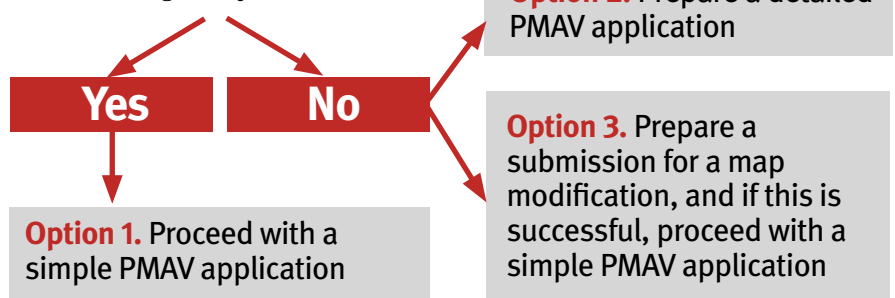
Step 1

Check current vegetation mapping

- EPA website www.epa.qld.gov.au/REMAP
- Ask at NRM&E office.

Step 2

Is the current mapping correct (correct enough for you to live with?)



Option 1. A simple PMAV application

If the current RE mapping is accurate for your property you can proceed with a simple PMAV application.

- ▶ Obtain a PMAV application form from DNR&M:
 - Download from web
 - Pick up from an NR&M office.
- ▶ Purchase a certified RE map for your block from NR&M.
- ▶ Locate 5 identifiable points to define your property boundary and obtain GPS coordinates.
- ▶ Mark these points on either the certified RE map or another cadastral map. In an attached table, give the coordinates and a description of their location.

The most difficult thing in this process is obtaining the GPS coordinates. The five GPS points need to encompass your property and should be identifiable fixed features. Suitable points include boundary corner posts, survey pegs, road intersections or a dam close to the boundary.

If you don't have a GPS yourself perhaps you have a friend who is a keen fisherman and does have a GPS. Some Landcare groups have a GPS and may be willing to hire it out. Another alternative is to engage a surveyor to collect the GPS coordinates for you.

If you are using your own or a hired or borrowed GPS, you need to ensure that it is set up to either GDA94 or WGS84 datum and uses a projection of UTM Zone 56.

To avoid cluttering the map, simply mark and number the points on the map and then list the coordinates and a description of each point's location in an attached table.

Option 2. A detailed PMAV application

A detailed PMAV requires a property plan that has an image base (either aerial photograph or satellite image). This image needs to be rectified and overlaid at scale with the cadastral boundaries of your property from the digital cadastral data base (DCDB). As for the simple map you need to supply at least five GPS points surrounding your property.

If the intent of the detailed application is to dispute and change the current RE mapping you need to map the areas on your property you wish to change and classify them into one of five categories (contact NR&M for details).

Provide evidence of why the category for the vegetation in each of these areas should be changed. For most people this will involve changing an area mapped as remnant to non-remnant. Supporting evidence includes:

- ▶ clearing history and
- ▶ canopy height is less than 70% of the average for that RE or
- ▶ canopy cover is less than 50% of the average for that RE or
- ▶ species composition is not typical of that (or another) RE.

Due to the complexity involved with mapping and the need for relatively detailed vegetation surveys it is recommended that you seek professional advice and perhaps engage a consultant. A PMAV kit can be obtained from the NR&M website or your local NR&M office.

Option 3. A map modification submission

If you think the RE mapping on your property is incorrect, you can prepare a submission for the Queensland Herbarium to modify the RE mapping for your property.

A submission should include:

- ▶ Your contact details and your property details (Lot on Plan numbers found on your rates notice).
- ▶ An aerial photograph or property map with the property boundary and the areas you want changed clearly marked on either the copy of the photo itself or a clear plastic overlay attached to it. If you number the areas you want changed it will be easier to relate supporting information to them.
- ▶ Information on when the areas were cleared and a description of the vegetation that is there now. An accurate date of when the area was cleared allows the Herbarium to look at the aerial photographs following the clearing. The description of the vegetation should distinguish between the canopy trees (such as spotted gum, iron barks and bloodwoods) and understorey trees and shrubs (such as wattles, supplejack, dogwood etc). Also include what proportion of mature canopy trees were left during the clearing operation and the current height of the regrowth canopy trees.

- ▶ Where you believe the current RE mapping is wrong (such as where spotted gum slopes have been mapped as blue gum flats), provide information on the type of country, topography, soil type and vegetation.

This request for a map modification is submitted through NRM&E. The Vegetation Management Officers conduct a preliminary assessment of the submission and forward an RE map modification request along with your supporting documentation to the Queensland Herbarium.

The Herbarium will assess the request and, if they deem it appropriate, will change the RE mapping. You will be sent an updated certified RE map. You can then use this to proceed with a simple PMAV application.

There may be delays in processing your application for a map modification. To provide some security and peace of mind, it may pay to 'lock in' non-remnant areas with a simple PMAV before you apply for the map modification. You will then have to apply for another PMAV after the map modification application has been processed.

Further information

Contact your local NR&M office or
Website: www.nrm.qld.gov.au/vegetation/



Training – It's worth the effort

New FarmBis training program commences

Primary producers are under continual pressure to meet new market requirements, to show they are managing their land sustainably and looking after the welfare of their livestock, and to remain profitable.

Keeping up to date with new technology and business management can help producers meet these challenges.

Producers often say they cannot afford the cost of attending training workshops. With the pressures on a modern primary production business, the question should be, 'Can I afford not to go to training?'

The DPI&F offers a number of training workshops which attract a 50 per cent subsidy through the AAA FarmBis Scheme.

The workshops cover Nutrition, Breeding, Grazing Land Management, Selling and Marketing, and Business Management.

Workshop outlines

Nutrition

- Understand a product label
- Know the nutritional requirements of your cattle
- Save money on supplements
- Know what supplements to feed when
- Learn from other producers
- Estimate the feed value of pasture
- Know how to balance cattle requirements with pasture management

Breeding

- Develop a breeding plan to meet your production targets

- Understand male and female reproduction relative to herd performance
- Understand new breeding technologies and how to use them
- Develop a personalised herd management plan
- Establish reproduction strategies to achieve desired goals

Grazing land management

- Understand how your paddocks work as part of a grazing ecosystem
- Assess land condition and determine its impact on productivity and sustainability
- Develop plans for managing grazing
- Understand the role of fire and its use as a management tool
- Assess sown pasture options
- Manage the tree/grass balance
- Develop effective weed management strategies
- Develop a grazing land management plan to meet your production goals and ensure environmental and economic sustainability

Selling and marketing

- Learn how to get the best money for your cattle
- Understand consumer requirements
- Plan your long term marketing strategies
- Discuss global market trends
- What markets are there and which one is best for you

Further information

Contact the DPI&F
Call Centre – 13 25 23

The FarmBis program Agriculture – Advancing Australia (AAA) was launched in late April 2005, and aims to improve the long-term economic, social and environmental circumstances for primary producers.

\$22 million of funding has been allocated for the program, which is jointly funded by the Queensland and Commonwealth Governments.

It provides subsidies towards approved training activities for eligible primary producers and land managers. Eligible producers include Primary Producers (including commercial wild catch fishers and wild game harvesters), Indigenous Land Managers and Rural Land Managers.

The program aims to encourage primary producers to effectively manage change and risk and to benefit from innovation and best practice management techniques.

A 50 percent subsidy rate will apply to approved learning activities undertaken in the categories of: – People Management, Financial Management, General Business Management, Marketing, Production Management, Natural Resource Management/ Biodiversity.

Guidelines, application forms and other supporting information can be viewed at the FarmBis website, www.farmbis.gov.au or by phoning 1800 623 946

The program will run until 30 June 2008 or until the allocated funds are fully utilised.



new product

Water medication – a guide for beef producers

Meat and Livestock Australia (MLA) recently published *Water medication – a guide for beef producers*. This book is a comprehensive review of using water medication to supplement grazing livestock.

The authors, Professor Keith Entwistle and Dr Sandi Jephcott, have combined research findings and basic chemistry with practical experience from many producers in northern Australia.

They have explored the question of water quality, one of the major problems associated with water medication.

Cost:
MLA members – free
Non-members – \$25

Available from:
MLA – phone 1800 675 717 or email publications@mla.com.au
DPI&F – Bookshop phone 13 25 23 or website www.dpi.qld.gov.au/shop



‘Stocktake’ Balancing supply and demand

‘Stocktake’ is a paddock-scale land condition monitoring and management package. It has been developed to provide grazing land managers with a practical, systematic way to:

- assess land condition and long-term carrying capacity, and
- calculate short-term forage budgets.

Using paddock condition indicators together with grass growth predictions for local land types, ‘Stocktake’ alerts graziers to changes in land condition at the paddock scale. It calculates the effect this is having on pasture productivity and subsequently on carrying capacities of stock. The information and photos are stored in a database which produces reports on land condition, paddock and property carrying capacities, and historical trends in cattle numbers.

The forage budgeting technique, a second component of the system, provides land managers with a dynamic tool for adjusting stock numbers based on seasonal pasture supply.

‘Stocktake’ is presented as a one day workshop costing \$275 (GST inclusive) per business unit and attracts a 50 percent Farmbis subsidy.

Further information:

Col Paton

DPI&F, Brian Pastures Research Station, Gayndah

Phone: 07 4161 3709

Email: col.paton@dpi.qld.gov.au



The 10 Commandments of Marriage

Commandment 1.

Marriages are made in heaven. But so again, are thunder and lightning.

Commandment 2.

If you want your wife to listen and pay strict attention to every Word you say, talk in your sleep.

Commandment 3.

Marriage is grand -- and divorce is at least 100 grand!

Commandment 4.

Married life is very frustrating.

In the first year of marriage, the man speaks and the woman listens.

In the second year, the woman speaks and the man listens.

In the third year, they both speak and the neighbours listen.

Commandment 5.

When a man opens the door of his car for his wife, you can be sure

Of one thing: Either the car is new or the wife is.

Commandment 6.

Marriage is when a man and woman become as one;

The trouble starts when they try to decide which one.

Commandment 7.

Before marriage, a man will lie awake all night thinking about something you say.

After marriage, he will fall asleep before you finish.

Commandment 8.

Every man wants a wife who is beautiful, understanding, economical, and a good cook. But the law allows only one wife.

Commandment 9.

Marriage and love are purely a matter of chemistry.

That is why wife treats husband like toxic waste.

Commandment 10.

A man is incomplete until he is married.

After that, he is finished.



Timely tips for south east Queensland

September–October

Dry season management

Reassess pasture quantity and quality in relation to ground cover and feed value.

Plan to spell heavily grazed country when the season breaks to allow pastures to recover.

Review supplementary feeding program and production targets. Check long range weather forecast.

Feed supplements to maintain good breeder condition, particularly first-calf cows (and second-calf cows if yearling mating). Lactating cows have high nutritional needs to maintain liveweight and milk.

Bulls

Ensure bulls are in good working condition.

Check all bulls for structural and semen soundness.

Cull on age (older than 6 or 7 years) and unsoundness.

Ensure bulls have a veterinary inspection before purchase and use performance information if available.

Vaccinate for 3 day sickness and vibriosis (2 doses 1 month apart initially then annual booster).

Breeders

Assess breeder condition for mating. Heifers and first-calf cows may need extra care.

Move pregnant breeders to a calving paddock, close to homestead and yard facilities.

Check calving cows, especially heifers, regularly.

Record all cows and heifers that have calving problems; cull them and their calves.

Order NLIS ear tags or rumen boluses for calves branded this year. It is now mandatory for all cattle leaving a property to carry

an NLIS device (unless specific exemptions apply).

Parasites

Obtain cattle dip analysis.

Plan tick control program.

Check weaners for worms one month after season has broken.

Check early calves (late winter) for scrub tick.

Evaluate the effect of buffalo fly on production and plan control if warranted.

Pastures

Check pasture yields following the spring break – is there enough ground cover? If you have enough standing dry feed to carry a fire (you don't have to burn), then your ground cover and stocking rate are about right.

Consider spelling paddocks early in the growing season for a positive impact on pasture composition. Prolonged heavy grazing of fresh growth will have a serious detrimental effect on pasture.

Implement a planned burning program for native pasture where appropriate. Only burn for a specific reason, such as to control woody weeds and regrowth, even out patch grazing, positively change species composition, or remove moribund pasture.

Keep an eye out for weeds. Actively patrol known 'hot spots' and places where you fed supplements.

November–February

Parasites

Check young cattle for worms.

Control buffalo fly where applicable. Apply buffalo fly insecticidal ear tags (December).

Continue tick control program.

Supplements

Start phosphorus supplementation program where a deficiency exists;

continue until end of growing season.

Evaluate effectiveness and cost benefit of winter supplementation program.

Pastures

Spell leucaena for at least two months, but ensure it does not go to seed.

Spell pastures that have been heavily grazed to allow seeding.

Breeders

Ensure cows are cycling; check nutritional levels and supplement as required.

Put bulls out with breeders. Where possible avoid mixing bulls of different ages.

Mate young bulls with heifers and/or first-calf cows. Mate heifers one month before the main breeder herd where nutrition is adequate.

Brand, dehorn, castrate and vaccinate calves (5-in-1 or 7-in-1).

Consider HGP implants for steer calves.

Growing cattle

Assess performance against required target.

Implant with HGPs where appropriate.

Evaluate markets and plan sales.

Property maintenance

Maintain watering infrastructure – windmills and pumps. With some surface water about, this could be a good time to refurbish valves, pump buckets etc.

Maintain fences, especially in breeding paddocks.

Check creek crossings after rain.

Personal

Have annual medical check-up.

Try to have some quality time with family and friends over Christmas/ New Year.



More than feeling down

All of us at one time or another have felt the pressure of outside events impacting on our mood, our family lives, our sense of well-being.

In rural communities, it seems those events are all too often outside our control. The weather frames farm management decisions, reducing the best farming practices to failure if conditions are tough enough. Prices for farm produce are volatile, such that even good seasons may fail to reward hard effort. Economic restructuring decisions made by government may have little regard for human impacts.

How individual people react to these outside events varies. Personality traits that encourage high achievement and careful attention to detail also tend to mean that people with these traits feel real or perceived failure more intensely.

Sometimes emotional reactions go from being normal to being abnormally severe. Stress levels rise, people feel under pressure, and they may feel they are not coping with the pressure. Physical and psychological symptoms may develop. Constant physical and mental demands wear a person down.

In other words, depression may occur.

Depression is more than just feeling down. It is an illness, and a surprisingly common one at that. Moreover, it is very treatable, with most people having a full recovery. Think about this: one in 20 of the people you know will be experiencing depression right now. (Some of them are pretty good at hiding it.) One in five people experience depression at some stage in their lives.

Sometimes people feel frankly sad, 'blue', maybe tearful. Other times people report feeling flat and emotionless, or negative and angry. Feelings of being no good or worthless can occur.

These negative feelings are persistent, present most or all of the time for at least two weeks. Sometimes the person concerned is aware enough to realise their reactions are out of proportion, but can't seem to snap out of their poor mood.

It sometimes happens that people start to feel like life is not worth living, and then that they may as well be dead. Sometimes people start to plan their own deaths. Unfortunately, all too often in rural communities people find the means at hand to act on thoughts of death. It is a fact that rural suicide rates are higher, and that many of the social supports available in urban settings are not available.

It is important to realise that there are chemical changes in the brain that make people feel this way. It is almost as though after repeated stresses the brain says, 'That's enough; I can't cope with this any more,' and starts shutting down.

Chemical changes occur in brain nerve cells in the emotion centres of the brain. Good emotions reduce and leave the negative feeling dominating. Soon, related sections of the brain start to malfunction, so that people start to report changes in basic body functions like sleep patterns, appetite and sexual function. Even memory and decision making may be affected.

If you recognise these feelings in yourself or in someone close to you, then help is no further away than your doctor. Almost all people can be helped by a combination of medication and psychological help. They report feeling more like their old selves again, or that they can cope again. The medications are not habit forming, and do not change your personality.

Your local doctor is a trained and experienced individual with the knowledge and skills to help. People often come back feeling improved in as little as one or two weeks. Treatment has to be individualised and it may take a little longer in some people, but mostly it works.

There is a good website for depression-related information, with checklists to assess your own feelings, and support and education services. It is www.beyondblue.org.au – give it a look.

In summary: stresses in a person's life may cause brain chemical changes to occur, leading to the negative emotions of depression. Treatment is safe and effective.

Don't let depression win – fight back, with help from your doctor.

Further information:

Dr J F Outridge

Rural Doctor Association of Queensland

Email: jmoutridge@bigpond.com

If you would like a copy of Beeftalk mailed to you, please complete the following form and send to Editor, Beeftalk, DPI&F, PO Box 395, Gympie, Qld 4570.

Name:

Address:

Postcode: Shire: Property Number: No. of cattle:

Phone: Fax: Email:

Which of the following best describes you?

Beef producer Agribusiness outlet Education Other (please state)

NLIS correct tag placement is essential

*The recommended
position for an
NLIS ear tag*



*Incorrect position for
NLIS tags. A number
of cases of infection
have been reported
where tags were
placed too high in the
ear. Note the mark
in the ear from an
infection caused by
an NLIS tag placed too
high in the ear.*



Editorial Committee

Russ Tyler, Tim Biggs, Vince Edmondston,
Rebecca Farrell, Jim Kidd, Jackie Kyte, Bill Schulke,
Roger Sneath, and Carli McConnel representing the
South East Regional Beef Research Committee.

Enquiries

Russ Tyler
PO Box 118, Gayndah Qld 4625
Phone: 07 4161 3726
Email: russ.tyler@dpi.qld.gov.au

Reproduction of articles

The Department of Primary Industries and Fisheries, Queensland welcomes reproduction of articles appearing in this newsletter, providing the source is acknowledged, the article is reproduced in full, and technical information is confirmed with the Editor prior to publication, ensuring that recommendations are still accurate at the time of reprinting. The Department of Primary Industries and Fisheries, Queensland has taken all reasonable steps to ensure the information contained in this publication is accurate at the time of publication. Readers should ensure that they make appropriate enquiries to determine whether new information is available on the particular subject matter.