



Beeftalk

Taking stock of your future

Prime news and views for beef producers of south east Queensland

in this issue

- 2 Supplementary feeding – Frequently asked questions
- 3 New Native Forest Practice Code finally approved
- 4 Know your dip
- 5 Know your ticks
- 5 Getting the best out of your new bull
- 6 Tail tags – phase-out announced
- 6 Book review
- 7 Brazil's beef industry
- 8 NLIS... frequently asked questions and answers
- 10 Skin cancer
- 11 Buying bulls – the pocket book checklist
- 14 Timely tips
- 15 Parasitic wasps trialled to control feedlot fly problem
- 15 Your channel to influence beef research, development and extension
- 16 Hormonal growth promotant legal requirements
- 16 HGPs for cattle
- 18 Fireweed in south east Queensland
- 19 Livestock library has the answers
- 20 NLIS update
- 21 Rural finance – considering the options
- 24 Spot the risk of avian influenza occurring in your birds

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editorial

By the time you read this issue of *Beeftalk*, the new rules covering the phase-out of tail tags will be in force. Compliance with NLIS has been excellent, and this has meant that tail tags can now be phased out from 3 April 2006 for all but a few groups of cattle. We have details in an article in this issue.

We have two articles on common questions posed by producers – about supplements and NLIS. Staff at produce agencies are often questioned about selecting suitable supplements and many answers are provided here. DPI&F recently invited livestock owners to phone or e-mail in their questions about NLIS, and many of these questions and responses are in this issue too. We also have an update on issues producers have raised regarding NLIS.

In this issue of *Beeftalk* we address wide-ranging health topics – an important yet often neglected area of rural life. An article on skin cancer continues our series of articles on Rural Health. And we hear almost daily of the movement of avian influenza in Asia and Europe. Did you know that there have been five outbreaks of bird flu in Australia since 1975? An article in this issue gives some facts on this disease.

More changes have occurred in the *Beeftalk* team – Tim Biggs, who was with us for 2005, is now lecturing in Cattle & Horse Husbandry at Katherine Ag College, Northern Territory. We wish Tim, Caroline and the children well in this new venture.

As hoped, much of south-east Queensland got a good break with very good rain from mid-October to Christmas. Since Christmas rainfall has been patchy and generally below average and the predicted good falls in early March did not eventuate. It is now time to start looking at pasture reserves for winter and reduce stock numbers in line with available feed. Remember the old adage "Sell and regret but what ever you do sell".

Good reading!
The Eds



Supplementary feeding – Frequently asked questions



1. When to start?

When pastures have matured and dried off, and possibly frosted.

The protein content of a plant decreases as the plant matures with an increase in dry leaf and stem, and this decrease is accelerated by frosting. At this stage there is generally sufficient energy in the plant, but the low protein results in an imbalance of nutrients in the rumen and therefore rumen activity decreases. This results in lower intake of pasture.

Feeding a small amount of protein – generally about 150g/day to adult cattle and 75g/day to weaners – will fix the lack of protein. Thus rumen activity will increase, as will pasture intake. By using near infrared spectrometry (NIRS) tests on dung samples you can identify when protein is deficient in the diet.

2. How long to feed?

There is no definite answer to this question; it depends mainly on the season and the performance you require from the animals.

Feeding should continue until there is sufficient green feed for the animals to meet their daily requirements. This is usually 2-3 weeks after good rain. The problem is that once it has rained cattle will often stop taking a protein lick.

As the dry season/winter progresses the feed value of the pasture continues to decline. The feed value often reaches a point where both energy and protein are too low to meet the animals' daily requirements. This usually occurs from about August onward until the season breaks and coincides with late pregnancy and calving when the cows' nutrient requirements double. When this occurs you need to change the supplement from one that supplies only protein to one that supplies protein and energy.

3. How much to feed?

This will depend on the level of production required.

Where protein is the main nutrient in the supplement, feeding protein at the rate of 150g/head/day for adult cattle, particularly breeders, and 75g/head/day for weaners is sufficient. Feeding more than this amount may be of little benefit because energy may also be limiting.

Protein is most commonly fed as urea using a urea-based supplement. Building up to feeding 60g urea to adults and 30g to weaners per day will give them the correct protein intake.

4. Liquid supplement vs blocks?

There is no clear answer to this question.

Points to consider when selecting a type of supplement are

- cost
- palatability – animals' taste preferences can change with the property, soil type, and even the paddock itself; when trying a new supplement, buy only a small quantity at first to check that your cattle will eat it
- ease of feeding, including time to feed out
- equipment required – mixers, troughs etc
- ability to adjust the mixture to obtain the desired intake (possible with liquid supplements and loose mixes).

5. Should I be feeding minerals?

Only if a mineral deficiency actually exists.

Before feeding a specific mineral do some research to find out if that mineral is actually deficient in that country. Steps to take are

- Talk to experienced local producers, veterinarians and advisors.
- If testing for specific deficiencies, use a professional who can do the right test, interpret the results and advise on appropriate action.

Phosphorus

Phosphorus is the mineral most commonly deficient in the diet of grazing cattle in Queensland and is included in most proprietary supplements. Most of the forest country east of the coastal range is deficient in phosphorus. If deficient, the best return is to supplement with phosphorus during the wet season.

Sulphur

The rumen microbes need sulphur to make protein from nitrogen (urea). Therefore it is important to feed sulphur when urea is being fed. Most proprietary supplements will include sulphur at the correct ratio. The desired ratio of sulphur to nitrogen is 1 to 10. This can be achieved by feeding a ration of 1 part of Gran am to 5 parts urea.



Further information:

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New Native Forest Practice Code finally approved

ON 30 November 2005 the Department of Natural Resources, Mines and Water released the approved 'code applying to a native forest practice on freehold land'. On 30 November 2005, the Code became law and any person or business that undertakes a native forest practice must comply with the

Code and all of the associated requirements of the Vegetation Management Act 1999.

The following is a summary of the major implications of the new Code for landholders and industry. The major recommendation is for landholders and others involved in the native forest industry to obtain a copy of the Code and to gain a thorough understanding of its interpretation and on-ground application.

Over the next year a number of organisations, including Private

Forestry Southern Queensland, will be running field days/workshops on native forest management and the application of the Code of Practice. The field days/workshops will be held throughout the Mary, Burnett, Condamine and SEQ catchment regions.

Further information:

*Department of Natural Resources,
Mines & Water*

Phone: 07 3896 3111 or

Ken Matthews

Private Forestry Southern Queensland

Phone: 07 5483 6535

Question	Answer	Explanation
Is there a definition of a native forest practice?	Yes	'Forest practice' means planting trees or managing, felling and removing standing trees, on freehold land, for an ongoing forestry business in a native forest if in the native forest all the activities are conducted in a way that is consistent with a code applying to a native forest practice. The term includes carrying out limited associated work, such as drainage, road construction and maintenance, and other necessary engineering works. The term does not include clearing native vegetation for the initial establishment of a plantation.
Does the Code apply to all native forest practice activities?	Yes	All the activities must be conducted in a way that is consistent with this Code.
Does the Code apply to all remnant vegetation on freehold land?	Yes	This Code applies to native forest practice activities conducted on freehold land subject to regulation by the <i>Vegetation Management Act 1999</i> (this means all remnant vegetation on freehold land that is mapped as remnant under the <i>Vegetation Management Act</i> .)
If applying the Code do you still need development approval under the <i>Integrated Planning Act</i> ?	No	The clearing of vegetation that is consistent with all aspects of this Code may be undertaken without prior development approval for clearing of native vegetation under the <i>Integrated Planning Act 1997</i> .
Does the Code apply to white areas?	No	The Code applies to remnant vegetation only (i.e. areas that are coloured red/pink, brown/yellow or green on a Regional Ecosystems map). Many of the requirements of the Code are consistent with sustainable forestry management. You're not legally bound to adhere to the Code in non-remnant (white) areas but probably would anyway as part of managing a native forest for timber production.
Do I have to abide by ALL the required practices?	Yes	If, from 30 November 2005, the requirements in column 2 (Required Practices) are not met, the practice is not consistent with this Code.
Is thinning allowed under the Native Forest Practice Code?	Yes	A native forest practice includes limited silvicultural activities. For the purpose of this Code, silvicultural activities are: • Non-commercial thinning of regeneration • Commercial and non-commercial thinning of mid-storey and upper storey trees • Use of fire to manage regeneration • Limited soil disturbance to encourage regeneration • Removal of competing non-native vegetation.
Can I thin remnant vegetation under this Code for any other purpose apart from a native forest practice?	No	To be consistent with this Code, the clearing of vegetation must only be for purposes directly associated with the production of value-added forest products other than wood chips for export.
What regional ecosystem types are restricted under the Code?	None	You may conduct a native forest practice within any regional ecosystem.
What vegetation categories are restricted under the Code?	None	You may conduct a native forest practice within any vegetation category i.e.which means any colour, pink, brown, yellow, etc
Is notification of my native forest practice to NRMW mandatory?	Yes	Under the <i>Vegetation Management Act 1999</i> , notification of your native forest practice to NRMW is mandatory.
What are the major required practices under the Code?	Many	Water course, wetland and unstable area protection via the establishment of buffer zones (set back areas where a native forest practice is not allowed to occur), in accordance with a prescribed schedule Establishment of filter zones adjacent to buffer zones, (set back areas where a native forest practice is conditional), in accordance with a prescribed schedule Retention of habitat trees in accordance with a prescribed schedule Retention of all feed, nest and shelter trees as defined in the definitions and explanatory notes; required practices in relation to soil disturbance, drainage of tracks, watercourse crossings, protection of retained trees, etc
Is the Code available on the internet?	Yes	The Code applying to a native forest practice on freehold land is available from www.nrm.qld.gov.au/vegetation/forestpractice.html



Know your dip

CHEMICALLY treating cattle in a plunge or spray dip is a common method for controlling cattle ticks. For the dip to be effective the chemical concentration must be kept at the correct strength. Using too much chemical is a waste of money, and too little chemical in the dip can lead to ticks developing resistance to the chemical. Regular testing is the only way to ensure that the chemical in the dip wash is at the correct strength.

The DPI&F (through the Chemical Residues Laboratory) offers a service to test the strength of dip chemicals and offers advice on how to bring chemicals to the correct strength.

How often to sample

Dip washes should be sampled and analysed at least twice every season to ensure the correct concentration of chemical is being used.

How to sample

1. Obtain a DPI&F approved sampling container from your local stock office.
2. Stir the dip thoroughly with at least 30 large cattle. Immediately after the last animal has jumped in and while the wash is still 'boiling', take a sample by immersing the sample bottle one metre deep and one metre from the 'jump in' end.
3. Pour off some liquid until the sample bottle is $\frac{1}{2}$ to $\frac{3}{4}$ full. Fit the lid tightly and place tape around the lid, if necessary.

Notes:

- It is best to use the approved sampling container. Samples sent in alternative containers – such as glass jars/bottles or soft plastic bottles – increase the risk of leakage or breakage during transport. The chemicals contained in dip solutions are hazardous and should not be collected in a bottle that displays a food or beverage label.
- Use the same sample bottle to collect and transport the sample – don't collect with one bottle and decant the sample into another bottle for transport.
- Don't overfill the sample bottle – this will lead to leakage during transport.

The paperwork

Take care to be accurate when completing the form that accompanies your dip sample bottle because the laboratory staff will base their advice on the information you provide. The most important information is

- property number
- property owner and address
- dip name (particularly where there is more than one dip associated with the property number)
- chemical used
- volume of dip when full
- volume of dip when sampled
- fax number (if available, so the results can be sent to you quickly).

The laboratory staff need to know both 'volume when full' and 'volume when sampled' to calculate the amount of chemical or water needed to correct the dip concentration.

If your sample is urgent please write **URGENT** on the paperwork.

How to send the sample

The most effective and safe way of sending your sample is by courier to the Chemical Residues Laboratory (see street address below).

Other options are

1. deliver the sample yourself to the CRL
2. deliver the sample to your local Stock Inspector who will dispatch it for you to the CRL
3. post the sample to the CRL (see postal address below).

Samples sent by post are occasionally damaged, resulting in sample leakage.

Importance of lime concentration

Amitraz (Tactic and Amitik) will break down when the dip wash becomes slightly acidic. Hydrated lime is used to keep the pH of the dip solution at the correct pH of 11.

The chemical will disappear from the mixture within 24 hours unless stabilised by the addition of hydrated lime. Dips that are not used should have lime added every 2 months.

Further information:

**Your local DPI&F Office or
DPI&F Call Centre on 13 25 23 or
Chemical Residues Laboratory**
665 Fairfield Road
Yeerongpilly 4105
Locked Bag 4
Moorooka 4105
Phone: 07 3362 9415 or
Erica Siddans
DPI&F Yeerongpilly
Phone: 07 3362 9415
Email: erica.siddans@dpi.qld.gov.au

Know your ticks

TO DEVELOP more accurate information about tick resistance to tick-control chemicals (acaricides), DPI&F and MLA are conducting a survey of beef producers.

By participating in the survey you can find out whether there is any resistance in the ticks on your property. This information will help you make informed decisions about implementing the

most cost-effective tick control strategies.

The benefits to the industry will be:

- Better acaricidal control strategies that are both effective and sustainable in particular regions, enabling acaricides to be used such that resistance to chemicals does not increase or spread;
- DPI&F will be able to fine-tune departmental policy on controlling cattle ticks in Queensland, including the role of 'knockdown' acaricides for treating cattle moving from

tick-infested to tick-free areas;

- MLA will be able to formulate a strategy for funding research into the cattle tick and cattle tick control.

To participate in this survey, call the DPI&F Call Centre on 13 25 23 for the cost of a local call or contact your local Stock Inspector.

Further information:

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Getting the best out of your new bull

YOU have been to the sales and bought a new bull. How you manage your new bull in the next few months will determine his long-term future and that of your breeding program.

Before you leave the sale

- Find out from the vendor what vaccinations the bull has had. You need more information than, 'Yes, he has been "done" for tick fever, 5-in-1 or 7-in-1, vibriosis and 3 day sickness'. Like all vaccinations, these four need to be done correctly. The bull should have been vaccinated with three germ blood for tick fever and had two vaccinations of 5-in-1 or 7-in-1, three day sickness, and vibriosis a month to six weeks apart. Also 7-in-1 will cover the bull for Leptospirosis which is not covered by 5-in-1. If the vaccinations have not been done correctly it is best to start the vaccination program again. If the bull is from tick-free country he should be vaccinated with three germ blood eight weeks before moving to ticky country.
- Find out from the vendor what the bull has been fed

on in preparation for sale. If possible, get some of this feed to use at home while weaning the bull from grain to pasture.

- Take out insurance on the bull. There are various insurance packages available. Talk to your preferred agent to find the package that best meets your needs.

The first few weeks at home

Keep your new bull in the yards with a few other cattle (for company) to:

- Get any weed seeds out of his digestive system.
- Wean him from a grain diet to pasture. Do this by gradually reducing the amount of bull ration and increasing the amount of hay and or pasture.
- Teach him to work through the yards and muster the way you want him to. Bulls reared on small studs are often not familiar with bikes, horses and dogs. Get him used to being yarded in your mustering style before he goes to a big paddock.

Introducing the bull to cows

- Only do this once he has been weaned from the bull ration onto hay or grass.

- Don't overwork him; give him up to 20 females.
- Observe him to ensure he is serving the cows. Note the date particular cows are mated and check them three weeks later. This will give you some indication of his ability to serve and get cows in calf. The ultimate check is if the cows are pregnant, which can only be done after a minimum of two months mating. Most vets will only guarantee a positive pregnancy test at a minimum of six to eight weeks pregnant.
- Most vendors guarantee that their bulls will produce calves. This guarantee usually only lasts for six months from the time of purchase. This means you have to give the bull adequate opportunity to get cows in calf, which means mating the bull no later than about three months after it is purchased.



Further information:

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Tail tags – phase-out announced

MANDATORY use of tail tags will cease from 3 April 2006 for most cattle moved to saleyards.

Since the commencement of the National Livestock Identification System (NLIS) on 1 July 2005, both tail tags and NLIS electronic devices have been mandatory. This dual identification system was essential while all sectors of the industry were gaining experience in applying and using NLIS devices and uploading to the NLIS database. Many saleyards also needed this time to train their staff and test their equipment for reading NLIS devices.

The general phase-out of tail tags on cattle from clean (non-chemical residue status properties) has been possible because livestock owners, saleyards, livestock agents and abattoirs have demonstrated they can comply with NLIS regulations. In fact, compliance with the NLIS regulations has been excellent for the vast majority of the commercial cattle industry. Audits on all saleyards have shown they are correctly handling NLIS tagging and data uploads to the NLIS database.

Cattle consigned direct to meatworks

Under the NLIS scheme, tail tags are not required for cattle consigned direct to meatworks, irrespective of the number of stock moved to abattoir. NLIS requires that all cattle moving from a property to any destination (other than another paddock under the same property identification code) must carry an NLIS device. Exemptions from NLIS tagging still apply for deck loads or more of the same class of animal from the same property (PIC).

However, tail tags are still required by some markets:

- Cattle destined for the EU market must be tail-tagged when consigned direct to meatworks as a requirement of the European Union Cattle Accreditation Scheme.
- Some processors may continue to require tail tags for certain groups of cattle such as cattle from accredited feedlots.

Before consigning your cattle, you should check with your processor whether your cattle will require tail tags.

Cattle sent to saleyards

Tail tags are still required for cattle:

- from a property that has a T-status for chemical residues

- from a property that is accredited under the European Union Cattle Accreditation Scheme (EUCAS) – lime-green tail tags are part of the certification and market access requirements
- with non-functional NLIS devices where the cattle are not re-tagged with a new NLIS device by the saleyard (blue saleyard tail tags will continue to be used to identify these animals).

Cattle producers may also elect to continue to use some other types of tail tags for special accredited market access schemes or for other marketing use, including:

- Hormonal Growth Promotant (HGP)-free cattle – stock owners can voluntarily use the existing pink HGP-free tail tags on cattle sent to a saleyards to signal to cattle buyers that these stock are available for markets that require cattle to be HGP-free. NOTE: the existing triangular cattle ear hole punch indicating an animal has been treated with a HGP is still required at time of implanting the HGP.
- National Feedlot Accreditation Scheme (NFAS) – AusMeat-accredited lot feeders can voluntarily continue to use the purple NFAS feedlot tail tag.

Further information:

www.dpi.qld.gov.au/NLIS or

DPI&F Call Centre on 13 25 23 or

your local **DPI&F stock inspector**

Book review



Cattle Breeds in Australia

Cattle Breeds in Australia is comprehensive reference book and full colour guide to every breed of cattle, beef or dairy, available in Australia.

High quality photographs of both male and female animals accompany the interesting, easy-to-read text which provides a history and description of each breed as well as contact details for the relevant breed society.

This 232 page hard-cover book will be an excellent addition to cattle producers' personal libraries as well as to the libraries of schools and colleges.

Edited by JM Parsons and published by CH Jerram and Associates, *Cattle Breeds in Australia* is available through the Rural Bookshop at Queensland Country Life for \$140.50, which includes GST and postage and packaging within Australia.



Brazil's beef industry

THEY grow a lot of cattle in Brazil! A country of similar size to Australia with no large arid areas and an annual rainfall 1000 mm to 1500 mm, Brazil has 204 million cattle and 200 million people. Brazil produces primarily grass-finished beef with only five percent of production from feedlots. In 2005 Brazil exported one million tonnes of beef compared to Australia's export of 900,000 tonnes. This was despite the loss of a number of export markets due to a foot and mouth outbreak in October of that year.

Greg Robbins, General Manager, Delivery (Animal Science) DPI&F, and I recently visited Brazil to learn about their industry and identify opportunities for Queensland. Although in Brazil for only six days, we were able to visit areas around the Tropic of Capricorn and to the north-west, to the country's largest cattle producing state. Our impressions are that the Brazilian beef industry is developing rapidly, uses current technology, and has an enormous potential to develop further.

Feedlots are increasing in number and have a current capacity of 2 million head.

Brazil has a largely tropical climate; ticks and screw worm fly are significant problems. The presence of screw worm means all calves must be treated to prevent infection.

The cattle are primarily the Nelore breed (a pure strain of *Bos indicus*) that has been bred over a long period of time for their environmental adaptation. The animals we saw appeared very similar to our Brahman with perhaps a little higher frame size but with variable muscling. Some crossbreeding is being conducted (more in the cooler south of the country) and some producers are experimenting to see what

content of European and British breeds can be run within their environmental constraints. The main breeds being trialed are Angus and Charolais.

The processor we met (Friboi is the fourth largest processor in the world) traded largely on weight with animals being slaughtered at 30-42 months of age weighing approximately 450 kg liveweight. There were no penalties for fat levels and producers receive little in the way of market signals to provide direction to their breeding program. The processing plants appear to be of a high standard and, due to foot and mouth constraints, are well adapted to value-adding lower value cuts of meat as cooked product (mainly the forequarter cuts). Most of the meat exported at this time is high quality frozen or chilled into Russia, the EU and the Middle East. This processor is working to develop a better feedback system and further investigate value-based trading opportunities with their suppliers.

The country appears to be very fertile with red soils (krasnozome) which we associate with the Toowoomba range. These soils are quite acidic. The pastures are mostly improved with signal grass and stylo legumes.

Mato Grosso do Sul

The dominant cattle-producing state is Mato Grosso do Sul which has 24 million head of cattle. In this State the average farm size is between five and ten thousand hectares, running between three and five thousand head.

Last October's foot and mouth outbreak was in this State, so we found it difficult to get onto farms. The one we visited was relatively small at 4000 hectares and a better producer running 4000 head of cattle in a rotational grazing system. The cattle were all steers. A quarter of the property is sown to soy beans each year to boost fertility and then resown to improved pasture of signal grass and panic. Stocking rates were high by our standards with 1.77 head per hectare with an average daily weight gain over the three years of 0.6 kg. In the dry season this operation uses a feedlot to keep their cattle growing.

Most breeder operations are concentrated on poorer quality country to the north-west of the State with an average stocking rate of 1 head per 3 hectares.

Brazil is gearing up

Brazil appears to be gearing up its beef production



and export focus. Artificial breeding appears widespread. We were told about another million hectares in central Brazil that has not yet been developed with improved pastures. Current feedlot capacity is two million head with a big potential to increase.

Holdings are required to maintain a minimum of 10 percent timber cover. If previous management has cleared more than this, then current management is required to replant the trees or lease country elsewhere to make up the percentage.

Brazil has a well-developed beef industry with the ability to produce a lot of beef. Their biggest limitation will be the apparent environmental

constraints and genetic limitations of the Nelore breed to produce to the high quality end of the market. The industry has many similar issues to us and is exploring the same avenues as our industry in terms of gene markers for meat quality traits, parasite resistance and so on. A competitor, yes, but a country we can certainly learn from.



Further information:

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NLIS... frequently asked questions and answers



The implementation of NLIS has gone fairly smoothly, but many property owners still have questions. Here are some questions and answers from the NLIS online question and answer session.

Q: If a cow has a white tag when you buy it, do you have to replace the tag with an orange one?

A: No – the original tag stays with the animal for its life. It is an offence under the Stock Identification Regulation 2005 to remove a NLIS tag from an animal unless it is non-functioning. A non-functioning tag can be removed and replaced with a new tag. The numbers of the old and new tags should be linked on the NLIS database.

Q: Is NLIS for all cattle or just cattle born on your property?

A: All cattle must be identified with an NLIS device before being moved to another holding. There are phase-in arrangements for cattle going to slaughter and live export.

Q: What does 'SAME CLASS' mean – as in 'full deck loads of the same class'?

'Same class' means a recognised class such as bulls, cows, steers, bullocks, heifers and calves. 'Male' or 'female' are not classes.

Q: What is a transaction ear tag for use on bobby calves?

A: A bobby calf is a calf under six weeks of age that is not accompanied by its dam. A bobby calf transaction ear tag is a non-electronic ear tag used to identify the property of consignment when calves are being moved to saleyards or abattoir.

If the bobby calves are purchased at the saleyards by an abattoir, there is no need to change the bobby calf transaction ear tag.

However if the bobby calves are purchased at the saleyard by another farmer, the calves must be fitted with an orange post-breeder NLIS ear tag of the saleyard before being moved to the purchaser's property.

If you purchase a bobby calf direct from another property, it must have a white breeder NLIS tag attached before leaving its property of birth.

Q: Do calves that are born to our cows on agistment need to have a white tag (because they are born to our cows off our property) or an orange tag (because the calves are born on another property)?

A: Calves born on an agistment property must have the white tags of the property on which they were born (that is, of the agistment property, not the home property).

Q: With dead stock do NLIS devices have to be removed prior to burning or burying the carcass?

A: NLIS devices must be destroyed if they are removed from a dead animal. They do not have to be removed from the carcass before it is burned or buried because this is regarded as destroying the device. However you must advise the NLIS database of the tag number of the dead animal.

Q: What age should calves be tagged?

A: Calves can be tagged at any time before they are moved from the property of birth. Rumen boluses should not be used on calves that have not developed their rumen (that is, calves under about three months of age).

Q: Can NLIS tags (or tag numbers) be used on a PIC other than the original PIC (such as a fattening property)?

A: No. NLIS tags can not be used on stock on any other PIC other than the one they are allocated to unless you make application to the Chief Inspector of Stock for this approval.

Q: If the council owns the clearing dip, but the DPI&F stock inspectors inspect and dip cattle through the facility, who is responsible for notifying the NLIS database of cattle movements through a clearing dip?

A: If the cattle are not changing ownership at the dip and they are consigned to the property of destination on the appropriate documentation then this movement only requires a mob-based report to the database. The responsibility for this notification rests with the person who presents the cattle at the clearing dip. This could be the owner of the cattle, an agent, a contractor, the owner's representative or the transit centre owner. When the cattle reach their final destination the person receiving the cattle is responsible for ensuring the database is notified of the movement details.

Q: If the matching ear tag for a rumen bolus is lost, do I need to replace the ear tag and how do I arrange this?

A: Yes, the ear tag indicating a bolus is present needs to be replaced. If you know the ear tag

number you can order a replacement. If not, you need to read the bolus in the animal to find out the RFID number, contact the device manufacturer, and request a tag to match that RFID number. You may also make your own tag provided it contains the correct information and is the correct colour. You could do this by purchasing a blank tag and writing the number and R symbol on it. To obtain the correct visual number you will have to either read the RFID and check the database for the matching visual number or contact the bolus manufacturer.

Q: Under NLIS, is our neighbour still able to use our plunge dip to dip his dairy herd?

A: Cattle that are moved to a neighbouring holding for management/husbandry purposes do not need to be identified with NLIS devices and/or their movement reported to the database provided they are returned to the place of departure within 48 hours (examples of ordinary stock management are dipping, branding and vaccinations).

Q: A lady picks up baby calves from a feedlot to rear them at home. The calves can be just a few hours old. Should she put white feedlot tags on the calves before she takes them home, or can she take them home and put orange post-breeder tags on later?

A: The correct action is to apply the feedlot's white breeder tags before the calves are removed from the feedlot. To take the calves home untagged would be an illegal movement.

Q: What action do I need to take in regard to NLIS if my cattle stray onto my neighbour's property or his come to my property?

A: When stock stray onto a neighbouring holding they can be returned to the property of origin without being tagged. 'Neighbouring holding' means the property next door or one more over from that.

Q: Where do you place the NLIS ear tag if the offside ear already has an ear tag?

A: If there is already a tag in the offside ear, you can place the NLIS tag in the same ear. The NLIS tag should be placed close to the head and in the middle of the ear (between the two ribs of cartilage). You may prefer to remove the existing management tag and place it in the near (left) ear so that there is sufficient room for the NLIS tag.

Q: What colour and PIC tags should a calf get if the cow gives birth while attending an agricultural show?

A: A strict interpretation of the Regulation would mean that the calf should receive a breeder tag bearing the PIC of the showground before returning home. However it is acknowledged that this may not always be practical. The alternative is for the calf to receive a post-breeder tag when it returns home.



Skin cancer

QUEENSLAND has the unfortunate reputation of being the skin cancer capital of the world. This comes from a combination of our European backgrounds, intense sunlight, and significant periods of time spent outdoors for recreation and work. Articles in this and the next edition of *Beefstalk* will provide some background on skin cancers, what causes them, how to prevent them, and how skin cancers are diagnosed and treated.

For the most part, skin cancers in people living and working on properties are caused by exposure to sunlight and welding – both sources of ultraviolet light.

The ultraviolet light in sunlight is 98 percent UVA (high penetration but lower DNA damage) and 2 percent UVB (lower amount but responsible for more cancers). Ultraviolet light type C in sunlight does not reach the earth's surface.

The ultraviolet light given off by welding contains all three types – A, B and C. The short distance to the source of the light means it is of higher intensity. Exposure to welding light has the potential to cause a higher rate of skin cancers than exposure to sunlight.

General principles for sun and welding protection

As with any potentially hazardous exposure, the guiding safety principles are:

- elimination
- substitution
- engineering.

For both the sun and welding as sources of UV light, substitution is not possible.

To eliminate exposure to sunlight, stay out of the sun between 10 am and 3 pm whenever possible – when the intensity of sunlight is at its peak. Similarly, stay away from where welding is occurring whenever possible.

Engineering takes the form of sunscreen, hat and shade, and sunglasses.

Sunscreen should have a sun protection factor of 30+ and needs to be applied at the beginning of the

day to all areas that may be exposed to the sun or welding. Sunscreen needs to be reapplied every two to three hours or more frequently if sweating, wet, or under conditions where the sunscreen may wash off.

A hat and shade are essential for cutting down the direct light falling on skin, but they do not protect against reflected light. A long-sleeved shirt with cuffs at the wrist will provide the best protection for the arms – but only if sleeves are rolled down! Spending time in shaded areas also decreases the total exposure for the day.

The final component is sunglasses. These preferably wrap around the face/eyes to minimize the amount of UV light shining across the eye. As well as protecting against eye cancers, wearing sunglasses will go some way toward preventing pterygium, a fleshy growth seen in the eye especially in rural and remote Queensland.

In summary sun (and welding) related skin cancers are very common in Queensland, with serious outcomes if detection is delayed. Simply following the 'slip, slop, slap' principle when in the sun or welding will help to prevent or at least minimise exposure to harmful ultraviolet light.

An article in the next issue of *Beefstalk* will cover the types of skin cancers, what should be included in a skin check, and brief details of how skin cancers are managed.

Further information:

Dr Rod Martin

Rural Medical Registrar, Theodore

Rural Doctors Association of Queensland

Transferring NLIS numbers on the database

If you transfer NLIS numbers on the database we recommend that you check to make sure the transfer has been processed. It is also important, particularly for cattle destined for the EU market, you check that the cattle have not lost their lifetime traceability.

If you have any problems you should ring the NLIS helpdesk (1800 654 743).

Buying bulls – the pocket book checklist



Your breeding objective

Before selecting a bull it is important that you have clear breeding objectives set for your herd. The following points should be used as a guide to determining your breeding objectives.

- Traits of economic importance
- Customer/market requirements
- Herd production targets
- Current herd performance
- Breeding goals and selection criteria.

EBVs can be combined into a \$ Index EBV which effectively ranks available animals with all traits weighted according to their effect on the profit drivers for the herd.

Make sure you keep your selection criteria in mind when selecting a bull. It is important that you rank your selection criteria in priority order. This will help you make a choice between bulls that generally meet your selection criteria.

Temperament

Select genetically docile bulls to increase the probability that progeny will be more quiet, have higher growth rate, and transport better.

Temperament can be measured using 'flight time' or scored using a crush or yard test. Flight time provides a more accurate and heritable measure of the bull's likelihood to modify herd performance.

Bull breeding soundness evaluation

The Bull Breeding Soundness Evaluation (BBSE) was developed

by the Australian Association of Cattle Veterinarians to standardise bull fertility testing and to provide a consistent descriptor of bull fertility.

A BBSE indicates whether a bull has met a set of standards for five bull fertility components which will indicate whether a bull has a high probability, but not a guarantee, of being fertile.

The two components of the BBSE are a full report that identifies the bull, date and place of testing, who conducted the test, and comments associated with each test, and a summary of the five indicative components of bull fertility (see example below).

The five components of bull fertility in the BBSE are

Scrotum – Scrotal circumference/size (SS) in centimetres (cm) where testes shape is within normal range. The current recommendation for two-year-old tropically adapted bulls is a minimum scrotal size of 32 cm (average is 34-36 cm).

Physical – Within the constraints of a standard examination, there is no evidence of any general physical/structural condition or of a physical condition of the reproductive tract indicating sub-fertility or infertility. This evaluation will identify structurally unsound bulls in legs, feet, sheath and general structure.

Semen – Crush-side assessment indicates that the semen is within normal range for motility, colour and percent progressively motile

and is suitable for laboratory evaluation.


Morphology – Semen examination of percent normal sperm using high power magnification to ensure minimum standards for normal function are achieved.

Serving – The bull is able to serve normally as demonstrated in a standard test and shows no evidence of fertility-limiting defects. Serving capacity testing provides

- an indication of a bulls ability to mount and serve a cow/heifer and includes both reproductive and structural soundness (legs, feet, sheath, penis and overall anatomy)
- a measure of the sex drive (libido) or eagerness of a male to seek out a female on heat
- an indication of the subsequent pregnancy rates achieved following a restricted mating period (more particularly in *Bos taurus* breeds).

In the summary table each of the components will be rated as follows:

- ✓ For this component, the bull met the fertility standards as published by the Australian Association of Cattle Veterinarians.
- ✗ The bull did not meet the standards for this fertility component.
- Na Not applicable e.g. certificate not required to indicate status for this fertility component.
- Nt This fertility component was not fully tested/evaluated.
- P For Morphology only, the samples taken do not meet

Bull Number/name	Age Yr:Mn		Scrotum	Physical	Semen	Morphology	Serving
AACV Top of the rack	2.02		37.0 cm	✓	✓	P	Nt

the full standards but indicate that the bull is very likely to be fertile under natural mating (P >50% and <70% N). Seek advice from your cattle vet.

A✓ indicates >70% Normal.

Estimated Breeding Values

Estimated Breeding Values (EBVs) are predictions of an animal's genetic merit, based on available performance data on the individual and its relatives.

EBVs are expressed in the units of measurement for each particular trait. They are shown as positive (+ve) or negative (-ve) differences from the breed base (or breed average). EBVs provide the best basis for comparing the genetic merit of animals reared in different environments and under different management conditions. EBVs can only be used to compare animals within the same breed.

The differences in EBVs between animals are more important than the absolute value of the EBV. Particular animals should be viewed as being 'above breed average' for a particular trait only if their EBVs are better than the average EBVs of all animals born in their year drop.

EBVs are published for a range of traits including calving ease, fertility, growth and carcass merit. When using EBVs to assist in selection decisions it is important to achieve a **balance** between the different traits and to place emphasis on those traits that are important to your herd, your markets, and your environment.

Calving ease traits

Calving ease is an important economic trait because of its impact on calf and heifer mortality, labour and veterinary expenses at calving time, and subsequent re-breeding performance of female cattle.

- *Calving ease (DIR) EBVs* are

estimates of genetic differences among animals in their ability to calve as a direct effect of the sire. The EBVs are reported as differences in the percentage of unassisted calvings. Larger (more positive) calving ease (DIR) EBVs are more favourable.

- *Calving ease (DTRS) EBVs* indicate the genetic differences for calving ease of an animal's daughters. The EBVs are reported as differences in the percentage unassisted calvings. Larger (more positive) calving ease (DTRS) EBVs are more favourable.
- *Gestation length EBVs* are estimates of genetic differences among animals in the number of days from the date of conception until the date of giving birth. Lower (more negative) gestation length EBVs are generally more favourable. This EBV is only available where the mating and calving dates are known.
- *Birth weight EBVs* are estimates of genetic differences between animals in kg of calf birth weight. Small or moderate birth wt EBVs are more favourable.

Fertility traits

Fertility is a critical component influencing the profitability of a breeding herd. EBVs are provided for two fertility traits – Days to calving and scrotal size.

- *Days to calving (DC) EBVs* are estimates of the genetic differences among animals in fertility, expressed as the number of days from the start of the joining period until subsequent calving. Lower (more negative) days to calving EBVs are more favourable.
- *Scrotal size EBVs* are estimates of the genetic differences among animals in scrotal circumference at 400 days of age. Larger (more positive)

Scrotal size EBVs are more favourable.

Growth traits

EBVs are provided for three growth traits: 200-day wt, 400-day wt and 600-day wt. Selection for growth traits should be relative to target market weights.

- *200-day wt EBVs* are estimates of the genetic differences among animals in weight at 200 days of age. Larger (more positive) 200-day wt EBVs are generally more favourable.
- *400-day wt EBVs* are estimates of the genetic differences among animals in weight at 400 days of age. Larger (more positive) 400-day wt EBVs are generally more favourable.
- *600-day wt EBVs* are estimates of the genetic differences among animals in live-weight at 600 days of age. Larger (more positive) 600-day wt EBVs are generally more favourable.
- *Mature cow wt EBVs* refer to the weight of the mature cow at the time the calf is weaned and are taken over up to five calvings. This EBV provides an indication of the mature weight of the breeders and should be related to the nutrition available on the property.

Carcass traits

- *Carcass weight EBVs* are estimates of the genetic differences among animals in hot standard carcass weight at 650 days of age. Larger (more positive) carcass weight EBVs are more favourable.
- *Eye muscle area (EMA) EBVs* are estimates of the genetic differences among animals in eye muscle area (cm²) at the 12/13th rib site on a 300 kg carcass. Larger (more positive) EMA EBVs are generally more favourable.
- *Rib fat EBVs* are estimates of

the genetic differences among animals in fat depth (mm) at the 12/13th rib site on a 300 kg carcass. Rib fat EBVs are used to change the progeny fat levels relative to the market specifications.

- **Rump fat EBVs** are estimates of genetic differences among animals in fat depth at the P8 rump site on a standard 300 kg carcass. Rump fat EBVs are used to change the progeny fat levels relative to the market specifications.
- **Retail beef yield % (RBY%) EBVs** are estimates of genetic differences among animals in percentage retail beef yield in a 300 kg carcass, with 2-3 mm fat trim, adjusted to 85% chemical lean. Larger (more positive) RBY % values are more favourable.
- **Intra-muscular fat % (IMF%) EBVs** are estimates of genetic differences among animals in percentage intra-muscular fat (marbling) in a 300 kg carcass. Depending on the target markets, larger (more positive) IMF% EBVs may be more favourable.

Other issues to consider

DNA markers

This is a developing science and provides a key for the future. Markers are now available for marbling and tenderness traits. This technology offers the potential to identify animals carrying the desired markers, but may not provide its fullest benefit until further markers are identified for many more traits.

Net feed efficiency (NFI)

Net feed efficiency identifies animals that are more efficient converters of available feed to kilograms of liveweight gain. A negative EBV for NFI will provide the opportunity for producers to select more efficient animals.

Summary table for buyers to 'fill in' with their bull selections and associated data for comparison before auctions commence.

Bull ID	Bull Breeding Soundness Evaluation				Fertility			Growth (EBVs)			Carcass (EBVs)		Temperament	Colour	
	Scrotal size (cm)	Physical	Semen	Morph % normal	Serving	Dam age 1st calf (yr)	Dam calv. Interval-dy	SS (EBV)	200 day	400 day	600 day	EMA			Fat (Rib/P8)
Comment															
Comment															
Comment															
Comment															
Comment															
Comment															
Comment															
Comment															
Comment															



Timely tips for south east Queensland

April – May

Dry season management

Assess pasture quantity and quality in each paddock and potential dry season carrying capacity.

Do an NIRS test on dung to evaluate diet quality.

Start your dry season management plan that was developed earlier. Stick to your plan.

Make sure you have supplements on hand to meet your dry season management plan requirements.

Bulls

Remove bulls from breeders.

Check for defects or physical problems e.g. sheaths, leg injuries.

Cull bulls that are older than seven years, bulls with bad temperament, or bulls with physical defects.

Start dry season supplementation.

Breeders

Pregnancy test 6 to 8 weeks after removing bulls.

Draft cows according to body condition and pregnancy status for tailored management and possible supplementation.

Start dry season supplementation.

Weaners

Wean and weigh.

Draft off any small weaners (less than 150 kg) and give them special care.

Feed weaners supplements in yards to train them to eat supplements.

Feed weaners in troughs and racks. Feeding on the ground may increase coccidiosis.

Educate weaners through yards and by tailing them out every day.

Vaccinate with booster 5-in-1 or 7-in-1.

In tick-infested areas, vaccinate for tick fever.

Parasites

Start strategic dipping for pre-winter treatments.

Check ticks for chemical resistance every 2 to 3 years.

Check worm burdens in weaners (WormCheck). Treat if necessary.

Treat for buffalo fly to reduce numbers that may over-winter.

Business plan

Meet with accountant for tax planning.

Assess success of previous year's business plan.

Plan management strategies for next 12 months.

Pastures

Start preparing land for sowing improved pastures in spring.

June – July

Dry season management

Re-assess pasture quantity and quality

- o if quantity is below requirements, implement your selling strategy
- o if quality will not sustain desired animal performance, consider supplements.

Determine the level of performance you want from each group of cattle and ensure supplements are sufficient to meet these requirements.

Breeders

Assess your maiden heifers. Are they going to be heavy enough to mate?

Draft empty breeders from main herd.

Cull breeders from main mob.

Discuss breeder health with your Vet and vaccinate as necessary.

Vaccinate pregnant breeders for leptospirosis.

Assess mating program and plan changes if necessary.

Are sale animals meeting target? If not, why not?

Maintain check on pregnant breeders, especially maiden heifers and first-calf cows.

August – September

Dry season management

Re-evaluate dry season management plan.

Draft cattle according to nutritional requirements.

Bulls

Check bulls for soundness and determine numbers for next breeding season.

Evaluate potential bull supplies.

Check young home-grown bulls as potential sires.

Vaccinate bulls for vibriosis and 3-day.

Breeders

Assess your first-calf cows. Are they in good enough condition to get back in calf?

Check early calving heifers.

Parasites

Plan tick control for summer. Check for resistance if control is a problem.

Check late winter calves for scrub ticks.

Pastures

Consider burning native pastures to maintain good pasture condition and control woody weed growth.

Where possible, spell paddocks that have been burnt until pasture is at least 15 cm high.

Ensure paddocks get at least one late spring or summer spell every fourth year.

Watch SOI and other long range forecasts for suitable time to plant pasture.

Property maintenance

Maintain fire fighting equipment, extinguishers, and fire breaks.

Do workplace health and safety audit of property.

Do annual electrical safety check on all household and farm equipment.

Personal

Make sure you go for your annual health checks and ensure you have quality family time together.

Research update



Parasitic wasps trialled to control feedlot fly problems

An innovative research project is assessing whether naturally occurring parasitic wasps can be used to control flies in cattle feedlots.

This research is being undertaken by the Department of Primary Industries and Fisheries in collaboration with the US Department of Agriculture and with support from Meat and Livestock Australia.

The research has found that naturally occurring populations of the tiny parasitic *Spalangia* wasps are reducing fly numbers in Australian cattle feedlots. In the USA, releasing mass-produced wasps has improved fly control.

The female wasps lay eggs into immature fly pupae, killing the developing fly and producing

another wasp. When fully developed, the wasps chew their way out of the pupae and, after mating which occurs usually within hours of emergence, seek out fresh fly pupae to lay eggs inside or feed on. Each female wasp can destroy many fly pupae.

The tiny parasitic wasps do not sting animals or humans.

If current and follow-up trials demonstrate that these wasps can successfully control fly populations, the wasps could be produced commercially and made available to feedlot operators as a biological fly control.

Further information:

Rudolf Urech

DPI&F, Yeerongpilly

Phone: 07 3362 9437

Email: rudolf.urech@dpi.qld.gov.au

Your channel to influencing beef research, development and extension

WE continue to profile members of the South East Queensland Beef Research Committee. This committee provides an avenue for producers to raise issues they believe the industry should be addressing.

Current committee 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.



Max Boothby

'Chess Park',
Eidsvold

Region: Central and north Burnett

Industry involvement: AgForce member, Auburn River Landcare Group

Industry issues and passions:

- Promote the need for continued investment in basic and applied research
- Push for the beef industry to be a exporter of knowledge not an importer of knowledge
- Encourage producers to take a more business-like approach to their operations rather than viewing them as a 'lifestyle'.



Cam Hughes

'Malarga',
Brooweena.

Region: Wide Bay Burnett

Industry involvement: AgForce member

Industry issues and passions:

- Better management options for weeds, particularly grassy weeds
- Continue to develop existing and new pasture plant options to maximise production
- Encourage younger people to be enthusiastically and confidently involved in rural industries
- Participate in information and technology exchange for rural industries.

Hormonal growth promotant (HGP) legal requirements



PRODUCERS who buy and use HGPs in their cattle must meet certain legal obligations. These conditions are in place to meet the requirements of some overseas markets.

If you use HGPs, you must:

- Complete a purchaser declaration for HGPs at point of sale and retain the duplicate copy.
- Ensure the HGPs are only used on the property listed in the declaration.
- Administer the HGPs (or HGP implants) strictly in accordance with label directions.
- Ensure implants are placed in the ear.
- Identify all implanted stock by placing a triangular ear mark wholly within the right (off side) ear at time of implant.
- Keep records of all animals treated (including

HGP product and batch numbers used), date of treatment, number of HGP doses used, HGPs that have been lost or destroyed, and details of the disposal of HGP-treated cattle (for example, waybills).

- Retain these records for at least two years after the HGP treatment day.
- Be able to distinguish between HGP-treated cattle and untreated cattle.
- When selling HGP-treated cattle, declare them as treated on the associated NVD waybill.

Random audits are carried out on properties using HGPs to ensure the legal requirements are being met. Checks are also made at saleyards and abattoirs to ensure cattle treated with HGPs have been ear-punched.

HGPs for cattle

What are HGPs?

Cattle HGPs are small implants given in the ear which slowly dissolve to release hormone into the bloodstream. They are widely used to improve both rate and efficiency of weight gain.

HGPs contain female hormones (such as oestradiol and progesterone) or male hormones (such as testosterone and trenbolone acetate) or a combination of both.

Combination implants containing a female hormone plus trenbolone acetate are referred to as 'aggressive' implants as they generally further increase growth rate, feed efficiency and delay in fattening.

HGPs increase muscle growth, mature size and lean yield and tend to delay fat deposition. They do not improve meat quality. Aggressive implants and repeat usage have in some cases reduced tenderness and marbling.

Do they work?

Countless trials have shown improved weight gain and efficiency with proper use of HGPs (Table 1). Responses are greater with good genetics, nutrition and management. HGPs are widely used for increasing profits; for example, approximately 90 percent of fed cattle in the United States are implanted. In Australia less than half of all cattle are treated. Research trials in the US have shown that proper use of implants returns approximately \$10 for each \$1 invested. For example looking at weight gain alone, a 15 percent increase

from 0.8 to 0.92 kg daily gain equates to an extra 12 kg live weight over 100 days.

Table 1 Estimated response to implants

Class of cattle	Gain	Feed efficiency
Nursing calves	4 – 8%	
Growing cattle	10 – 20%	6 – 8%
Finishing cattle	15%	8 – 10%

Source: Arkansas University

When do they work?

Best responses occur when cattle are already making reasonable weight gains, such as more than 0.5 kg per day. Conversely, responses are poor under poor growth conditions. Proper application is also important.

Would you use them?

Some people and markets, such as the EU, do not want HGPs. If you are considering using HGPs, first check that your customers will accept cattle/meat treated with HGPs and whether there is a discount for HGPs. Legal requirements to use HGPs are described elsewhere in this edition of *BeefTalk*.

How do you use HGPs?

HGPs are not recommended for stock intended for breeding.

Correct application is important for good results. Carefully follow instructions or check with product agents for best practice techniques. Common problems can be site infection, which can lead to pellet loss, and

crushing pellets on application. To help avoid abscesses forming at the site of implant, the surface of the ear should be thoroughly cleaned and disinfected before implantation.

Beef CRC research results have shown it is possible to improve gains by using 4 x 100 day implants compared with 1 x 400 day implant. Obviously there are practical considerations to be taken into account when considering multiple implants. Another option would be to use shorter-acting implants when best growth is expected and then longer-acting implants over periods when the growth rate is expected to be less reliable or reapplication is not practical. Repeated use should improve weight gains while cattle are gaining weight, but this may reduce tenderness and marbling which could be a concern for your market.

Aggressive implants containing male and female hormones are more likely to give faster weight gain but

also delayed fat deposition. A strategy is to use male-based hormones in breeds that tend to have too much fat (e.g. British breeds) and female hormones in breeds that often have insufficient fat (e.g. European breeds).

How safe is treated beef?

Meat from treated cattle is safe to eat. The hormones in the beef are natural and are at much lower levels than in many other commonly consumed foods. For example 200 ml of milk contains about seven times the amount of oestrogen in 500 g of beef from HGP-treated cattle; 375 ml of beer contains 10 times as much oestrogen; a hen egg 150 times; or 10 ml of soybean oil 1800 times.



Further information:

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DPI&F, Dalby

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

Commercial HGPs

Product	Manufacturer	Active ingredient	Registered use	*Days active
Compudose 100	Elanco Animal Health	21 mg oestradiol 17 beta	Steers, spayed & vealer heifers	100
Compudose 200		25 mg oestradiol 17 beta	Steers, spayed & vealer heifers	200
Compudose 400		44 mg oestradiol 17 beta	Steers, spayed & vealer heifers	400
Compudose G		12 mg oestradiol, 60 mg trenbolone acetate	Steers & heifers older than 3 months	100
ProGro H	Pro Beef Australia	20 mg oestradiol, 200 mg trenbolone acetate	Heifers older than 3 months grass-fed or 6 months lot-fed	90-100
ProGro S		20 mg oestradiol benzoate, 200 mg progesterone	Steers older than 6 weeks	90-100
ProGro T-S		140 mg trenbolone acetate	Steers older than 3 months grass-fed or 6 months lot-fed	90-100
ProGro TE-S		28 mg oestradiol, 140 mg trenbolone acetate	Steers older than 3 months grass-fed or 6 months lot-fed	90-100
Ralgro	Coopers Animal Health	36 mg zeranol **	Steers older than 6 weeks	100
Revalor G	Intervet Australia	12 mg oestradiol, 60 mg trenbolone acetate	Heifers or steers older than 3 months	120
Revalor H		20 mg oestradiol 17 beta, 200 mg trenbolone acetate	Heifers older than 6 months	120
Revalor S		28 mg oestradiol 17 beta, 140 mg trenbolone acetate	Steers older than 6 months	120
Revalor I		16 mg oestradiol 17 beta, 80 mg trenbolone acetate	Non-breeding cattle (heifers & steers)	120
Synovex C	Fort Dodge Australia	10 mg oestradiol benzoate, 100 mg progesterone	Steer & heifer calves	112
Synovex H		20 mg oestradiol benzoate, 200 mg testosterone propionate	Heifers older than 6 weeks	112
Synovex S		20 mg oestradiol benzoate, 200 mg progesterone	Steers older than 6 weeks	112
Synovex with trenbolone acetate		28 mg oestradiol benzoate, 200 mg trenbolone acetate	Lot-fed steers & heifers older than 6 months	112

* This time is provided as a guide only. The active period may vary depending on the growth rate of the animal and implant administration.

**Zeranol is a synthetic anabolic agent which acts by stimulating the pituitary gland in the brain to produce more of its own natural growth hormone, somatotropin.



Fireweed in south east Queensland

FIREWEED is an introduced weed that competes strongly with pasture species and is toxic to livestock. Chronic poisoning results in depressed growth rates; severe poisoning results in death. The best control for fireweed incorporates integrated management strategies, including herbicides, mechanical control and competitive perennial pastures.

Description

Fireweed (*Senecio madagascariensis*) is an annual or a short-lived perennial. It is a daisy-like herb that can vary greatly in size and shape depending on environmental conditions. In dry, harsh conditions it may be less than 20 cm tall with narrow leaves, no branching and few flowers. In ideal conditions fireweed will grow to 50 cm tall with multiple branches, long wide leaves (6 cm x 2 cm) and about 100 flowers.

The leaves are alternate, dark green, have serrated margins, and are usually 2 - 6 cm long. The flowers are bright yellow, daisy-like with a diameter of approximately 2 cm and produce up to 100 seeds each. It is very similar to a range of native *Senecio* species. Flowers and seeds are produced continuously over the growing season, with an average plant capable of

producing over 10 000 seeds.

Fireweed has a shallow branched tap root with many fibrous roots. Lodged plants can sprout roots from the stem at the point where it touches the ground.

Fireweed is a class 2 pest. Landholders have a responsibility to reduce its spread and work toward managing existing infestations.

The problem

Fireweed is a weed of both arable country and rangelands. It can dominate pastures and is toxic, particularly to cattle and horses. Heavy infestations of fireweed often result from two principal causes:

- neglect of steadily increasing fireweed infestations in previous years;
- lack of good ground cover caused by overgrazing, drought, fire or slashing.

Poisoning

Fireweed produces pyrrolizidine alkaloids throughout all growth stages. These chemicals damage the animal's liver. Severe poisoning will result in death and an autopsy will reveal chronic liver sclerosis.

Chronic fireweed poisoning is difficult to detect because the symptoms, such as reduced weight gain or low milk production, can have a variety of causes. Symptoms of more severe poisoning include: -

- loss of appetite
- aimless wandering
- loss of co-ordination
- sensitivity to sunlight
- jaundice
- abdominal straining (with rectal eversion).

Fireweed is generally unpalatable to cattle. Cases of poisoning are usually associated with heavy infestations where selective grazing is impeded or where

hungry stock new to an area graze an infested pasture. Fireweed remains toxic in hay or silage.

Life cycle

Fireweed is weakly perennial. Most seedlings appear between March and June. Plants grow quickly to produce their first flowers in 6 - 10 weeks and usually begin to die in spring. The top growth dies, leaving the base and the roots which can last through the summer and re-grow in the following autumn. Depending on rainfall, some plants continue to grow and produce flowers and seed through summer. A dry summer followed by autumn or winter rains leads to heavy fireweed infestations.

Seeds are light and can be spread several kilometres by wind. Seeds also have rows of short hairs that can loosely cling to animals. Fireweed is spread greater distances in pasture seed, hay, turf, mulch and with stock transport.

Distribution

Fireweed is native to Madagascar and southern Africa and was first recorded in Australia in the Hunter Valley in 1918, probably as an escaped garden plant. The spread of fireweed has accelerated in the last 30 years.

Fireweed currently infests beef and dairy pasture east of the Great Dividing Range along the entire New South Wales coast north to Brisbane. Isolated infestations have been found near Caboolture, Cooroy, Belli Park, Maleny, Yandina, Pelican Waters and as far north as Gympie. Fireweed has the potential to infest pastures as far north as Rockhampton.

Control

As with all weeds, prevention is better than the cure. Early

intervention is critical in preventing fireweed becoming established in a pasture. Proper planning ensures maximum value for each dollar spent in weed prevention and management.

A successful weed management strategy will incorporate several control measures (including chemical and mechanical methods) combined with sustainable pasture management (pasture spelling, grazing systems, fire and sown pastures).

Management strategies

Maintaining a competitive pasture and ensuring adequate ground cover is critical in preventing fireweed establishment. Winter active pasture should be established using zero or minimum tillage techniques.

Mechanical control

For isolated infestations plants should be chipped out, bagged and correctly disposed of. Chipped-out plants left in the paddock are a source of seed and can poison stock. Slashing is ineffective in killing fireweed and may actually increase the risk of stock poisoning.

Herbicides

Herbicides are most effective on young plants (usually during autumn). If plants are treated later in the season (during flowering), applications rates need to be higher.

Boom spraying is effective in an open pasture situation where there is a moderate to heavy infestation. Followup is usually necessary to treat plants that were missed or have regrown.

Bromoxynil is effective on seedlings but is less effective on mature plants where it needs to be applied at up to double the rate. Mature plants often regrow from lower growing points following

treatment with bromoxynil. Bromoxynil will not affect grass and is suitable for use in pastures containing legumes.

Unfortunately fireweed control is often not considered until the highly visible flowers appear by which time it is too late for effective herbicide control.

Biological control

A number of organisms can be found attacking fireweed, but any effect they have is temporary and isolated. An orange rust, *Puccinia lagenophorae*, is common and often affects fireweed particularly in lower country. The blue stem borer moth, (*Patagoniodes farinari*) is also common, but the larvae usually develop too slowly to have an impact. Other potential biological control agents have been identified, but rigorous testing is needed to ensure that they do not feed on closely related native plants. No new agents are expected to be released in the near future.

Further information

Vegetation management/weed control/environmental staff through your local council

Department of Natural Resources, Mines and Water (NRMW).

Acknowledgements

This article is an abbreviated version of the NRMW Pest Fact, which is available through the NRMW website or your local NRMW office.

Livestock Library has the answers

AUSTRALIAN sheep and cattle producers now have web-based access to Australia's key beef and sheep industry R&D information from the last 50 years with the launch of the Livestock Library, an online collection of industry publications.

The Livestock Library puts it all in one place and brings together multiple sources of information relevant to the industry.

The Library contains articles from prominent industry journals and conferences, as well as fact notes from the Department of Primary Industries and Fisheries, Queensland.

Over the coming year, sheep and beef fact sheets from all the state departments of primary industries will be added to the Library, as well as more industry reports and publications from a wide variety of sources.

To access the Livestock Library, go to www.livestocklibrary.com.au and complete the free registration.

Further information:

Cynthia Mulholland
Beef CRC, Armidale
Phone: 02 6773 3501

Heidi Hoffman
Australian Sheep Industry CRC
Phone: 02 6773 2927

Acatak, Oztik and Wintik now accepted by EU

As from 19 November 2005 the EU will accept cattle treated with products containing the chemical fluazuron. The 42-day Export Slaughter Interval (ESI) and the need to use the chemical according to manufacturers' recommendations still apply. For more information contact your preferred supplier or manufacturer.

NLIS Update

End of exemption

From 1 July 2006:

- Cattle must be identified with an NLIS device before leaving a property, unless they are moving as deck loads of the same class from their property of birth and are consigned directly to slaughter or live export.

From 1 July 2007:

- Cattle must be identified with an NLIS device before leaving a property

Note: Currently exemptions to these rules apply to bobby calves and to bulls born before 1 July 2003. For both of these classes of cattle, if they are not identified with a permanent NLIS device, a transaction tag must be applied if they are moved to saleyards or for slaughter. For bulls this can be a tail tag or an ear tag, for bobby calves it must be an ear tag (bobby calf tag).

What does the ID number mean?

The NLIS ID is shown on the outside of the tag. Each ID has 15 or 16 characters. They provide the information below. The NLIS database links the NLIS ID printed on the tag with the NLIS Radio Frequency Identification Device (RFID) number recorded in the device.

Each visual NLIS number must be different from any other number in Australia. This is achieved by the combinations of the sixteen letters and numbers

in each number. For your property this could mean that the only difference in two or more numbers is the year of manufacture letter. This letter follows the Breedplan convention and changes on the 1st of January each year.

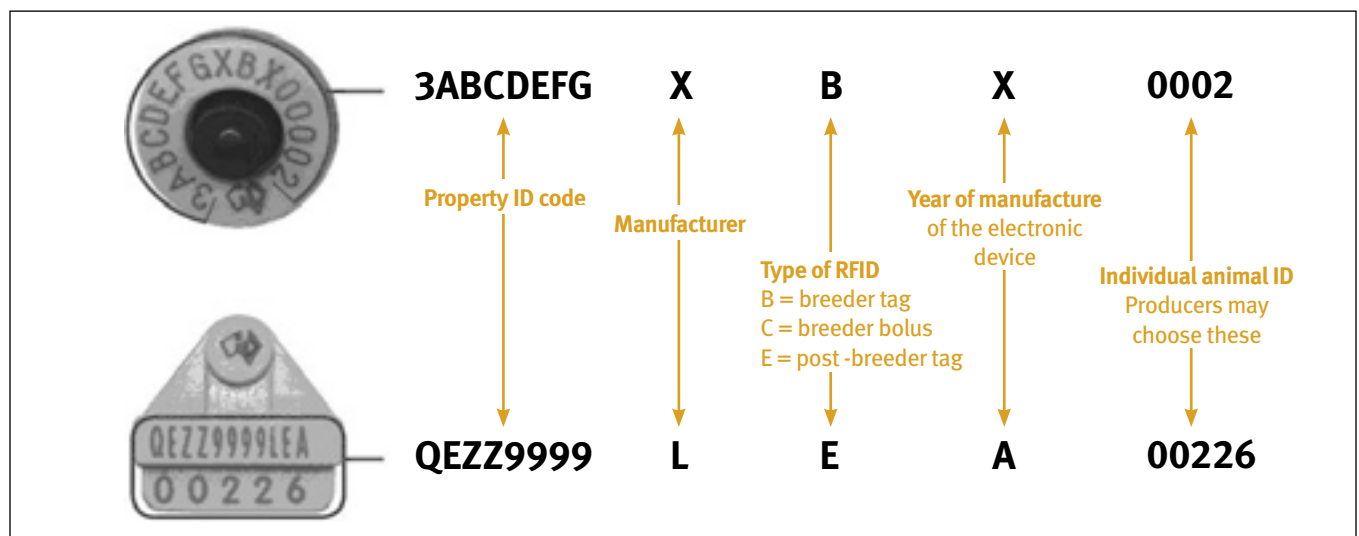
To provide some flexibility in the numbers available to owners, the last five characters printed by the manufacturer when tags are supplied can be specified when you order your tags. The first of the five characters can be specified as a letter but the next four must be numbers. In any particular year for the same type of tag (that is a breeder or post-breeder tag), the same number cannot be issued.

Usually if you do not specify the tag numbers you require, the manufacturer will start at 1 and continue on to the number of tags you order. This is also often the case even if some tags are breeder and some post breeder.

If on the next occasion you buy tags from another manufacturer and again do not specify the numbers to go in the last 5 places these tags will usually start at 00001 and continue to the number of tags you order.

The only difference between the NLIS number on both lots of tags will be the manufacturers' code and possibly the year if you purchase the second lot of tags the next year.

If you are ordering matching management tags it is important to consider the numbers you would like to use to suit your management program. If you are reading the electronic numbers from a reader and you also wish to use the visual numbers displayed on the tag, you will either need to obtain a tag bucket file from the tag manufacturer or download the matching numbers from the NLIS database. Use of a computer stock management program makes working with these numbers much more convenient.



Explanation of options available in the tag numbering system:

Rural finance – considering the options

Like most businesses, farms may need additional financial support to fund improvements or expansion, equipment purchases, or simply working capital to meet day to day operating expenses. Determining what sort of support best fits a particular business may be daunting.

Should I borrow?

Before considering how a project or plan should be financed, it is best to thoroughly consider the financial viability of the project first. What benefits will this project give? Will it be viable? Are there other uses for the money that could better improve the viability of the farm? The proposal you're considering might be a good one, but evaluate it thoroughly before you proceed.

Some key points are:

- What will be the likely benefits, and what are the likely costs?
- How long will it take from paying out the money to getting an income?
- What are the risks?
- Is the project achievable within the business's resources? That is, apart from the funding, do you have the time, land, and expertise to see it through? Will other parts of the business and overall profit suffer?
- Are you considering the proposed project objectively?
- Are you using the right evaluating tools? For instance, when considering purchasing a breeder property, don't just look at the \$/ha figure –the \$/breeder area (based on purchase price and the number of breeders the property will support) that can provide a truer picture of the likely benefits. E.g. a 500 ha and a 400 ha property are for sale. The first is on the market for \$800 000 and the second for \$700 000. Both carry 200 breeders through most seasons. The analysis below shows one way to evaluate these properties.

	Property 1	Property 2
Size (Ha)	500	400
Price	\$ 800,000	\$ 700,000
C/Capacity	200	200
\$/Ha	\$ 1,600	\$ 1,750
\$/Breeder	\$ 4,000	\$ 3,500

On initial evaluation, property 1 is cheaper per ha, but in terms of ability to carry income producing units, it

is in fact 14% dearer. All other things being equal this may mean it will cost more per calf on property 1 than on property 2.

How do I get finance?

When lenders evaluate an application for finance, they look at the amount to be borrowed, the ability of the applicant to pay it back, and the risk involved. The only way to really assess all three of these criteria is to prepare a cashflow budget. By considering these aspects yourself before you go to the bank, you will be able to put together an application which will have a better chance of success.

Mention the words 'budget' or 'cashflow' to a farmer and the response is usually not that positive, but the truth is that most farmers already use these tools without knowing it.

Budgets and cashflows are just plans that have been costed and put against a time line. They work out the monthly balance at the bank once you estimate the income and expenses that are likely to occur and when they will occur.

How many farmers have thought along the lines that 'ok I should receive a cheque from the agent next week and that will allow me to pay the feed account, the phone bill and buy groceries which are all due'? This is a simple form of a cashflow. Most farmers know how much they will need to build a new fence or how many cattle they should have to sell this year. Both are part of the budgeting process.

A good place to start with budgets is to look at the past. The introduction of GST several years ago has meant that financial information is now much more available to farmers than ever before. Historical information is pulled together every quarter.

Start by ruling up some columns with months across the top and income and expense columns down the side (see table 1). This can be done on a piece of paper, in a pre formatted 'cash book' or on computer if you have a suitable spreadsheet.

Once you have entered all the income and expenses that you expect to occur over the period, the next step is to add up each category to get sub totals. If you enter the opening bank balance at the beginning of the period, and then add each months income and subtract each months expenses then you should be able to see your expected monthly working account balance.

Once complete for the whole year, you can look along the closing bank balances and see what is the highest negative amount and in which month it occurs. This will roughly tell you what level of finance will be

Table 1: example cashflow

	Jan 2200	Feb -2105	Mar 10455
Opening bank balance			
Income			
Cattle	0	14500	0
Crops	0	0	1500
Diesel Rebate	250	0	0
Other	0	0	0
Total income	250	14500	1500
Expenses			
Accounting	0	100	0
Agent fees	0	1625	180
Animal expenses	100	100	200
Bank charges	15	15	15
Electricity/gas	100	0	0
Feed	2050	50	150
Fert, seed, chemicals	0	100	0
Freight	0	250	50
Fuel	100	100	100
Loan/lease repayments	200	200	200
Motor vehicle expenses	90	90	90
Other expenses	80	80	80
Rates	590	0	0
Repairs & maintenance	120	120	120
Water	110	110	110
Total expenses	3555	2940	1295
Capital expenditure			
Fencing	0	500	0
Cattle	0	0	6000
Machinery	0	1500	0
Total cap expenditure	0	2000	6000
Total expenditure	3555	4940	7295
Net cashflow	-3305	9560	-5795
Closing bank balance	-2105	8455	2660

required, although some care is needed to make sure that bank interest has been allowed for as well.

Need help?- The DPI&F Farm Financial Counselling Service (see details later in this article), Private Agribusiness Consultants or Accountants can assist you with these evaluations, budgets and cashflows.

Points to consider

Interest only or principle and interest?

Interest-only loans are particularly useful when cashflow will be tight (e.g. early in a project, droughts etc), but by paying interest only, you aren't reducing the amount of money you owe. Principle & interest loans have higher repayments because these will need to cover paying back the loan principal as well as the interest due. Sometimes loans can be structured to begin with an interest-only period and convert to paying principle and interest at a later date. Some lenders allow you to convert from one type to the other as circumstances require.

Timing of repayments

The repayment of rural finance can be structured to fit the income characteristics of the farm. If the farm receives all or most of its income once a year (eg an orchard) its finance can be structured to have one repayment per year once the crop is harvested. Alternatively, if income is more evenly spread then weekly, monthly, quarterly and biannual repayments can also be arranged.

Interest rates

When lenders determine the rates they will offer with a finance package, they consider factors such as risk, corporate strategies, equity, cashflow, term and amount. Each lender may evaluate these factors differently and therefore offer quite different interest rates. Shopping around can often be well worth the effort.

Fixed or variable interest

Variable interest rates will increase or decrease with changes in the financial markets. Sometimes financial packages include the option of fixing the interest rate for a period of one or more years. If the interest rate rises during this time, you may be paying a lower interest rate than others who chose to ride the market. A fixed interest loan means you will know what your repayments are for the fixed period and can budget more accurately.

Banks fees

Most lenders charge fees. These include application fees, valuation fees, review fees, monthly administration fees, annual fees, etc. Fees can become significant and may make a seemingly attractive finance package very expensive. Make sure you consider all these 'extras' when evaluating options.

Loan security

Banks and other lenders are in the business of lending money, but they also carefully manage their risk. To minimise their risk, they often try to take security over not only the asset being purchased but over other available assets. A finance package that takes security over all the assets of the farm may limit the borrowing capacity of the farm in the future and so should be considered cautiously.

Equity

As a general guide, most lenders prefer to lend only up to 50 to 60 percent of the value of the landed security being offered. It's handy to know this 'rule of thumb' when trying predict the lender's reaction to an application for a new loan or borrowing more if things aren't going so well.

Types of finance – Short term

Overdraft/line of credit

Works like a normal business account but has a pre-approved limit for borrowing. This facility is mainly set up to meet the normal day-to-day cash requirements of a business. It can be set up to access cash, cheques or

electronic banking. Interest rates are generally higher than for term loans, and interest is payable monthly on the balance borrowed. Security (usually over property) is required.

Credit card

Can be useful for short-term funding of day-to-day expenses. Can be set up with interest-free periods and often with loyalty or rewards schemes. Interest rates can be quite high, so should only be considered for very short-term funding needs. Usually approval time is fast and security is not required.

Trade account

Often offered by local businesses. Usually interest free on a 7 to 30 day basis. Limits spending to the one business or branches of a business. Generally no security is required.

Unsecured loans

Short term loans (1-7 years) without security being taken by the lender. Because of the increased risk, the interest rates are usually higher and repayment terms not as flexible.

Stock/crop loan

Loans set up to purchase stock or plant a crop. The stock or crop are used for security, so the loan is paid out when crop is harvested or stock sold. Interest payments can be structured to suit the business.

Lease/hire purchase

Usually used for the purchase of equipment or plant. Low interest rates are often offered by dealers or manufacturers as an incentive to buy. Security is taken out on equipment purchased. Repayments can be structured to meet the cashflow of the farm.

Types of finance – Long term

Term loans

Usually secured by a mortgage over the property and structured to pay the loan back within a specified period. Can often be taken out for a long period (20 years) and so keep repayments amount to a minimum. Interest rates are usually lower than for overdrafts, but may include margins depending on risk.

Bank notes

Taken out for specific period (usually 3-12 months) at a fixed rate (based on market rates at the time).

When the period expires, a new bank note contract is arranged or the total amount repaid. A mortgage over the property is usually taken out by the lender.

QRAA

Queensland Rural Adjustment Authority (QRAA) is a government organisation set up to administer rural financial packages and assistance. Loans generally have lower interest rates than banks, and have no fees.

Examples include:

PIPES

Three loans under this scheme – First Start (purchasing first farm), Development (expansion, stock, additional land, equipment, etc) and Resources Management.

Drought

Two loans – Drought Carry-on (operational expenses during a drought) and Drought Recovery (replanting or restocking after a drought).

What if things go wrong?

Obviously things don't always go to plan. Drought, poor prices, crop loss and unforeseen expenses can combine to put pressure on cash flow. The chance of a farm surviving such problems is usually better if assistance is sought early.

A first point of call is the DPI&F Queensland's Farm Financial Counselling Service. This is a free and confidential service specifically aimed at helping primary producers deal with the wide range of financial issues that may arise.

Your Farm Financial Counsellor (FFC) can help with assessing your current circumstances, evaluating options, assisting with negotiations with lenders, and accessing government assistance if applicable. To access this service, phone the DPI&F Call Centre on 13 25 23.

Alternatively, accountants, financial advisers or bank managers may be able to help.



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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)

Spot the risks of avian influenza occurring in your birds.

Biosecurity Fact Sheet:

Avian influenza (AI) is a highly infectious disease affecting many species of birds.

Australia has had five outbreaks since 1975, and we need to act now to prevent another.

Avian influenza viruses circulate in wild birds in almost every country in the world and our previous Australian outbreaks were thought to have occurred when domestic poultry had direct or indirect contact with wild birds.

Q What are the clinical signs?

A Birds may die suddenly or show a range of clinical signs including:

- swollen heads
- dullness
- drop in egg production
- respiratory distress
- loss of appetite.

Some birds, especially waterfowl, can be infected without showing any signs of disease.

Q How does the virus spread?

A The viruses are spread via the birds' droppings, blood and saliva, spreading AI either directly or through contaminated water, feed, or other materials.

Q Who should I contact?

A There are bird industry organisations who have their own biosecurity plans and who may be able to assist in drawing up your own biosecurity plan.

For further information contact:

- Your State or Territory Department of Primary Industry or Department of Agriculture
- Australian Chicken Meat Federation
- Australian Egg Corporation Limited

If you suspect a disease in your birds contact a veterinarian or stock inspector, or call the Emergency Disease Watch Hotline on 1800 675 888

For more information visit www.animalhealthaustralia.com.au



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