



Local Land  
Services  
Hunter



Winter 2018

# Animal Health news

## Feeding cattle – reminders for producers

Hunter Local Land Services is supporting landholders through the difficulties of this extended 18 month drought in the Upper Hunter through a series of workshops with advice on managing stock and land through drought, livestock nutrition, government financial assistance and how to access rural financial counsellors. Farm family gatherings have also been held to support farmers socially with more than 600 people attending 13 events around the region in March and April.

We also conduct individual farm consultations and work to understand and respond to the difficult situation producers are in. If you have any thoughts on different activities we can provide, please make contact with us. All ideas are warmly appreciated.

While the Upper Hunter is experiencing ongoing drought conditions and most producers are facing their second winter of feeding with no pasture available, it is timely to provide some reminders in relation to feeding livestock. Even the Lower Hunter and Manning Great Lakes can benefit from supplementary feeding through winter as the quality of Kikuyu and native dominant pastures decreases.

Producers are encouraged to seek a Commodity Vendor Declaration on bought-in feed to assist with both biosecurity plans and National Vendor Declarations for livestock at point of sale. More feed producers are becoming familiar with requests for these forms and it is easy to print them off online.

Feed quality can be very variable, especially with hay and silage. If you can source feed that has a feed analysis for energy and protein levels on a dry matter basis this makes developing an effective feed ration much easier. It is also important to be aware of nitrate/nitrite levels, especially in cereal hays such as oaten, millet and sorghum/sudan. Prussic acid levels can also be high in Sorghum or sudan hays. High levels of either of these can cause deaths in livestock. Feeding poor quality hay can actually result in stock losing weight, despite feeding cotton seed as well.

White cotton seed is a great source of protein but should be limited to two – three kilograms per day in adult cattle

because of the high oil content affecting the rumens ability to function effectively. When selling cattle that have been on cotton seed it is important to fill in the NVD correctly if selling straight off feed – by answering YES to the question “if in the last 60 days have this consignment consumed any material that was within a withholding period when harvested collected or grazed” as the cotton seed will be put together from multiple crops at the cotton gin and there is no accurate information that could be available.

In view of this, consider using grain/pellets only for increased protein in young cattle being fattened for slaughter.

Seek advice, or use the DPI Drought Feeding calculator to work out your costs and a feed ration – working out your costs on units of protein and energy is more important than cost per tonne of hay/grain/cottonseed and can give surprising results. This will also ensure that you are feeding the correct amount for the age/stage of production of the livestock.

Coming into winter remember feed requirements will increase further and there is an ongoing need for roughage, especially in lactating cows.

Finally, drought conditions are starting to extend across the state and feed can be in short supply. When ordering, budget for the whole winter to insure feed security for your farm. Likewise be wary of some of the unusual feeds which will start to come onto the market. Many have serious issues and little nutrition even though they may sound cheap.

Our Regional Livestock Officer and District Vets are available to discuss any queries you may have.

Commodity Vendor Declaration can be downloaded here:  
<https://www.mla.com.au/globalassets/mla-corporate/meat-safety-and-traceability/documents/commodity-vendor-declaration.pdf>

The NSW DPI drought hub has a lot of valuable information on feeding and nutrition of stock during drought. Visit  
<https://www.dpi.nsw.gov.au/climate-and-emergencies/drougthub>



Local Land Services  
[www.lls.nsw.gov.au](http://www.lls.nsw.gov.au)

We help secure the future of agriculture and the environment for NSW communities



## Farewell Digby

After more than 35 years as a District Vet for the Lower Hunter Valley, Digby Rayward retired during April.

Digby started with the Maitland Pastures Protection Board in 1983 and served right through to finish his career leading the Hunter Local Land Services vet team.

Hunter Local Land Services hosted a community farewell attended by more than 80 people in early April to thank Digby for his years of service.

Guest speakers included current and former colleagues and local farmers, who spoke highly of Digby's passion for the area and his dedication to supporting producers through both the good times and the bad. Digby's common sense approach to solving tricky situations was also highlighted, along with a few funny tales from the early days.

Digby thanked his fellow vets and other staff, including the local biosecurity officers and extension staff he also worked closely with, and also noted the importance of district vets to protecting agriculture across the state.

## Vet team changes

Jim Kerr has taken over from Digby as Senior Vet and will be based out of our Tocal office Monday - Thursday.

Kylie Greentree is now available four days a week Monday, Tuesday, Wednesday and Friday out of the Rutherford office at Maitland Saleyards.

Jane Bennett and Lyndell Stone continue to work out of Scone and Wingham offices four days a week respectively. Jane Monday, Tuesday, Thursday and Friday and Lyndell Monday to Thursday. With the addition of Kristi Arnot this increases the level of sourcing available for our vet team.

## Meet our new Singleton District Vet

Hello, my name is Kristi Arnot and I am your new District Veterinarian for Hunter Local Land Services and will be based out of the Singleton Office 2.5 days a week, Monday, Wednesday and Friday.

I have lived in the Hunter Valley for eight years now.

Since graduating from Sydney Uni Vet School in 2004, I have lived and worked in the Hunter, Grafton, England and the Hawkesbury region of Sydney.

I have worked in small animal, mixed and equine practice and was most recently involved in the Racing NSW Thoroughbred Rehabilitation Program.

I enjoy all aspects of veterinary medicine and working with large animals and am passionate about animal welfare.

I have two small children who keep me very busy, but when time permits I enjoy horse riding and spending time with friends.



Kylie Greentree



Kristi Arnot

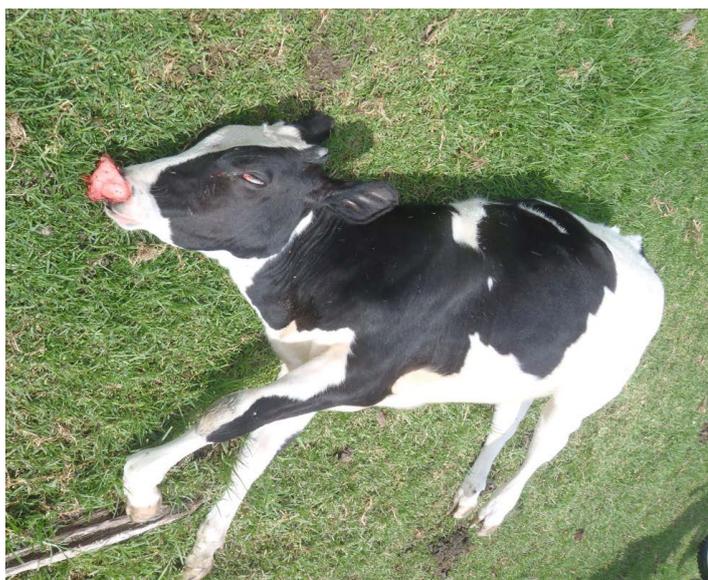
## Vaccinations are a cheap insurance policy

All animals are at risk of Clostridial disease. Clostridia bacteria are present in the environment, in the animal's faeces and in the gastrointestinal tract of healthy animal. Clostridial spores are highly resistant and can survive very long periods.

There are over 100 different species of Clostridial bacteria but not all cause disease, those that do are usually fatal. The Clostridial diseases of concern in cattle include Enterotoxaemia (commonly called 'Pulpy Kidney'), Blackleg, Tetanus, Black Disease, Malignant Oedema and Botulism.

The two most common causes of sudden death in the Hunter Region are Blackleg and Enterotoxaemia. The scenario we often see is sudden death in inadequate or unvaccinated rapidly growing animal (under two years of age) or an animal on a sudden change in diet, which we often see after a rain event. Affected animals usually die quickly, and their carcasses blow up and begin decomposing in a matter of hours.

Blackleg is characterised by acute inflammation of muscles which can be brought on with bruising, setting up severe toxæmia and high mortality. Death usually occurs within 12-24 hours; with the first symptoms seen are loss of appetite, severe depression, lameness and sometimes swelling over a specific muscle mass which is painful to the touch. However, the onset is so rapid most animals are found dead without any premonitory signs. The affected muscle is often dark red to black (hence the name blackleg), with the muscle infiltrated with small gas bubbles.



*Blackleg is one of the most common causes of sudden death in our region and frequently affects young steers less than two years old.*

Enterotoxaemia is a highly fatal disease that can affect animals of any age. Under certain conditions the organism proliferates rapidly in the intestines and produces lethal quantities of toxin. This toxin is absorbed from the intestines and causes sudden death. The factors that may precipitate Enterotoxaemia include; sudden change in animal's diet (going onto better pastures or grain diets), increased feed intake and change to grain diets and stress related factors such as transport. Affected animals are often those in the best condition, as they are the greediest eaters.

Blackleg, Enterotoxaemia, Tetanus, Black Disease, and Malignant Oedema are preventable with a vaccination. Vaccines used for protection against Clostridial diseases include either a 5-in-1 (which covers the 5 Clostridial Diseases listed above) or a 7-in-1 (which covers the 5 Clostridial diseases and *Leptospirosis hardjo* and *Leptospirosis pomona*). Cattle require two vaccinations four to six weeks apart to start the programme and from then on, one booster per year. Young stock should be initially vaccinated at three months of age - with a second vaccination given four – six weeks later. Animals in feedlot conditions are vaccinated more frequently to provide adequate protection. This is cheap insurance for a disease where no sickness is usually seen, only deaths.

Always vaccinate introduced cattle, it is best to assume they have not been previously vaccinated and also give them a booster four to six weeks later. It will take 10-14 days for immunity to develop after the first vaccine. The Clostridial vaccinations provide long lasting protection against tetanus and blackleg but immunity against Enterotoxaemia lasts only approximately three months (check product leaflet) which is why it is recommended to vaccinate your stock with any change in the season, or 10-14 days before supplementary feeding or introducing animals onto rich pastures. For winter/spring calving cows, vaccination one month before calving is recommended to provide protection against Enterotoxaemia heading into spring and increases the immunity against Clostridial disease that they provide to their calves in colostrum.

The 7-in-1 vaccine is more commonly used in breeding stock. The vaccine provides added protection against Leptospirosis bacteria that can not only cause infertility and abortions but also provides a zoonotic risk to producers.

## STDs of the Cattle World

Over the next couple of months many cattle producers in the Hunter will be in the market for new bulls. When purchasing bulls we check the animal for structural soundness including muscling and body conformation, quiet temperament and good reproductive potential. Reproductive potential can suddenly plummet if your bull is carrying the bacterium that causes Vibriosis.

Vibriosis is a sexually transmitted disease of cattle, caused by the bacterium *Campylobacter fetus venerealis*. Vibrio is one of the major causes of infertility and abortions in cattle throughout Australia. Bulls do not show any clinical signs of disease but carry the bacteria and spread the disease when they mate with susceptible cows and heifers. Vibriosis is commonly introduced into clean herds by an infected bull.

The first sign of Vibrio in your herd will be; cows returning to service, low conception rates, abortions and extended calving intervals. The disease is often unrecognised causing continued reproductive losses.

Vibrio is easily prevented and controlled with a vaccination. The vaccine is called Vibrovax and bulls should receive two doses of the vaccine four weeks apart, then an annual booster. Vaccination should be given four weeks before joining. A vaccination programme and antibiotics can also be used to eradicate the disease from a herd.

It is recommended to purchase Vibrio vaccinated bulls and continue a vibrio vaccination programme on your property. This is particularly important when friends, family and neighbours share bulls and have an increased chance of picking up the disease.

Request a National Cattle Health Declaration (available from [www.farm.biosecurity.com.au](http://www.farm.biosecurity.com.au)) from the vender so you know the vaccination and health status of purchased livestock.

If you are concerned that vibrio could be causing reproductive losses in your herd, a veterinarian can take vaginal mucus swabs and test for the presence of infection.

### Other Vaccinations recommended for Bulls

- **7-in-1 vaccination** against 5 Clostridial Diseases (Enterotoxaemia, Blackleg, Tetanus, Black Disease and Malignant Oedema) and Leptosporosis (*L. Pomona*, and *L. hardjo*) or a 5-in-1 vaccination at a minimum.
- **Bovine Ephemeral Fever (BEF) Vaccine:** Bovine Ephemeral Fever (also called three day sickness) commonly occurs in the Hunter Region around February-April depending on the season and causes a debilitating fever, lameness and swelling that can cause the animal to go down and remain down from a couple of days to weeks. Bulls and heavy cows are often worse affected. There is a vaccination available to prevent the effects of BEF. Two vaccines are given four weeks apart, should be given well before the BEF season commences in the district.
- **Pinkeye Vaccination-** many producers in the Hunter vaccinate their herds against Pinkeye. There are a number of predisposing factors that aid in the spread of disease and these include flies, UV light, long grass, dry dusty conditions, overcrowding and a poor immune status. The vaccine available is called Piliguard and is to be given three – six weeks before the onset of the pinkeye season.

*Healthy vaccinated cattle play a key role in avoiding stock losses.*



## Cattle Tick Fever Warning

Hunter Local Land Services District Veterinarians are reminding producers to practice good farm Biosecurity following the detection of cattle tick and tick fever on the NSW Mid North Coast at Kendall in April.

Around 70 head of cattle have died, across several properties, as a result of this tick fever outbreak.

Cattle tick is a serious external parasite of North Queensland. An introduction of cattle ticks carrying tick fever can have a devastating effect on our herds. Cattle in the Mid Coast and Hunter, which are mainly Bos Taurus breeds, are highly susceptible to this disease as they have no immunity. Both cattle tick and tick fever are notifiable diseases in NSW and all cattle must be inspected and treated for cattle tick before entering NSW.

Several properties in the area are now undergoing a NSW Department of Primary Industries supervised cattle tick eradication program. This includes tracing of cattle movements and monitoring and treating cattle to eradicate the tick and tick fever. A number of additional properties also have movement restrictions in place until we can be sure cattle tick has not entered those properties.

Issues like this are a reminder to all that we must be vigilant with our biosecurity practices to prevent bringing diseases, pests and weeds onto our farms.

Quarantining new or returning stock onto your property and providing suitable livestock health treatments to rid the animal of pests, disease and weed seeds is an effective method to stop issues crossing your farm gate.

Holding new cattle in a yard and treating for internal and external parasites as well as vaccinating for key diseases is really a "must do" if you want to protect your stock and your farm. There are a range of tickicides and anthelmintics that treat for cattle tick as well as products for other external parasites that may be a problem in different seasons. A combination drench is also a good choice for internal parasites and liver fluke.

While cattle are in your quarantine yard or small paddock, they should be inspected daily for any signs of disease or pest infestation and only let out with other stock, and wider access to the property when you are confident they are healthy and not harboring diseases, pest or weed seeds. Maintaining stock proof fencing is also essential.

Cattle ticks cause disease as they can carry a red blood cell parasite that is injected into cattle when ticks attach and feed. The parasite destroys red blood cells and causes fever, depression and anaemia. Affected animals may stagger, show nervous signs and have red coloured urine (redwater).

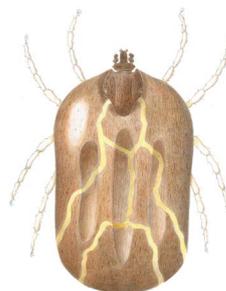
Hunter Local Land Services can help with tick identification to distinguish between cattle, paralysis and bush ticks. The key to identifying cattle ticks is the pale coloured legs and leg position.

Investigating unusual illness in livestock and safeguarding agriculture is a key role of the District Vet team. But, we rely on producers to work with us and report unusual illness, exactly as the producers have done in this instance. Early reporting of an issue gives us the best chance of containing and eradicating a disease threat to keep our region and Australia free of many exotoxic diseases that cause great productivity losses and market closure to other countries.



*Stock being treated for cattle tick earlier this month as a precaution after they were notified they bought cattle from a tick affected property.*

### Adult females at various stages of engorgement



*Cattle ticks have pale cream legs with a wide space between the first pair and the snout. Hunter LLS can help with tick identification.*

## Kikuyu Poisoning in cattle

During February and March 2018, the Mid Coast and Hunter region of NSW suffered an outbreak of Kikuyu poisoning causing the death of approximately 100 head of cattle.

Kikuyu toxicity is an unusual and infrequent disorder that appears to be associated with rapid kikuyu growth after the end of a summer drought. Cattle are acutely ill and the majority of affected animals die. While cattle are most frequently affected (only cattle were affected in this outbreak), other livestock may also be susceptible.

Hunter Local Land Services District Veterinarians coordinated outbreak investigations to rule out other causes of disease and diagnosed kikuyu toxicity. The vet team is now contributing to further research to track down the cause and help producers with management. The farms affected by this outbreak were surveyed and pasture and livestock sampled. The results from this investigation are consistent with findings from previous outbreaks in Australia and are summarised below.

### When does kikuyu poisoning occur?

Kikuyu poisoning occurs when cattle graze kikuyu which is growing rapidly after rain in late summer/autumn after a prolonged period of summer drought.

### Does the poisonous kikuyu look any different to 'safe' kikuyu?

There is no visible sign on the toxic pasture to indicate that it is affected, other than the fact that cattle will often leave it ungrazed if they have the choice of eating something else. This selective grazing behaviour is important to note, because the deaths observed during 2018 occurred when cattle had no alternative feed available (i.e. monoculture kikuyu pasture), or the alternative grazing options had been exhausted and they had nothing left to eat but kikuyu.

### Was the poisonous kikuyu associated with any particular risk factor?

There was no consistent association with the type of fertiliser that had been applied to the pasture or how recently it had been applied. Stress or damage to the affected kikuyu plants by insect attack (e.g. army worms or grasshoppers) was also not a consistent feature. The affected pastures had all been subject to severe drought stress. There were no reported cases of kikuyu poisoning on irrigated kikuyu pasture.

### What signs do you see in poisoned cattle?

Many affected cattle were just found dead. The most common signs of poisoning observed before death were drooling thick, ropery saliva, sham drinking, severe dehydration, inappetance, abdominal pain, unsteady gait, recumbency, depression, and muscle tremors. Most affected cattle died (80%).

### What is it in the kikuyu that poisons the cattle?

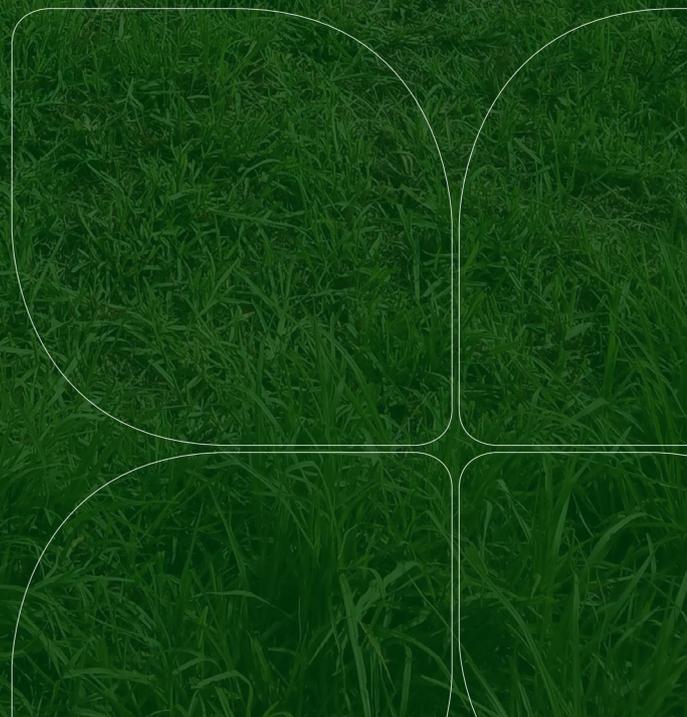
We don't yet know. Kikuyu poisoning affects the fluid balance in the animal, resulting in an accumulation of fluid in the rumen which is not absorbed into the bloodstream i.e. although the animal's stomach is full of water, the animal is severely dehydrated. This is presumably what causes the 'sham drinking': the dehydrated animal feels desperately thirsty, but can't fit any more fluid into its stomach, it consequently stands in a dam or with its face stuck in a trough wanting to drink, but is unable to do so. Post mortem samples from the affected cattle invariably feature severe damage to the lining of the stomach. Unfortunately, it remains unclear how the kikuyu causes this damage and disrupts the animal's ability to absorb water from its gut. It has been thought for decades that a fungus within the affected kikuyu might be responsible, and it has recently been theorised that chemicals in the kikuyu causes an electrolyte imbalance. Many samples were collected from dead cattle during this outbreak, together with pasture samples, in order that these theories can be tested.



## What can you do to avoid kikuyu poisoning?

Be aware that kikuyu can represent a risk when growing rapidly after a drought, and take the following steps to reduce the risk of poisoning:

- If introducing cattle into risky kikuyu, fill them up with something else first so that they can be more discriminating when going into the kikuyu paddock.
- Do not force cattle to graze risky pasture. Leave the gate open behind them when putting them into such pasture, and put out some hay or silage in the kikuyu paddock so that the cattle have an alternative source of feed.
- Watch the behaviour of the cattle: if they seem reluctant to eat what looks to be good, young kikuyu, remove them from the paddock and spell it for several weeks. The period of risk seems to be relatively brief, and passes after a few weeks. The risk is presumably associated with stage of growth of the kikuyu.
- When re-introducing cattle after a period of risk, follow the steps listed above and let the cattle behaviour guide you regarding the ongoing risk of the kikuyu.



## Exercise Border Bridge

During March Jane Bennett our Scone District Vet and several other Hunter Local Land Services staff were involved in Exercise Border Bridge. This was a cross border exercise involving New South Wales and Queensland Biosecurity and Emergency Management staff in working through an exotic disease outbreak occurring across the two states. It involved State Control Centres in Orange and Brisbane and a Joint Control Centre in Toowoomba and involved more than 260 people from across Australia.

The focus of the exercise was the use of legislation, IT systems and existing arrangements, to respond to a biosecurity incident and a pest incursion. Both New South Wales and Queensland recently introduced new biosecurity legislation so the exercise also provided an opportunity to assess the implementation of each legislation in a cross-border scenario.

Evaluation of the exercise is presently underway but the initial feed back has been positive

Exercise programmes like this are an important part of government and industry's preparedness to respond effectively and efficiently to biosecurity emergencies. They assist in better preparation for pest and disease incursions that have the potential to damage Australia's food and fibre production industries.



### REMINDER:

#### Johne's Disease testing deadline for Beef producers

Producers who intend to claim a JBAS-7 or 8, are reminded that the "check test" of 50 adult animals must be completed by 30 June 2018. After that date a sample test (of more animals) will be required to progress a herd to JBAS 7 and two sample tests for JBAS-8. All producers should also have an on-farm biosecurity plan in place.

## Here's how to contact your district vet:

### Jim Kerr – Tocal

0439 185 275

### Kylie Greentree – Maitland

0428498 687

### Kristi Arnot – Singleton

0409 758 823

### Lyndell Stone – Wingham

0429 532 855

### Jane Bennett – Scone

0427 322 311

### For more information about Hunter Local Land Services:



1300 795 299



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The District Vet team frequently holds information sessions for producers, including "Beef Basics" to assist new landholders manage cattle and also FAMACHA a worm control session for Sheep and goat producers. Contact your DV to add your name down to the next round of courses.