

Livestock health considerations in spring

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Meet the team

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Spring and paralysis ticks

Spring is a particularly high risk time for paralysis ticks (*pictured top right*) affecting calves. Peak tick periods often coincide with peak calving times. A calf's low body weight and lack of previous exposure to the paralysis tick increases their susceptibility to the effects of the paralysis toxin. It generally requires a couple of ticks to cause death in calves. However, you

can't always rely on the presence of ticks on a calf to diagnose tick paralysis as the ticks may have already dropped off before symptoms appear.

The paralysis toxin generally causes an ascending muscle paralysis. This means the paralysis starts in the hind legs and progresses forward to eventually cause death by affecting the chest muscles and breathing. In the early stages, calves appear lethargic and uncoordinated in the hind legs, eventually being unable to walk.



Early detection and tick removal can assist recovery. However the calf will die unless it receives veterinary attention and an injection of tick anti-serum. Unfortunately, there can also be secondary health issues such as lung infections as bacteria have managed to find their way into the lungs due to the compromised breathing.

Prevention is the key to reducing the opportunity for ticks to attach to calves as it is often impractical to locate and treat each newborn calf with tick repellent chemicals.

Selecting calving paddocks with minimal tick habitat (i.e. minimal blady grass, bush, lantana and mulch) is

often the best option to reduce paralysis tick risk in this most susceptible age group.

Ticks prefer scrubby paddocks with layers of mulch and thick grass as it protects them from hot temperatures or frosts.

Native animals can also spread ticks. Paddocks with low tick burdens are often those paddocks that have shorter grass and less mulch coverage.

The three different life stages of a paralysis tick can remain on suitable paddocks for up to nine months, but the actual tick is only attached to an animal and injecting toxin for 5-7 days. When moving calves and cattle to these low risk paddocks it is worthwhile treating the stock for ticks with a tickicide to reduce the contamination of the new paddocks. When a fully engorged female tick drops from its host it will lay 2000-3000 eggs before dying.

Other control options are to treat calves with a tickicide to kill the ticks before they can inject a lethal toxin dose. Registered treatment options for paralysis ticks revolve around chemical sprays and ear tags.

Spray tickicides have a minimal residual effect and thus frequent treatments may be required while the calves are small. Care also needs to be taken to ensure export slaughter intervals and withholding periods are adhered to. Adult paralysis ticks can be identified as they have a grey body, a long snout with one pair of brown legs close to their snout, two pairs of pale legs and another pair of brown legs closest to their body.

More information:

Detailed agnote on Paralysis ticks:

www.dpi.nsw.gov.au/__data/assets/pdf_file/0013/160321/paralysis-ticks.pdf

Chemical treatment options:

www.dpi.nsw.gov.au/__data/assets/pdf_file/0004/49918/chemicals_for_controlling_paralysis_ticks_in_cattle_-_primefact_134-final.pdf



Carcass of heifer dead from enterotoxaemia

Enterotoxaemia

Enterotoxaemia (commonly called 'pulpy kidney') is a fatal disease of livestock that occurs when there is a change of diet, usually to richer feed. Cattle being started on grain, meal or pellets are ideal candidates. Sudden access to lush pasture can have the same effect, meaning that a spring flush of feed or strip grazing oats or rye grass can have fatal consequences. Affected cattle usually die quickly, and their carcasses blow up and begin decomposing in a matter of hours. Affected animals are often those in best condition, as they are the greediest eaters.

Cattle and sheep can be protected by vaccination with 5-in-1 (or 7-in-1) vaccine. However, unlike the long-lasting protection these vaccines offer against blackleg and tetanus, the protection offered against enterotoxaemia may only last for a few months (refer to your product's leaflet). As many farmers mark their calves in late spring, this is when they also perform annual vaccination of the herd with 5-in-1 vaccine. Consequently, by late winter / early spring the following year when the enterotoxaemia risk is high, the protection from the previous year's vaccination has worn off.

Recommendations

Give a booster 5-in-1 vaccination 10-14 days before starting cattle or sheep on grain/meal/pellets or before introducing them to rich pasture. For winter/spring calving cows, vaccination in late pregnancy (done quietly to avoid stressing them) protects them against enterotoxaemia heading into spring and increases immunity against blackleg which they provide to their calves in colostrum.

Theileriosis

Theileriosis is a disease of cattle which can cause fatal anaemia (loss of red blood cells). The disease is caused by a parasite carried primarily by bush ticks, although lice, biting flies and even vaccination syringes may also play a part in spreading the infection between cattle.

A benign form of the disease has been present in coastal New South Wales (NSW) for decades, and rarely caused significant problems. However, a more serious strain of the disease arrived in the area about 10 years ago, and has caused considerable disease and stock losses in that time. Cattle introduced from inland areas are particularly at risk, as they arrive without the immunity coastal cattle develop as calves. Heavily pregnant cows introduced into the Mid North Coast districts are especially vulnerable and may suffer abortion and even death as a result of theileriosis anaemia. Coastal cattle taken to inland farms naïve to theileria can introduce theileria issues into those herds as well.

Spring is a high risk period for theileriosis, as ticks become active and spread the disease. The spring risk period coincides with the arrival of bulls in late winter purchased for the spring/summer joining period. After an animal is infected by a tick carrying the theileria parasite, it usually takes about 4-6 weeks for the parasite to multiply to a level where signs of disease are obvious. Symptoms in introduced cattle are often at their most severe 6-8 weeks following



Liver of a calf with theileriosis

initial exposure, after which survivors gradually recover. The signs of disease are those of anemia (lack of adequate red blood cells), including weakness, lethargy, loss of appetite, and occasionally bad temper.

Affected animals have little tolerance for exercise, so will lag behind the

mob when moved, and will have pale or yellow gums, eyelids and vulva.

Inspecting cattle for anaemia

The colour of the gums, eyelids or vulva of anaemic cattle will be pale or yellow, rather than the normal pink colour. However, it is counterproductive to stress a severely anaemic beast by locking it in a head-bail to check the colour of eyes or gums. If you suspect anaemia in female cattle, they are far less bothered if you check the colour of the vulva and stay away from their head, regardless of whether the animal has been quietly walked into a race or has collapsed in the paddock. Avoid head-bailing weak cattle.

Treatment

If naïve cattle are introduced into areas where theileriosis is present, they should be watched closely from about four weeks after arrival for signs of theileriosis, and managed in a paddock that is not hazardous for weak cattle affected by anaemia. The crisis period often occurs 6-8 weeks after arrival, so that bulls arriving in late August / early spring are discovered to be critically ill just when the new owner wants to put them out for joining. Steep dam and creek banks are hazardous for anaemic cattle, as they don't have the strength to climb back up those banks after drinking. Boggy dam edges are particularly treacherous, as anaemic animals aren't strong enough to extract their front legs from the mud after drinking, so will lie down and drown.

Supportive therapy for theileriosis cases should always include easy access to shade/shelter, good food and water.

Severely anaemic animals should not be put under stress or made to walk or run any distance, as some will collapse and not recover. Various antibiotics and other drugs have been used to treat affected cattle with mixed (and often unconvincing) results. Some severely anaemic cattle that have collapsed and died when being pushed to yards for treatment may have survived if they had been allowed to remain quietly in the shade and given easy access to food and water.

Blood transfusion can be effective in saving valuable cattle, and is certainly a practical (if not always economically justifiable) option for calves and younger cattle.

Prevention

Tick control is advocated as part of the approach to slowing the onset and minimising the effects of theileriosis, but no tick control protocol is so effective that exposure to theileriosis can be completely avoided.

It appears safer to introduce naive cattle to theileria areas in late autumn and winter, presumably because the infection challenge is not as great as during spring and summer.

When buying cattle for introduction into areas where theileria is present, it is certainly safer to buy cattle that also come from an infected area, as they will generally already be immune. If you plan to buy an expensive animal from an inland stud, check the insurance policy carefully to see if death from theileriosis is covered if theileriosis was considered to be endemic on the purchaser's property.



Cow with Bovine Johnes Disease

Bovine Johnes Disease: a reminder

Bovine Johnes Disease (BJD) causes intractable, fatal diarrhoea in cattle. BJD has a much higher prevalence in dairy herds in Victoria than in dairy herds in the Hunter LLS districts. If BJD is detected in a beef herd in NSW, that herd will generally be placed in quarantine, with sales direct to abattoir the only permitted cattle movements off the affected property. If BJD is detected in a dairy herd in NSW, the herd is assigned a Dairy Assurance Score (DAS) of one (1), limiting marketing opportunities.

Dairy farmers considering buying cattle in Victoria should be aware that Victorian dairy cattle with a 'Non-Assessed' status for BJD generally have a much higher risk of BJD infection than 'Non-Assessed' dairy cattle sourced from dairy holdings in the Hunter LLS. Dairy farmers for whom BJD status is important (now, or in the future) should carefully assess the risk of BJD before buying Victorian cattle.

Beef cattle farmers who buy cross-bred cattle from saleyards should also be aware that they may unknowingly be buying dairy-cross cattle. While BJD prevalence in dairy herds in the Hunter LLS is low, there are a number of infected herds. Farmers may legally sell cattle through the saleyards, as long as they provide a 'Dairy Assurance Score certificate' stating that the cattle have a DAS of one (1). It is the buyer's responsibility to make themselves aware of the DAS of the cattle being sold to avoid introduction of BJD. However, when we phone these buyers to advise them of the implications of introducing infected 'dairy' cattle onto their 'beef' properties, many are unaware of what a 'Dairy Assurance Score' means, and some have no idea that the cattle they have bought are dairy cattle.

More information:

Cattle buyers seeking more information about the national BJD management program can visit the Animal Health Australia website: <http://www.animalhealthaustralia.com.au/programs/johnes-disease/bjd-home-page/managing-bjd/> or call the Hunter LLS.

Testing for spring worm burdens

Worm burdens can appear quite suddenly in spring and it is a good time to consider if sheep need drenching by checking worm levels with a worm test.

A worm test is essential for correct, timely and cost effective drenching decisions. Drench resistance is increasing throughout all areas of Australia. Resistance is now common to Benzimidazole, Levamisole and combinations of these, Macrocytic Lactones, Moxidectin and Closantel drenches. The resistance profiles change per farm and across haemonchus and scour worms.

Due to this ever increasing drench resistance problem worm treatments administered by producers can fail and it is essential that producers know which drenches are effective on their farm. The most

expensive drench is the one that doesn't work. Generally, combinations of unrelated drenches are more effective, and rotating between drench types within a season can slow resistance development.

To assist producers with when to drench and what compound to use, a range of testing options are available.

The haemonchus dipstick test is a useful quick, interim, on-farm test to detect rapidly developing barbers pole infections and is suitable for use between normal worm egg counts.

The dipstick test can detect blood loss in sheep faeces caused by immature barbers pole worms one week before they start to lay eggs but when they are already causing disease in sheep. This makes it useful when infections start to develop rapidly during warm wet weather.

This test, however, only detects barbers pole worm infections by an indirect method as it detects blood in sheep faeces. If used, it should be done in addition to more comprehensive laboratory faecal worm egg counts and larval cultures to identify the full spectrum of worm burdens which can occur.

The wormkill program has few fixed drenches apart from a drench for lambs at weaning. In addition, use liver fluke treatments (1-3 times a year) on fluke affected properties. Using a worm test at other times first to measure the actual worm burdens in your sheep is suggested. A worm test is relatively simple to do and can be very cost effective if it shows drenching is not required at that time.

It involves taking faecal samples from a representative sample of sheep and sending these to a laboratory to count the eggs. The egg numbers indicate the level of worm burden. It is also worthwhile getting the laboratory to culture the sample so that the eggs hatch and the larvae can be identified further into the species of worm, i.e. barber's pole worm (*Haemonchus contortus*), black scour (*Trichostrongylus* spp) etc. This is the first and most simple step to take to understand the worm profile on your farm.



This is an important step as otherwise you may be drenching when not required. Apart from wasting money, this can contribute to developing drench resistance on your farm.

Drenching is generally recommended when barber's pole worm eggs are at 600-1000 eggs per gram (epg) and scour worms are at 200-400 epg. The condition of your sheep, feed levels, your approach to risk and the frequency which you worm test will determine whether you use the upper or lower limits.

The next step is a DrenchCheck-Day 10. This should be conducted occasionally to identify if the current drench you are using is successful. An effective drench achieves a greater than 95% kill of worms which is assessed as a 95% reduction in faecal worm eggs. Anything less than this and the worms on your property are resistant to the drench. The DrenchCheck is done by taking a faecal sample from a representative section of your flock on the day of drenching and then a second faecal sample 10-14 days later to check the level of worm egg reduction and worm kill achieved by the drench.

DrenchTesting is the third type of testing. This should be conducted on sheep farms every three years to monitor changes in resistance levels. A DrenchTest assesses the efficacy of drenches you are considering using on your farm for the following 2-3 years. This is a coordinated testing program that tests a range of drenches for their effectiveness on the particular worm profile and worm genetics that reside on your farm. Every farm has a different pattern of drench resistance based on the drenching history of your farm and the farm of any introduced sheep.

Making sensible choices about which drench group or combination drench to rotate through is only possible if you know which drenches are effective on your property.

Contact your LLS District Veterinarian or local veterinarian if you would like help with designing a worm and drench testing program for your farm.

More information:

Wormkill – the basics:

http://www.dpi.nsw.gov.au/__data/assets/pdf_file/0007/365956/WormKill-the-basics.pdf

Testing drench effectiveness:

www.wormboss.com.au/tests-tools/tests/testing-drench-effectiveness.php

Drench resistance:

www.wormboss.com.au/programs/nsw/managing-drench-resistance.php

Lead poisoning risk on farms

Cattle producers are warned of the risks of lead poisoning from discarded batteries and encouraged to take steps to protect their stock.

LLS veterinarians have been diagnosing lead poisoning as a cause of cattle deaths on an occasional, but regular basis.

The source of the lead is invariably old batteries found in farm tips or around sheds. Cattle are more susceptible to lead poisoning than other livestock. Cattle are at most risk of lead poisoning due to their inquisitive nature and tendency to 'taste test' items such as old batteries, flaking lead paint, sump oil, ashes, diesel and just about any other potential lead source they come across.

Often the first sign of lead poisoning is finding dead stock. Where affected animals are observed alive, they show signs of depression and are unresponsive to their surroundings. Affected stock are often blind and may walk aimlessly, eventually stumbling into fences or other obstacles, before becoming comatose and dying. Finding dead cattle against a fence line would have lead poisoning as a prime suspect.

Treatment attempts are invariably unrewarding.

Unacceptable lead levels can persist for many months in the liver and kidney of stock that have recovered from lead poisoning.

Ensure you look around your sheds or in paddocks where stock are grazing, and remove any batteries.

While checking for lead poisoning hazards, consider reviewing the security of other farm areas that offer potential stock poisoning risks – including chemical stores, chemical handling areas, spray gear and stores of treated seed grain.

Ensuring that stock remains isolated from these hazards will reduce the risk of loss from accidental poisonings as well as keeping them contaminant free.

Upcoming events

Date	Event	Location	Phone
5 & 6 November 2014	Seasonal conditions workshop	Merriwa and Singleton	6542 4444

Contact Local Land Services:

Your local District Veterinarians are:

Lower Hunter

Digby Rayward - Paterson
Phone: 4939 8966 or 0427 493 617

Kylie Greentree - Maitland
Phone: 4932 8866 or 0428 498 687

Upper Hunter

Lyndell Stone - Scone
Phone: 6545 1311 or 0427 322 311

Manning - Great Lakes

Jim Kerr - Wingham
Phone: 6553 4233 or 0429 532 855

Keep up to date with current Hunter LLS news and events on the Hunter LLS website.

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