Dry weather challenges for livestock health

Unfortunately the promising start that spring initially offered hasn’t held out in many areas. While storms have provided some welcome rain it is patchy at this stage.

Pastures that are lacking in bulk and low in protein and energy make it difficult to keep stock in good condition but can also negatively affect the resilience of stock to disease.

When feed conditions deteriorate livestock health issues can emerge. Dry weather can be accompanied by an increase in plant poisonings as stock chase green feed and common cattle diseases such as pink eye, buffalo fly, three day sickness and worm burdens can cause extra issues in herds affected by the current conditions.

Good nutrition is a fundamental requirement to help stock cope with every day disease challenges.

Producers should be vigilant in monitoring stock condition and providing cattle with extra help when pasture conditions are tight. Being mindful of a few key areas can make a lot of difference;

**Internal and External parasites** - While hot dry weather can reduce worm egg and larvae levels on pasture, parasite burdens in cattle may be elevated.

Conducting a faecal egg count of stock less than 12 months of age to assess worms burdens and if required administering an effective drench can help stock cope. Cattle older than two years generally don’t require drenching. However, first calf heifers, bulls and stock in poor condition may be an exception to this rule.

**Poisonous plants** - Assessing the risk of stock grazing poisonous plants, often found along streams, riverbanks and rougher paddocks, is another key area. Green cestrum, mother of millions and bracken fern are key culprits that can present as attractive green offerings to hungry stock, but will result in stock deaths.

**Preventative vaccinations** - Making sure stock are up to date on necessary and optional vaccinations is important. As stock graze closer to the ground they can pick up the spores responsible for blackleg, increasing the risk of cattle deaths from this disease. Black leg and other clostridial diseases are preventable by ensuring stock are up to date with 5 in 1 or 7 in 1 vaccines.

Hot dry dusty weather, flies and cattle browsing rougher fodder can also increase pink eye issues. Pink eye is a very painful infection of the eye. The infection can spread rapidly with a large proportion of the herd being affected. If untreated, the animal can lose sight and the eye can rupture. Affected weaner calves can also lose body condition.

Monitoring for pink eye and providing early treatment is important. Treatment revolves around the use of eye patches and specific antibiotic eye creams available from your private veterinarian. Vaccination against pink eye can substantially reduce the severity and incidence in cattle, but should be completed 3-6 weeks before the start of cases.

Given that conditions presently favour insect proliferation in Queensland, it wouldn’t be surprising if other seasonal diseases spread by insects (Akabane and Three Day Sickness) make their way south to us this summer. Additionally, buffalo fly might also appear again this year.

**Supplementary Feeding** - Feed supplementation or reducing your stocking rate may also be required depending on your situation. If considering feed supplements they should make up for the main paddock deficiencies. Identify the most limiting component (energy or protein) and provide a supplement, which contains high levels of this. If feed is low (<7cm high) cattle can not physically consume enough to meet maintenance needs. Hay or silage may also be required.
Sheep and goat information session

An information session was held in Tocal recently for sheep and goat producers in the Hunter. We were fortunate enough to have Stephen Love as our guest speaker. Stephen is the NSW State Worm Coordinator and Parasitologist from NSW Department of Primary Industries.

Stephen discussed worm control techniques such as cross grazing, paddock rotations, spelling paddocks, cross grazing with other species including cattle and horses, and the importance of genetics and good quality nutrition. Drenches and drench resistance were also discussed along with the importance of regular faecal egg counts and the correct times to drench. Local Land Services provides Faecal Egg Count Kits which you can collect from any office to use on your stock.

As the weather gets warmer and if we get some rain the environment will be ideal for the Barber’s Pole worms to reproduce and affect your sheep and goats. Not only should you do regular faecal egg counts but it is a good idea to keep an eye out for clinical signs seen with internal parasites. Signs include pale mucus membranes around the eyes indicating anaemia, a bottled jaw, loss in condition, scours (depending on the worms) and lethargy.

If an anaemic animal is placed under any physical stress they may not be able to cope and can die suddenly. It is important to remember that every property is different and worm control strategies vary from season to season, as do drench usage and the techniques incorporated onto each farm to decrease exposure to worm larvae.

Further information:
If you would like to be notified of other updates or events related to sheep and goats send your contact details via email to kylie.greentree@lls.nsw.gov.au

Photosensitisation

With the recent dry weather, stock are at risk of grazing plants they wouldn’t normally eat. This is creating a higher than normal incidence of plant associated health issues across the region. Veterinarians have diagnosed several cases of Photosensitisation of recent weeks.

Photosensitisation is an ailment in which the skin becomes abnormally sensitive to bright sunlight after stock have eaten certain toxic plants. Severe skin damage and even death may result. It can occur in one of two ways:

- **Primary photosensitisation** – where livestock stock eat plants containing light sensitive substances.
- **Secondary photosensitisation** – where livestock eat plants that cause liver damage, resulting in difficulty excreting breakdown products from chlorophyll metabolism.

In some instances the exact cause is unknown.

Only those areas exposed to sunlight will be affected, that is, non-pigmented skin with little hair or wool cover. In cattle, damage tends to be limited to the white areas with sparing of the coloured areas being characteristic. Skin damage occurs along the back and on the sides of the udder that are exposed to the sun. In sheep, the face, ears and muzzle are the worst affected areas; however, recently shorn sheep can be affected over the whole body.

The skin becomes red, weepy and swollen. Swelling causes the ears to droop and eyelids to close. There may be swelling under the jaws. Swollen lips make it difficult for the animal to eat. In the most severe cases the surface skin may crack, die and turn black. There is intense irritation and pain. Animals will be agitated, scratch and rub against fixed objects, shake their head, seek shade and lose their appetite. Affected cattle will have a sharp drop in milk production. Cows with their udder affected will often kick at their belly and seek relief by standing in a dam.

Depending on the cause animals may or may not respond well to treatment. Blood tests may assist in assessing whether liver damage is present. If liver damage is severe they may progress to jaundice and die.

It is important to remove animals from affected pasture and protect from the sunlight as much as possible. Feeding hay or feed with as little green colour as possible can aid with recovery.

Common plants causing photosensitisation include grazing of canola, kale, grazing oats, medics and Lucerne; St John’s wort (Hypericum perforatum) and buckwheat (Polygonum fagopyrum); Hairy panic, Heliotrope (Heliotropium europaeum), Paterson’s curse (Echium plantagineum), Lantana (Lantana camara), blue green algae and smart weed (Persicaria spp).
Enterotoxaemia (Pulpy kidney)

Enterotoxaemia is an acute poisoning condition caused by the bacterium Clostridium perfringens type D. This bacterium is a normal inhabitant of the intestine but is usually present in low numbers. Sudden changes in diet such as the occurrence of a spring flush of pasture or commencing grain feeding enables the bacteria to multiply rapidly and produce a toxin which kills the animal.

It is often the best animals in the group that die of enterotoxaemia, as they are the greediest eaters. Enterotoxaemia deaths can easily be confused with bloat deaths because affected animals often bloat terminally, and their carcases typically blow up rapidly.

This has led to the misconception that 5-in-1 vaccine is protective against bloat. This is not the case. Bloat and Pulp kidney are two different diseases.

5-in-1 and 7-in-1 vaccine protect livestock against enterotoxaemia, as well as several other clostridial diseases including tetanus and blackleg. However, the protection offered by these vaccinations against enterotoxaemia may only last for a few months (check the label). It is therefore important to plan giving booster 5-in-1 vaccinations to your cattle/sheep/goats two weeks before you plan to expose them to a change of diet.

Ideally, annual 5-in-1 boosters should be timed to occur in late winter in order to protect livestock against a sudden flush of feed in spring. An added benefit of vaccinating your winter/spring-calving cows in winter is that they will confer good Colostral immunity to their calves against blackleg until the calves are old enough to be vaccinated themselves at about 6 weeks of age.

Please ensure your stock are up to date with their vaccines and protected against clostridial disease. It is one of the cheapest forms of insurance you can find!

Further information:


Bushfire Preparation

As the summer weather warms up and feed dries off it is important to make sure you prepare in case of bushfire/grassfires affecting your property. Frequent storms have increased the risk of lightning strikes starting grassfires and there is also the risk of haystacks and compost/manure piles self-combusting.

Planning ahead includes:

- Ensure property has a PIC and livestock numbers are registered with LLS- this gives valuable information to emergency services in times of crisis.
- Livestock identification with NLIS tags enables location of owners if stock are roaming after fires.
- Create a heavily grazed area where stock can be moved during a bushfire. This could be a grazed, slashed or green paddock or a laneway, with access to water (preferably dam).
- Consider having a central laneway to assist moving stock before a fire threatens.
- Identify a possible containment area where stock can be fed after a fire. In addition to containing stock, this also reduces the risk of weed spread across the property following a fire.

Cattle are generally quite good at avoiding fire if they have room to move. In most cases, it is sufficient to move them onto a low risk paddock if threatened by fire.

Sheep have a strong flocking instinct that may prevent them moving away from an oncoming fire. Moving them onto a low risk paddock is better than no action at all, but it is far better in most cases to move them into a confined area that is low risk - such as sheep yards surrounded by a bare area. Sheep in full wool manage better than newly shorn sheep.

Goats have a strong flocking instinct like sheep but are more agile and thus more likely to escape a fire if they do not succumb to heat stress first. Moving them onto a low risk paddock or opening internal gates to give them a greater range of access to your property is better than no action at all.

Horses - if you are staying on the property during the fire risk, move your horse into a safe yard area with water or a bare paddock with room to move. Some form of identification e.g. microchip or even a sticky label stuck into mane with owner details and contact can be helpful.

After the fire injured/burnt animals need careful assessment with respect to survival and welfare. Seeking veterinary assistance in this process is important.

Further information:

Tick-associated diseases

Tick paralysis

Tick paralysis is caused by a toxin injected by the paralysis tick (Ixodes holocyclus) when sucking blood from livestock, pets, or people. Bandicoots and other small marsupials are the natural hosts for the paralysis tick. Tick paralysis problems in livestock are consequently most common in bushy or scrubby paddocks and long pasture which provide shelter for these host animals.

Spring is a high risk season for tick paralysis. Ticks are active by early spring after a period of dormancy in winter. In early spring there are plenty of young calves running around whose small body size makes them susceptible to the effects of tick paralysis.

Unfortunately, protection of the very young calves that are most susceptible can require preventative treatment almost immediately after birth if they are running in a high risk paddock. Such early and repeated intervention is not always feasible in extensive livestock operations. Calving paddocks should be free of high risk scrubby areas in order to reduce calf losses.

There are pour-on medications, sprays and insecticidal ear-tags available for protection of young livestock. Private veterinary practitioners can provide antitoxin treatment for affected livestock and pets.

Further information:

Theileriosis

Theileriosis is a disease of cattle caused by a protozoan parasite carried by the common bush tick (Haemaphysalis longicornis). Cattle become infected when bitten by an infected tick. Lice, biting flies and use of a common needle and syringe may also play a role in spreading the disease. After an animal is infected, the theileria parasite multiplies over a period of weeks, resulting in the destruction of red blood cells. If too many red blood cells are destroyed, the affected animal will become pale and weak (anaemic), and may even die.

Badly affected animals cannot tolerate exertion, and will typically lag behind the mob and spend most of the time lying down. They often seek shade.

Theileriosis is endemic in the coastal districts of the Hunter Local Land Services region. Cattle bred in these districts are generally exposed as calves, and are immune to theleria by 6 months of age. Calf losses do occur on some properties, most commonly between 6 and 12 weeks of age.

Theileriosis occurs sporadically in the Upper Hunter Valley, with cattle deaths having been recorded from Maitland to Scone. The further you move up the valley from the coast, the less likely it is that the cattle are immune.

Cattle introduced into the coastal districts from areas further west (e.g. tablelands or west of the Dividing Range) are at risk of theileriosis. Spring seems to be a particularly high risk time to introduce naive cattle, with clinical disease often occurring 6-8 weeks after arrival. Calves and pregnant females are at greatest risk of developing severe disease.

None of the treatments that have been used to treat theileriosis have produced convincing results (other than blood transfusion). In fact, the exertion required of affected cattle in moving them to cattle yards for treatment has sometimes been responsible for killing cattle that might otherwise have survived if left quietly in the shade. If broad-spectrum antibiotics such as oxytetracyclines can be administered without causing the patient undue stress, their use can probably be justified in preventing secondary infections (particularly pneumonia). Otherwise, the best approach is merely to provide the animal with easy access to water, food and shelter. Steep dam banks and boggy dam edges can prove fatal to anaemic cattle.

Further information:
Bluetongue virus exclusion at Tocal

Hunter Local Land Services District Veterinarians and Biosecurity staff recently responded to a concerning presentation of respiratory disease and intense inflamed nasal tissue in sheep, potential hallmarks of Bluetongue virus infection in sheep.

This required immediate action to exclude an exotic strain of Bluetongue virus especially since, we were aware that the sentinel herd had recently confirmed the usual non-disease causing varieties of Bluetongue were currently circulating.

As is often the case, these unusual and concerning disease issues can occur at night and on weekends. Staff responded to late night calls and conducted testing under torch light and over the next days. An Australian alert was raised as a precaution- luckily the virus was non-pathogenic, a pathogenic strain of virus would have had trade implications.

This case proved very interesting as the positive bluetongue blood tests in two sheep that were showing clinical signs may have been confused with clinical bluetongue in sheep. Fortunately, through the combined actions of the Hunter Local Land Services District Veterinarians, biosecurity officers and the NSW Department of Primary Industries State Laboratory at Menangle we were able to exclude Bluetongue Virus as the cause of the respiratory disease.

Bluetongue disease is a non-contagious, insect-borne, viral disease of ruminants, mainly sheep, however cattle and buffalo have a role as a maintenance host. There are many serotypes of BTV worldwide, but fortunately only a limited range of the non-disease causing types occur in Australia. Bluetongue disease has not been observed in commercial flocks or herds of any susceptible species in Australia. Thus the disease causing strains are exotic to Australia.

Major clinical signs include high fever, nasal discharge, noisy breathing, excessive salivation and swelling of the face, tongue and lips which gives the tongue a blue appearance.

Supporting Hunter beef producers

Several information days for new landholders were recently held at Tocal and Wingham with abridged half day sessions at Gloucester and Buladelah. ‘The Beef Basics’ workshop is designed to assist new landholders in understanding some of the basics of beef production.

The combined practical and theory session provided participants with introductory information on many aspects of beef production from buying rural land and carrying capacity to understanding their obligation with regards to Property Identification Codes and National Livestock Identification System (NLIS) database transfers to maintain product traceability.

Pasture quality, livestock production and managing the winter feed gap were also discussed as well as protecting a farm’s biosecurity, wild dog management, livestock health, welfare and common disease issues to watch out for. Participants were able to learn practical livestock handling and husbandry skills such as moving cattle safely in yards, vaccinating and drenching.

The workshop aims to ensure new producers are aware of their responsibilities with regards to meat and milk withholding periods for chemicals and treatments they may use, ensuring restricted animal feeds aren’t fed to stock and employing good biosecurity practices to guard against exotic and emergency diseases.

New landholders can make a valuable contribution to a region, bringing resources and off-farm skills to the industry. Whether a producer has 10 or 1000 head we must all understand we are part of a community and industry that many rural people rely upon. We have an obligation to ensure we all work to maintain our ‘green and clean’ domestic and international livestock reputation.

Feedback indicates that the workshops hit their mark with most rating the day highly.

Further information:

If you are interested in attending a Beef Basics information session in 2017 please contact Lyndell Stone at Wingham or Digby Rayward at Tocal.
Insect borne virus surveillance

Disease surveillance to protect and advance Australian agriculture is one of the main roles of Local Land Services District Veterinarians and biosecurity officers. We work with producers, government and industry to keep NSW properties free of disease and safeguard trade and market access.

Hunter Local Land Services monitors five cattle sentinel herds at Taree, Tocal, Singleton, Scone and Merriwa for several economically important insect borne viruses through the National Arbovirus Monitoring Program (NAMP). This federal and state government collaboration detects changes in the seasonal and year to year distribution of several viruses that infect livestock. In total there are 40 sentinel herds located throughout NSW and 90 nationally.

Blood samples are collected from each herd up to eight times a year by Hunter Local Land Services District Veterinarians to monitor the distribution of Bluetongue and Akabane virus. Hunter Local Land Services appreciates the involvement of our participating farms in this program.

This program is part an integrated disease surveillance system that provides an important early warning system to detect incursions of exotic strains of Bluetongue virus (BTV). Hunter Local Land Services District Veterinarians recently undertook a late night Bluetongue virus disease exclusion. See page 5 for more information.

Hunter Local Land Services supplements the NAMP program with additional disease surveillance for Bovine Ephemeral Fever (BEF) through liaison with industry north of the region and strategic on-farm surveillance.

Bluetongue and Akabane viruses are transmitted by the Culicoides midge and BEF virus is mainly transmitted by the mosquito Culex annulirostris.

BEF, commonly known as Three Day Sickness, historically arrives in our area in Late summer. Unusually high mosquito numbers in Qld in October hinted toward an earlier start to BEF season this year. However, an early southward progression of the virus has held off at this stage.

Last year was a particularly widespread BEF season for NSW. Cattle infected through previous exposure develop long lasting immunity. However, any cattle born or introduced after last years’ BEF season, and older than 6 months of age when BEF arrives, should be monitored as they may be naive to the virus. Infected cattle suffer a fever, and can become very sore and stiff and unable to stand until the pain and inflammation subsides. Heavy and well muscled bulls, steers and pregnant cows are often the worst affected. Infected stock require nursing care (water, food and protection from heat/sun) and anti-inflammatory medication. An effective vaccine is available if given before the disease arrives.

The NAMP and wider government veterinary services provide credible data on the nature and distribution of specific diseases to assist producers and to underpin trade confidence.

Further information:

An interactive map showing current Bluetongue Virus surveillance and transmission zones for use by the livestock industry and exporters, along with further information on NAMP is available online at: https://www.animalhealthaustralia.com.au/what-we-do/disease-surveillance/national-arbovirus-monitoring-program/.

If you suspect an emergency animal disease please contact your local District Veterinarian or the Emergency Animal Disease hotline on 1800 675 888.