Animal Health Update

Hairy Panic Toxicity
by District Veterinarian Matt O’Dwyer

Plant poisonings in sheep grazing ‘Hairy Panic’ (also known as Witchgrass) is on the increase in the Riverina and this is associated with summer rainfall events. Hairy Panic is a summer perennial grass that is generally short lived. Hairy Panic is drought tolerant and grows up to half a metre high and has hairy leaves, hairy leaf sheaths and nodes. Summer rainfall events have given rise to increased amounts of Hairy Panic in the paddock. It is also a common weed growing amongst crop stubbles. Hairy Panic rapidly becomes established after these periods of summer rainfall allowing for larger quantities to be grazed. This is associated with an increase in plant poisonings, especially in younger sheep. While Hairy Panic does have moderate grazing value (12% protein when young and lush) it should NOT be grazed by younger sheep, especially lambs, which are highly susceptible to poisoning. Hairy Panic should not be grazed when it is a dominant plant in the pasture making up a large part of the bulk of available feed (>50%).

The first signs of photosensitisation (see figure 2) on the sheep are seen in those areas of the sheep that are exposed to direct sunlight. These areas include the ears (droopy ears occur), lips, eyelids, vulva and generally around the muzzle and nose (see figure1). These areas lose skin and are reddened or blackened with crusty scabs. The eyes can become very swollen and weepy with a yellow fluid. Sheep that have been recently shorn can also be affected around the body. These animals will become agitated and restless, shake their heads, actively seek shade and will not want to eat. When the head is severely affected it is commonly referred to as ‘Big Head’ or ‘yellow big head’ because of the weeping and jaundice. The eyes and gums can become yellowed (jaundiced) due to the liver damage. Sheep that recover may lose one or both ears or possibly have permanent eye damage.

Hairy panic can be sprayed with herbicide and grazed after it has browned off completely.

In all cases of photosensitisation the animal must be protected from direct sunlight and removed off the affected paddocks. Ideally the animals must be placed into a large darkened shed. There must also be a good supply of fresh water, cereal hay or lower quality pasture hay with no green Avoid higher protein feeds and green feeds because the liver damaged animals...
are unable to metabolise these. Call a District Veterinarian at your Local Land Services office for assistance with diagnosis and treatment.

Caltrops as a pest weed to livestock
By District Veterinarian Timothy Biffin

With recent rain events in the Riverina many producers have reported heavy growth of *Tribulus terrestris* – more commonly known as Bindii, Caltrop, Cat’s head, Goat head or Tackweed (see figure 1). This invasive plant is somewhat palatable to stock, especially when there is fresh green growth present on the plant. Defined as a summer growing annual, Caltrop remains to be a current problem in the Riverina.

Caltrop presents serious animal health risks and production difficulties. The foliage of the plant itself contains two known types of toxins, one of which causes severe liver damage. As a producer you may notice “poor doers”, agitation, itchiness, and photosensitization in the stock. Photosensitization is a condition where animals are hyper-reactive to UV light causing them to become severely sunburnt (see figure 2). Much less commonly, Caltrop may cause an irreversible ‘staggers’ condition unique to sheep in NSW. The ‘fruit’ of Caltrop is very characteristic and easily recognized (see figure 3). As livestock come into contact with these burs it may cause lameness, foot abscess, fly strike and degradation of wool production. Some texts also reference that Caltrop can cause a blood toxicity, however, this is more likely relating to other species of *Tribulus*.

Unfortunately disease in livestock cannot be cured and prevention of disease is only via removal of exposure to the plant. Any animals grazing significant amounts of Caltrop or appear to be showing any symptoms should be removed from the pasture immediately. If you suspect or are concerned about toxicity in livestock seek veterinary advice. Useful resources: your private practice veterinarian or local DPI/LLS veterinary officer.

As with all weed species, the key to minimize production loss is with weed management, in particular prevention. *Tribulus spp.* will only develop an infestation with the presence of seeds (i.e. burs). Therefore all efforts should be taking to minimize the spread of seed:

- Introduced stock from areas you suspect to be infested with Caltrop should be grazed on established perennial pasture, and the paddock monitored for any new weed infestations.
- Minimise the movement of stock or machinery through Caltrop infested pastures.
- Clean machinery, vehicles and personal clothing prior to moving out of Caltrop infested pasture.

In late spring and summer producers should be actively monitoring pasture for the present of *Tribulus spp*. If identified, the weed should be acted on earlier rather than later via a combination of methods: predominantly cultivation and chemical control. Agronomy advice may be sought to identify the most effective means of control for an individual property. Useful resources include: your agribusiness supplier, local DPI or Local Land Services agronomist, and publications such as *Weed Control in Winter Crops and Weed Control in Lucerne and Pastures*, both available from Industry & Investment NSW.

The most effective means of preventing Caltrop infestation is via pasture/crop competition. This emphasizes the importance of good crop management to sustain perennial grass species, especially during drought periods.

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*Figure 1*
*Tribulus terrestris* – more commonly known as Bindii, Caltrop, Cat’s head, Goat head or Tackweed.

*Figure 2*
Photosensitisation in sheep
Protect against Pestivirus in cattle by District Veterinarian Gabrielle Morrice

Pestivirus is a relatively common virus in cattle, which is present in a large percentage of cattle herds. Most cattle producers are probably living with it in their herds, along with the potential effects on their herd’s productivity.

The disease:

It will affect herds in a mixture of ways; common problems are infertility or abortions/ stillborn or weak calves. Calves can also be born apparently normal but persistently infected (PI) with the virus, which means that they are infecting other cattle in the herd. These PI cattle can then go on to develop mucosal disease, where they lose weight and often scour due to damage to the gastrointestinal tract. There is no cure for this disease and these animals usually die prior to yearling age (although they can live longer). Whilst still alive and in the herd they will spread the disease to other susceptible cattle. If they survive to calf-bearing age, all of their calves will be PIs. Non-pregnant cattle infected after birth can have a range of symptoms from virtually no signs, through to transient diarrhea or immune suppression causing illness or even death from secondary infections. In feedlot situations, the disease can have a big impact on the incidence of disease, weight gain, drug costs and death. Cattle that are infected during pregnancy are also susceptible to the full range of infertility/ abortion or stillbirths, OR may give birth to PI calves.

Herds that have no virus at all are relatively uncommon. These herds are at high risk of a disease and infertility outbreak if their cattle are ever exposed to the disease (stray cattle, agistment, introductions that are carrying the disease).

Diagnosis:

Pestivirus can be diagnosed by a variety of means including blood tests, ear notches and hair samples. Blood tests can also be used to screen cattle to determine if infection is present within a herd and how long since the cattle were exposed to the disease. Stud cattle are now often tested prior to sale to ensure they are not persistently infected with the disease.

Other diseases can have similar signs to the various ways that pestivirus presents itself, so it is important to have the disease properly investigated by a vet.

Treatment:

There is no treatment for pestivirus. Secondary infections occurring with the transient disease may require antibiotic treatment.

Prevention

Prevention can take a number of forms and deciding on which one to use will depend on individual situations and disease prevalence. There are pros and cons with each form taken. There is not a one-size-fits-all solution. Ideally, undertaking some testing first will assist in the decision of which form of prevention to use.

Pestivirus can be prevented by the use of a vaccination. This can take the form of full herd or partial herd vaccination. Heifers are the most susceptible group and these animals need to be vaccinated twice prior to joining (with the second shot ideally timed for 2-3 weeks pre-join). Following this, a single annual booster vaccination can be used prior to joining in older cattle. Knowing whether to use full or partial herd vaccination is best decided by looking at herd immunity profiles and management.

Other methods include exposing unjoined heifers to PI cattle. Known as autovaccination, this method has been shown to be ineffective in providing full immunity across the whole group. It will also lead to the development of transient disease of varying severity in susceptible cattle. PI cattle showing signs of the
disease can rapidly become very poor and these animals should not be kept for welfare reasons.

Removal of PI cattle from the herd: this may be difficult to achieve in full and if done will gradually increase the susceptibility of the herd to this disease.

Biosecurity: this method involves maintaining a closed herd and only using tested free introductions such as bulls, minimize over the fence contact and vaccinate any cattle that will go off the farm and be returned (e.g. for agistment or shows).

Pneumonia
by District Veterinarian Rahul Shankar

Over the past few months there have been increases in the number of confirmed pneumonia cases around the Riverina. Post-dipping aspiration pneumonia, acute pleuropneumonia (infection of the lungs and lung space) and summer pneumonia have been the causes of mortalities in cases worked up. Summer pneumonia is most commonly seen in the summer months and the condition is often sub-clinical with no obvious clinical signs elicited by affected animals.

Pneumonia is an infection and inflammation of the lungs. If the pneumonia is severe, or develops in a certain way, the inflammation can extend to the chest cavity and cause parts of the lungs to stick to the chest wall; this is referred to as pleurisy. Pleurisy is a common post-mortem finding in animals affected by any form of pneumonia. Onset can be either rapid or slow and is most commonly seen in lambs, weaners and hoggets. Pneumonia is a complex combination of multiple factors involving: a primary or secondary bacterial infection (or a fungus, parasite or virus) coupled with adverse environmental conditions and poor sheep/lamb immune systems (from stressors).

Clinical signs of animals affected by pneumonia are: Coughing, running/frothing at the nose, lethargy, inappetence, lying down (moribund state). Affected animals are typically separated from the rest of the flock and can be easily caught and restrained.

Treatment for confirmed cases of pneumonia involve administering prescribed anti-biotics, minimizing stress and ensuring that affected animals are kept away from common watering sources and feeders where possible as the disease is contagious and has the possibility of spreading in a flock.

Due to the complex nature of pneumonia and the multiple factors involved in the development of pneumonia no single management strategy can be used to prevent the disease. Some recommendations to reduce the incidence of pneumonia occurring in a flock are:

- When drenching/dipping: avoid plunge dipping thirsty sheep
- Be careful not to lift any animals head too high when drenching.
- When yarding/musterering, avoid overcrowding, avoid yarding in extreme temperatures (hot or cold)
- Allow stock to walk back at their own pace to the paddock after yarding.
- Avoid yarding animals in yards when the conditions are hot, dry and dusty.
- Avoid or minimize mixing mobs where possible.
- Ensure good worm control and appropriate vaccinations have been given.
- Avoid sudden diet changes
- Avoid and address any mineral nutrition deficiencies

Yellowish discoloration, with a 'pus' like consistency on the surface of the ribs, indicative of an infectious process, in this case bacterial pneumonia.

Evident pleurisy, depicted by the pieces of lung attached to the ribs.
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