Animal Health Update

Lupinosis risk
District Veterinarian Emily Stearman

Following the 2016 harvest, cases of Lupinosis in stock were seen across the Riverina, up to and including May of this year. Sporadic, and in some cases large, rain events across the Riverina have coincided with this year’s harvest. Rain events in the 4-6 weeks leading up to and months following lupin harvest can result in the fungal growth on not only dead plant material, but the pods and seeds concurrently. While fungal growth is a normal part of decomposition of plant material or in some cases is inconsequential, growth of Diapothex toxica produces a toxin called Phomopsin. Phomopsin ingested by livestock causes severe liver damage and often results in death. The Phomopsin producing fungus can be visible on the stem, pods and seed. It appears as black leopard-like spots, as demonstrated in the image below.

![Image 1: Affected lupin stalk](image1.jpg)

There are no safe grazing recommendations for stubble affected by Phomopsin producing fungi. If the stubble is affected, grazing should be avoided. If grain from the affected stubble is retained for livestock production, it is recommended that the grain be examined or tested for the fungal toxin. While there are no safe recommendations for grazing seed, the Department of Agriculture and Food Western Australia note that if ≥10% of the seed is affected it should not be grazed.

If poisoning occurs, affected animals may lose condition, develop a stiff gait, become blind or disorientated and are often jaundiced; severely affected animals will die. Reduced pregnancy percentages and losses in wool production have been reported in surviving animals. The best treatment is prevention. If animals develop clinical signs of lupinosis, remove them from the source, provide a low protein feed, and contact your local district or private veterinarian for further advice.

Production alerts
District Veterinarian Tim Biffin

Bloat

With the recent rain activity producers are reminded of the impact frothy bloat can have on farm and the fact that it is common in cattle grazing legume dominant pastures (especially when it is lush). However, as some may be surprised, bloat does occur in sheep, but less commonly.

As many producers would be aware, even moderate percentages of legume (e.g. >40%) in pasture and other lush feeds can present a high risk for sheep and cattle. There are many different ways producers can help to prevent the incidence of bloat in cattle. These include: providing adequate roughage such as hay, utilizing the various commercial forms of anti-bloat...
supplement and never allowing hungry animals to graze high risk pastures.

**Canola**

Self-sown or un-harvested canola can be a valuable feed source but there exists a risk of nitrate toxicity when grazing canola crop paddocks. Ways to manage this include: ensuring animals do not graze the crop when they are hungry, providing ad lib access to hay at all times while grazing the crop, grazing the crop for a few hours for the first 5–7 days to ensure the gradual adaptation to the change in diet and continuing to monitor stock daily.

**Parasites**

Generally, parasites like warm weather, humidity, and rainfall. Please be particularly vigilant for Barber’s Pole Worm (BPW). As most producers will be aware, this worm multiplies rapidly and can cause significant production losses (often including deaths in sheep). Early detection via a faecal egg count (FEC) is required. This testing is easy, cheap (usually starting at ~$40) and kits are readily available at any of our offices and many commercial outlets.

*Quick tips for management:*

- Perform FEC strategically as a matter of routine practice
- Perform FEC on any mobs you are concerned might have worm problems
- Contact your local private or district veterinarian to discuss FEC results
- Check out resources such as [wormboss.com](http://wormboss.com) and develop or refine your on-farm worm control plan

**Photosensitivity in sheep**

**District Veterinarian Kristy Stone**

Plants that cause photosensitivity are starting to cause problems in the area.

Recent rainfall means summer grasses such as *hairy panic* (also known as witch grass) are starting to shoot up. Hairy panic causes liver damage and results in photosensitivity. Hairy panic should not be grazed when it is a dominant plant in the pasture making up over 50% of the available feed. Lambs are highly susceptible to hairy panic so avoid putting lambs onto paddocks containing hairy panic.

Producers should also be mindful when putting sheep in areas with a high level of **Caltop - eg. cathead** (such as sheep yards) as this also causes liver damage and associated photosensitivity.

**Heliotrope** will no doubt start coming up in large numbers soon, especially in crop stubbles. Remember that liver damage caused by toxic plants is cumulative; meaning that each time they graze the plant, the liver damage gets worse and worse. While you may not see issues immediately you may see issues with liver disease and photosensitivity later on. Have a plan for managing these weeds and protect your stock from ongoing liver damage and poor performance.

**St John’s wort** seems to be particularly abundant in the Gundagai region this year compared to last and I have seen it cause some issues. St John’s wort doesn’t cause liver damage but it still causes severe photosensitivity. There is a narrow window when St John’s Wort can be grazed between July and September (for Narrow leaf varieties), after that, toxin levels rapidly increase. The ideal time to spray the plant is between November and January, when the plant is flowering.

Signs of photosensitization include:

- Droopy, swollen ears
- Swollen eyes, muzzle or head
- Jaundice (yellow eyes & gums)
- Shaking head
- Seeking shade
- Crusty scabs
- Blackened skin (particularly ears)
- Sometimes death (due to secondary infection or shock – the skin is an important barrier and when it is severely damaged it affects the animals ability to maintain hydration, body temperature, prevent infection etc.)
Regardless of the cause of photosensitivity, the management is similar. Treatment is aimed at supportive care and includes providing protection from sunlight (in a shed is best), access to fresh water in the shade and moving them off the affected pasture and feeding cereal hay or low quality pasture hay (no high protein feed such as lucerne due to liver damage).

Severely affected animals may need to be treated with anti-inflammatories for swelling and antibiotics for secondary infections. Unfortunately there is no treatment for the liver damage so prevention is definitely far better than cure in these cases!

For more information, or assistance with a suspected case of photosensitivity, please call your District Vet.

**Tips for grazing stubble**

**District Veterinarian Emily Stearman**

High quality stock feed is often a production limiting factor across the Riverina during summer. With the 2017 harvest coming to an end it may be a timely reminder to discuss the grazing management of stubble and dry feed conditions that may ensue.

Stubble provides a good source of roughage but is limited otherwise in its nutrient value, especially once ground grain is grazed out. There are however, things we can do to better utilise this resource which will enable livestock weight gain and clear stubble from paddocks prior to sowing.

The rumen is a large fermentation tank, full of bacteria that have the specialised role of breaking down roughage to provide nutrients to the animal. These bacteria require protein and energy to fulfil their role. When the nutrient value of plant material is limited, the ability of the bacteria to breakdown the plant is reduced. The gut remains fuller for longer as digestion is slowed, the animal then spends less time grazing and two outcomes occur – less stubble is utilised and the animal loses body condition.

Urea and molasses based products provide extra energy and nitrogen to the gut bacteria to support optimal utilisation of stubble and dry feed. These come in wet and dry lick forms as well as lick blocks; more commonly dry licks and lick blocks are used for sheep and liquid supplements used for cattle. Young stock in particular are rapidly growing at this time of year, the quality of available feed without supplementation can result in weight loss during dry months across the Riverina. Supplementation can provide production and economic benefit as well as increase the utilisation of available dry feed.

Care should always be taken grazing pregnancy stock on low quality feed. Appropriate protein and energy supplementation (eg. possibly grain or hay) can help reduce the incidence of pregnancy toxaemia seen on stubble, but these animals should be closely monitored.

**Integrated worm control - how to resist resistance**

**District Veterinarian Courtney Simkin**

Each and every property has is own worm resistance profile. Your farms profile will be based on its drench history and the history of the sheep bought in (whether purchased or agisted).

Any drench resistance currently on your farm cannot be reversed but it can be managed. Each time you use a drench there will be some development of resistance. However having an effective integrated worm control program can significantly reduce the rate of development of drench resistance on your property.

Effective drenches will kill 95% of target worms with a single drench. The only way to test this is a drench test 10-14 days post-drenching and comparing it with a pre-drenching worm test. An on farm drench test should be completed every 2-3 years. As different species of worms can become resistant it is always important to complete a larval differentiation with your worm egg count (WEC).

It is vital to check your flocks WEC and have larval differentiation completed before considering drenching. You may not need to drench your flock or you may only need to use a narrow spectrum drench.
Narrow spectrum drenches are active against certain internal parasites; for example fluke drenches are effective against liver fluke. Broad spectrum drenches will work against multiple species of worms. Different drenches will have different capabilities against each worm species. It is always better to use a narrow spectrum drench when possible (based on WEC and larval differentiation results). Continual untargeted use of broad spectrum drenches can increase the rate of drench resistance on your property.

Drenches should be used in combination or rotated annually. Another area that must be considered when choosing drench is short vs long acting. Short acting drenches kill all the immature and adult worms in the sheep at the time of drenching. Medium and long acting drenches also kill these worms and any new immature worms consumed off the pasture for the length of their persistence. Medium and long acting drenches can have a long tail-end where the drench is at sub-optimal levels. This means that both resistant and partially resistant worms can survive and breed on the pasture. Medium and long acting drenches (such as Avomec Dual or Cydectin Long Acting as examples of these drenches) should only be used in cases of high worm burden pastures when the stock cannot be moved elsewhere. They should not be used as an annual husbandry event as they can rapidly increase the rate of development of drench resistance on a property.

Worm control does not only consist of drenching. Each time you use a drench you will have some resistant worms join your pasture refugia (population of worms on pasture). Having a refugia of naïve worms can dilute any resistant worms that are dropped onto your pasture. Spelling pastures for extended periods (two-six months) and then having a sheep with a moderate worm burden (of preferably naïve worms or worms that have been exposed to a different class of drench) onto the pasture to again dilute the resistance worms.

Prevention is the best method. By working towards a mob of sheep with natural resistance to worms and a strong immune system you can reduce your use of drenches to only critical cases based on WEC’s. When moving sheep between pastures consider what their worm burden is and how much they will contaminate the next paddock. Put your highest risk stock (such as weaner lambs) on to pasture with the lowest burdens of naïve worms. Make sure your mob, especially weaners, have high nutrition levels. The better condition and more mature a lamb is the stronger its immune system and the more resistance it has to worms. Rams can also be selected for worm resistance. Consider the Australian Sheep Breeding Values for worm resistance when purchasing rams. Ewes, after lambs have been weaned, will usually naturally have a reduced worm burden. Weaning lambs at 12-14 weeks can further reduce the level of worm contamination on a pasture. Finally manage and monitor your mob. Regularly check the mobs WEC and use this knowledge to choose whether you need to drench and what to drench with.

Foot and Mouth Disease (FMD) real-time training in Nepal
District Veterinarian Tim Biffin

Foot-and-mouth disease (FMD) is a viral infection that affects all cloven-hoofed animals (e.g. sheep, pigs, cows, even camels). It is exotic to Australia and an incursion of the disease would be devastating to our agricultural sector, with wide sweeping effects to the broader community and our national economy. More about the disease can be read online (http://www.agriculture.gov.au/pests-diseases-weeds/animal/fmd).

I was fortunate enough to have recently been selected for one of the FMD real-time training program* positions, jointly funded by the state Department of Primary Industries (DPI) and federal Department of Agriculture and Water Resources (DAWR). This training involves a 1-week intensive course based in Nepal focusing on early identification, prevention, and response to FMD (if it were ever introduced to Australia). There are preparatory learning modules before the course so that our contact time can be spent focusing on practical aspects; such as visiting farms and inspecting infected animals [don’t worry strict measures were taken over there and on my return to ensure I wasn’t going to spread the disease – I was even specifically targeted and questioned by AQIS at the border!].

Early detection is absolutely critical for disease eradication (if ever present in Australia), and it is a big point of concern for us in Australia. Farmers, agents, sale yard staff, farm-hands etc will most likely observe the initial cases of a disease incursion. NOTE: compared to cattle and pigs, clinical signs of FMD in sheep and goats are usually very subtle and may go

Animal Health Update December 2017
undetected – this contributed to why they had so much difficulty with eradication in the UK in 2001. For these reasons, please report any suspicious animal health issues to the 24hr Emergency Animal Disease (EAD) Hotline 1800 675 888, it is in your best interest! Beyond this, if your producer group or business wishes to discuss measures for EAD preparedness and response measure please contact your relevant district veterinarian.

*Acknowledgements go to the Food and Agricultural Organization of the United Nations’ (FAO) European Commission for the control of Foot-and-Mouth disease (EuFMD), the administrators of the FMD real-time training program.

Image 2: Profuse salivation and a painful lesion on the foot of a FMD infected cow

Image 3: One of our groups, wearing Personal Protective Equipment (PPE) and attending a farm infected with FMD

ANNOUNCEMENTS

We would like to wish you all a very Merry Christmas and a safe and happy New Year.

The offices of Riverina Local Land Services will be closed from Saturday 23 December 2017 and will reopen on Monday 8 January 2018.

If you have a livestock health issue, and it is not an emergency, please contact your nearest private veterinary practitioner.

- If you have a suspect plant or plant disease please ring Exotic Plant Pest Hotline on 1800 084 881
- If you suspect that you have exotic emergency animal disease, please contact the Emergency Animal Disease hotline on 1800 675 888
- RSPCA (For animal welfare emergencies) on 1300 CRUELTY or 1300 278 3589

Riverina Local Land Services
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Please note new office numbers

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