Animal Health Update

**An Interesting case of bloat!**
District Veterinarian Kristy Stone

Three weaner cattle were noticed to be unwell for two days and then died within 24 hours of each other. They were showing signs of lethargy, bloating on the left hand side of the abdomen and one animal was regurgitating water after drinking.

The mobs had been recently moved into the paddock one week prior. They were grazing short, dry pasture and were supplementary fed silage, which they had been receiving for a while. Prior to movement, they were grazing a similar pasture.

An employee had performed a post mortem on two of the cattle and found osage oranges in the rumen of one animal. I completed the remainder of the post mortem on a steer that most recently died and found a 4cm x 10cm firm, partially chewed osage orange lodged in the oesophagus, behind the larynx, which appeared to be causing a blockage.

A blockage in the oesophagus impacts on the animal’s ability to belch, therefore resulting in an accumulation of gas in the rumen causing a gassy bloat. Distension of the rumen compresses the lungs and restricts blood flow to the heart causing death.

I suspect the cattle were attracted to the mild, cucumber-like flavour of the osage oranges at a time when there was no other green feed. The fruit is quite sticky with a very firm, fibrous centre making it a potentially difficult object to swallow. While this sort of bloat doesn’t commonly cause issues in multiple animals, it’s certainly something to keep in mind when grazing cattle around house yards or fruit trees (also remember when grazing around buildings cattle can get into nasty things such as lead batteries!).

Image 1: Osage orange

Image 2: A partially chewed osage orange in the oesophagus. Prior to dissection, a firm mass could be felt lodged in the oesophagus.
Points to consider when feeding pregnant ewes
District Veterinarian Emily Stearman

Prolonged, seasonally dry conditions this year have resulting in an increasing need to supplementary feed livestock across the Riverina. Lambing ewes in particular require special attention at present. Most producers are aware of the increased energy requirement leading up to lambing and during the subsequent lactation period.

Points to Consider:

Limited dry feed available – a roughage source is critical to gut health. The capacity to consume roughage is reduced during pregnancy by increased abdominal pressure from the unborn lamb/s. Low digestibility hay should be avoided; these occupy gut space for prolonged periods of time, further reducing feed intake and therefore available energy. The energy of a feed is calculated on a dry matter basis. High moisture silages are often highly digestible however, the moisture content dilutes available energy. Highly digestible, dry forage is best.

Grain is a concentrated energy source and readily fed with hay. Consideration to the species of grain used is important. In order of risk for acidosis wheat>barley>oats, this can vary between species of each grain such that low husk increases the risk of acidosis regardless of grain type. Legume seed has a low inherent risk of acidosis and can be a safe addition to a grain mix.

Grain can be fed by feeder or trail feeding; introduction to grain within the diet should be gradual. This may result in underfeeding the energy requirement initially but will better support gut health and reduce the risk of acidosis.

Mineral supplementation: Calcium, Calcium, Calcium. Calcium is important for foetal development but essential for effective uterine contractions during birth. A state of calcium deficiency is likely where cereal hay and grains are the primary feed sources. As the season progresses magnesium supplementation will become increasingly important, especially for lactating ewes during winter. Salt based calcium and magnesium licks are recommend ad lib pre-lambing and during lactation.

For specific information on how to improve the feeding regimen in your flock, contact your local District Veterinarian.

Electronic NLIS tags in Victoria for sheep and goats – how it may affect me in NSW
District Veterinarian Courtney Simkin

Shows/events in Victoria

- Sheep or goats attending shows and similar events in Victoria may be identified with a visually readable NLIS (Sheep) ear tag provided the use of such a tag is permitted in the State/Territory from which the sheep or goat was dispatched.

Sheep/goats going to Victoria

- Sheep or goats consigned from a property outside Victoria direct to a saleyard, show or abattoir in Victoria are exempt from having to be identified by the consignor with an electronic NLIS (sheep) tag; provided they are identified at entry into Victoria in accordance with the legal requirements of the jurisdiction from which they were dispatched.

- From 01 January 2019 any purchased NSW sheep and goats born after 01 January 2019 require an electronic NLIS ear tag prior to leaving a Victorian property. NSW producers may choose to identify sheep with electronic NLIS ear tags, especially if they are planning to sell to Victoria and they perceive a marketing advantage.

- Sheep and goats identified with visually readable NLIS (Sheep) ear tag may still be dispatched from an interstate location to a
Victorian property, saleyard or abattoir after January 2022.

NSW sheep on agistment in Victoria

- Any lambs or kids born on a Victorian property must have an electronic NLIS tag from 01 January 2017 prior to leaving the property - this includes agistment properties.
- From 01 January 2019 any agisted NSW sheep and goats born after 01 January 2019 require an electronic NLIS ear tag prior to leaving the Victorian property.
- All sheep and goats that have lost their visual NSW NLIS tag will need a post-breeder electronic tag of the PIC of the Victorian property prior to leaving the property.
- All sheep and goats leaving a Victorian property after 01 January 2022 must be identified with an electronic NLIS tag (including interstate ones on agistment).

Victorian sheep moving to NSW

- Lambs that are born in NSW, to Victorian sheep on agistment, can be tagged with a visual tag. However unless they are going direct to slaughter or sold from NSW, as soon as they return to the Victorian property they will need an electronic tag. The options would be either the Victorian producer asks the NSW producer to order electronic tags for the NSW property to use instead of visual tags or when they return to Victoria put electronic post breeder tags in them before they are onsold/leave the Victorian property.
- Lambs born in NSW would not be eligible to get the subsidized Victorian tags with the NSW PIC.
- When sheep come to NSW from Victoria, whether they have visual tags or electronic tags, it is the responsibility of the receiver of the sheep to do a mob based property to property sheep transfer on the NLIS database. Producers can individually transfer the electronic id's if they choose but it is not a legal requirement in NSW. If the sheep are on agistment and then return to Victoria, the Victorian producer will have to do a property to property movement for the individual RFIDs, within 48 hours.

Breeds of goats which are exempt from needing an electronic ear tag in Victoria

- Sannen, British Alpine, Toggenburg, Anglo Nubian, Melaan, Australian Brown, Alpine, La Mancha and Nigerian Dwarf dairy goat breeds
- The Elf ear type with miniature goats

Please note all sheep entering Victoria must meet the legal requirements of the jurisdiction from which they were dispatched. For NSW the current identification requirement is a visual NLIS tag. Electronic NLIS tags are recognised as an optional form of NLIS tagging in NSW.

When good feed goes bad
District Veterinarian Tim Biffin

Approximately 100km south west of Wagga Wagga, overnight a farmer found 10 out of his 450 cross bred ewes dead and approximately half a dozen others unwell. In the few weeks prior, the mob had been performing well and were moved onto canola stubble and provided several bales of lucerne/clover pasture hay. As described, there was
“a little water damage throughout the hay” provided. It was after a few days in the canola paddock that the disease outbreak occurred, at which point the stock were hungry and the hay was sparse.

Veterinary inspection ensured many of the notifiable and other serious infectious diseases were not present. Following post mortem exam of several animals and paddock inspection a provisional diagnosis was made of aflatoxicosis. Laboratory testing was able to support this diagnosis.

Aflatoxins are produced by fungi. In extensive agricultural settings they are most commonly found growing in ‘mouldy’ or ‘rank’ hay. Similar to many weeds, livestock will generally avoid mould damaged hay unless they are particularly hungry. In this case it appears the producer overlooked the condition of the hay being provided and overestimated the ability of canola stubble as a feed source. This forced the ewes to eat mould damaged hay, which they would otherwise avoid.

Farmers should never feed ‘water damaged’ hay to livestock. Not only is it generally very poor quality feed, with the nutrient content leached from the product, but concentrations of aflatoxins in water damaged hay can be extreme, presenting an unacceptable risk. Unfortunately, stock affected by aflatoxicosis can only be supported; there is no antidote for the condition.

Image 1: Foreground: remnant debris of mould damaged hay – the likely source of the aflatoxins. Background: Canola stubble and carcasses of those ewes which have died.

Image 2: Close inspection of a piece of remnant mould damaged hay debris from the paddock – the likely source of the aflatoxins.

Image 4: Diaphragmatic surface of the liver displaying severe and acute hepatopathy, typical of that observed with acute aflatoxicosis.
Antibiotics, “superbugs” and livestock
District Veterinarian Tim Biffin

Antimicrobial resistance is considered to be a "public health crisis" by the World Health Organisation and is referred to as a “health priority” by our own federal departments of Health and Agriculture. The development of resistant bacteria (commonly referred to as a ‘superbugs’) could threaten Australia’s market advantage as a “clean-green” food bowl, which is why it is so important for all of us - farmers, industry and government – to take appropriate measures to help prevent it.

‘Superbugs’ can emerge from normal bacteria exposed to the antibiotics we give production animals. From this exposure, bacteria can emerge with the ability to ‘resist’ the antibiotics. Animal-derived resistant bacteria can potentially ‘shake hands’ with other bacteria and pass on their genetic material.

There is evidence to suggest this interaction of bacteria through the environment and food chain can pass resistance genes on to human bacteria. It is, however, difficult to say how much this phenomenon is impacting human health.

The good news is that Australian agricultural systems, notably extensive grazing systems, use relatively little amounts of antibiotics. Additionally, it appears the antibiotics that we do use are not considered highly important to human medicine which is good for public health and the marketability of our produce.

The best advice I can give is that you should only administer antibiotics as prescribed by your veterinarian, and if you are unsure, call them.

The available data on the administration of antibiotics to sheep in Australia is limited. If you have received a questionnaire from me PLEASE COMPLETE AND RETURN IT. This survey is being performed to help recognize the (likely low) level of antibiotic use in our industry.

Cattle parasites
District Veterinarian Sophie Hemley

Are you a cattle producer? Have you thought about what your cattle's worm burden may be?

The significance of an internal parasite burden depends upon the class of animal, species of parasite, parasite numbers, rainfall, climatic conditions and pasture cover.

Calves, heavily pregnant and highly stressed animals (this includes animals in a poor body condition) are the most susceptible to internal parasites.

The high rainfall areas of Eastern Riverina and irrigation areas typically have a higher incidence of small brown stomach worm, small intestinal worm, nodule worm and liver fluke. The lower rainfall areas of the Western Riverina area commonly have small brown stomach worm populations and some liver fluke are observed along the creek and river systems.

When should you drench? Drenching on a Worm Egg Count (WEC) is optimal as a) you only drench when parasite burdens are highest, thereby not contributing to resistance; and b) it can save you money if you are not drenching unnecessarily.

How do you get a WEC done? It is as easy as 1-2-3!
1. Collect a free sample kit from your Local Land Services office
2. Collect either a pooled sample (a tablespoon of faeces from a number of cow pats) or individual samples from a number of animals. There are a number of little plastic jars in the kit, or if you run out of these a zip-lock bag is sufficient!
3. Send the samples off in the post and await the results. These results will also be sent to your local District Veterinarian and to your chosen email. Your District Veterinarian can help you interpret results and discuss management decisions with you.

When should you do a WEC and/or drench?

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What drench do you choose? Not one drench suggestion will fit every situation, therefore it is best to discuss your options with your District Veterinarian.

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**A centenary of veterinary public service in NSW**

**District Veterinarian Tim Biffin**

Last month the Association of the District Veterinarians of NSW commemorated the momentous achievement of 100 years of veterinary public service in NSW. The annual District Veterinarians Conference, this year held in Orange, acts as a point of professional development for those in the field.

Public veterinary services are critically important for healthy and productive societies. Some of the roles District Veterinarians perform relate to:

- Zoonosis control – Hendra virus, anthrax, lyssavirus (as examples)
- Food production – disease investigation and general production advice
- Food safety – chemical residues and zoonosis
- Market access – NLIS, declaration of disease freedom, agricultural advocacy & public reassurance
- Environmental contamination – livestock treatments and agricultural chemicals
- Social impacts of animals – animal welfare

With increases in globalization, food insecurity, population sizes & densities, global climate change, urbanization and deforestation the importance of good agricultural systems increase dramatically. District Veterinarians hope to support and guide good agricultural practices in NSW and Australia for the next 100 years to come.

*Image 1: District Veterinarians past and present.*
Announcements

Understanding lameness workshop
Dairy NSW and Dairy Australia are hosting a workshop presented by Neil Chesterton (a New Zealand vet) on dairy cow lameness. The workshop will review improving cow flow and how this will reduce lameness. Interest points of facilities and low stress handling will be discussed.

The workshop will run from **10am-2pm Tuesday 24th November**.

RSVP to Elizabeth Warren by Monday 23rd April on Elizabeth@dairynsw.com.au or call 0428 472 983.

Morning tea and lunch provided.

Call for participants – Jurox lamb study

Jurox, Australia’s Animal Health Company, is searching for farm sites to recruit into a lamb mulesing study in 2018.

The study will investigate the efficacy of several topical insecticide sprays for the prevention of blowfly strike on mulesing wounds.

From January to December 2018, the 6-week study will be conducted at a number of farm sites across Australia.

Requirements for farm sites to be enrolled into the study are:

- Farms that will have at least 400 unweaned lambs (all of the same breed or crossbreed) between 2 and 12 weeks of age at the time of mulesing.
- Farms with facilities appropriate for mulesing and for separating 8 groups of lambs and ewes for up to 24 hours after mulesing.
- Farms where mulesing will be conducted by farm staff or by a contractor organised by the farm owner/manager.
- Farmers that are happy for their 400 study lambs to be tagged with study ear tags and weighed by the Jurox research team just prior to mulesing.
- Farmers that are happy for mulesing to go slowly (i.e. 400 lambs mulesed over one or two days) so that the Jurox research team can apply topical sprays and record study data.
- Farmers that are willing to check lambs every day for 6 weeks after mulesing to identify, photograph and treat any lambs that are blowfly struck.
- Farmers that are prepared to complete study paperwork and are happy for Jurox staff to visit their farm multiple times during the 6-week study (follow-up visits will require yarding and handling of study lambs at 1 week and 6 weeks after mulesing).

All study medications will be provided and all study costs will be paid for by Jurox. As a token of appreciation, participating producers will receive Jurox products such as Strikeforce-S and Q-Drench for their own personal use after the completion of the study at their farm.

Producers who are interested in participating in the study in 2018 are encouraged to contact the study coordinator:

Jenna Fraser (Research Veterinarian) - (02) 4931 8096, 0418 247 722, jenna.fraser@jurox.com.au

Invitation to Participate in Gudair® vaccine research

Research conducted in the past 15 years has shown that vaccination with Gudair® substantially reduces mortalities but sheep in some flocks continue to shed Johne's disease causing bugs in their faeces. Why is the efficacy of Gudair® different on different properties? What are the reasons for the persistence of the disease on some properties? This project funded by Meat and Livestock Australia will answer these and other similar questions.

We cordially invite you to participate in Phase 1 of this research project to answer some crucial questions about the efficacy of Gudair® vaccine.
How can you participate in this research?
You can participate in this exciting research by
• clicking this link
https://www.surveymonkey.com/r/GGZSBJD
• by calling Dr Jeff Eppleston on 0429 652 888 or emailing him at jeff.eppleston@sydney.edu.au
• or by writing to us at the following address:
A/Professor Navneet Dhand
The University of Sydney
425 Werombi Road, Camden
NSW 2570

After receiving your response, we will contact you if you meet the eligibility criteria for the 2nd phase of the study. Your name will also go into a draw to win one of the ten $50 gift vouchers.

We sincerely thank you for your anticipated co-operation. Your participation in this research will help in better management and control of Johne’s disease in Australia!
Thank you!

Help DPI survey for Tomato potato psyllid in NSW

NSW DPI are looking to DPI and LLS staff across the state to assist in the surveillance activities of the Tomato potato psyllid.

Do you have a veggie patch at home?
Are you growing tomatoes, eggplants, potatoes, capsicums, chillies or sweet potato?

Why not participate in an insect trapping survey to help DPI Biosecurity prove NSW is free of an insect called tomato potato psyllid?

Tomato potato psyllid is a serious threat to Australia’s potato, tomato and capsicum crops. It causes damage to plants when it feeds, but is also a vector for the plant disease Candidatus Liberibacter solanacearum. It was found in Western Australia in 2017.

We need data from across NSW to prove this insect is not present here. Your participation will contribute to a greater insect surveillance project that also includes commercial growers and nurseries.

If you would like to be involved contact Bernie Dominiak (bernie.dominiak@dpi.nsw.gov.au or 0458 798 159) for your free trap kit. The kit has everything you need and instructions on what to do. All you need to do is place the sticky trap in your veggie patch for a week before posting it back to DPI in the reply paid envelope provided.

If you are interested in participating, please contact Bernie Dominiak directly for more info.

Kangaroos can also get hairy panic toxicity!

Over summer, staff from Charles Sturt University and the Graham Center responded to a mortality event characterized by blindness and dermatitis affecting eastern grey kangaroos (*Macropus giganteus*). It was identified that the invasive grass species, often referred to as hairy panic (*Panicum gilvum*) was the cause of the outbreak. The condition described shows similarities to hairy panic toxicity, which is seen in sheep across the Riverina.

A really interesting video of their findings was produced. It can be viewed here: https://youtu.be/Bgf1M6ki-d4

Their findings were also published in the Journal of Wildlife Diseases and can be found here: http://www.jwildlifedis.org/doi/abs/10.7589/2017-03-066?code=wdas-site#.Wqczze9DMPQ.facebook

J-BAS update

As of 1st October 2017, all producers should have implemented an On-farm biosecurity plan (in line with Livestock Production Assurance’s specifications). Some producers are using this biosecurity plan to identify their Johne’s Beef Assurance Score (J-BAS). Majority of beef producers within the Riverina would consider their farm as a J-BAS of 6.
This is a reminder for those producers that wish to maintain a J-BAS of 7 or 8 for their herd(s): your first laboratory testing must be conducted prior to 30 June 2018. This must be performed by your private veterinarian; however, you are welcome to call your local District Veterinarian for general advice.

Riverina Local Land Services
District Veterinarians
Please note new office numbers

**Wagga Wagga**
Tim Biffin and Emily Stearman
6923 6300

**Young**
Elizabeth Braddon
6381 4700

**Gundagai**
Kristy Stone
6940 6900

**Hay**
Courtney Simkin
0427 418 006

**Narrandera**
Sophie Hemley
6958 1800