

RIVERINA LOCAL LIVESTOCK UPDATE

June



Local Land
Services

Report:

National Sheep Health Monitoring Project Quarter 1 2021

By **Dione Howard, District Vet**

🔍 Sheep

The following information describes the most prevalent conditions and diseases found in sheep sold over the hook across the Riverina region in Quarter 1 2021.

Information is courtesy of the National Sheep Health Monitoring Project (NSHMP). The NSHMP commenced in 2007 to monitor lines of sheep in abattoirs for animal health conditions that reduce farm profit through productivity losses or increase meat processing wastage. For more information about the NSHMP visit the Animal Health Australia website:

- [NSHMP-Annual-Report_2019-20-1.pdf \(animalhealthaustralia.com.au\)](https://www.animalhealthaustralia.com.au/NSHMP-Annual-Report_2019-20-1.pdf)



SHEEP < 2 YEARS OF AGE:

The most recorded condition across **all** monitored areas of Riverina for sheep < 2 years old was nephritis. Nephritis is caused by an infection or toxin that causes damage and inflammation to the kidney. It is more commonly reported in lambs and is not normally associated with any clinical signs, although can reduce lamb growth and performance.

Affected kidneys are condemned, and in rare severe cases where kidney failure has occurred, whole carcass condemnation may occur. Infectious nephritis can be caused by a number of bacteria, viruses or protozoa. Toxins from plants, chemicals or enterotoxaemia (pulpy kidney) can also cause nephritis.

For more information about nephritis in lambs and prevention strategies visit the Meat and Livestock Australia website:

- <https://solutionstofeedback.mla.com.au/contentassets/125ffe13b7a445dfbdaa237c953b61fc/nephritis-factsheet.pdf>

SHEEP > 2 YEARS OF AGE:

Wagga – Bladder worm impacted over half the PICs where inspected sheep came from. Bladder worms are infective cysts from the dog tapeworm *Taenia hydatidigena* and are found in the liver and abdominal cavities of sheep. Visit the Animal Health Australia website for more information:

- <https://solutionstofeedback.mla.com.au/contentassets/125ffe13b7a445dfbdaa237c953b61fc/nephritis-factsheet.pdf>

Gundagai – Liver fluke impacted over one quarter of all inspected sheep. Liver fluke are large, flatworm parasites that infect sheep in high rainfall areas and irrigated areas of eastern Australia. A permanent water source and specific snails are required for the liver fluke life cycle to occur. Visit the NSW DPI website for more information:

- https://www.dpi.nsw.gov.au/__data/assets/pdf_file/0004/114691/liver-fluke-disease-in-sheep-and-cattle.pdf

Young – Sheep measles impacted over half the PICs where inspected sheep came from. Sheep measles (*Cysticercus ovis*) are infective cysts from the dog tapeworm *Taenia ovis*, found in the muscles of sheep. Visit the SheepConnect website for more information:

- https://www.sheepconnectsa.com.au/factsheets/SheepConnect_Factsheet_Covis.pdf

Case study: Triple Jeopardy!

By Elizabeth Ferguson, Team Leader Animal Biosecurity & Welfare

🔍 Sheep

CASE HISTORY:

The District Veterinarian was asked to visit a farm that had lost a number of heavily pregnant ewes over the previous few days. These mixed-age composite ewes had a high body condition score and the farm manager was trying to reduce their condition. Ewes had been held in a containment lot and fed low-quality hay for approximately 2-3 weeks and were now one month from the lambing start date. The mob had been drenched in late 2020 with current egg counts averaging 142 eggs per gram.

Six ewes from a total of 900 ewes had died suddenly over a seven-day time period, with the manager reporting that the dead ewes had signs of jaundice (yellowing). Four out of the six dead ewes were single-lambing ewes.

Prior to the visit, the mob had been moved out of the containment lot onto a mixed pasture paddock and were due to be shorn just prior to the lambing start date.

CLINICAL EXAMINATION:

One animal was unwell on arrival: The three year old ewe was bright and alert, however was aimlessly circling and appeared blind. She was full fleece but estimated to be a BCS of 4.5/5. The ewe was pyrexic (temperature – 39.90 C). Mucous membranes, sclera and vulva were not yellowed. Given the bright nature of the ewe, there was reasonable chance for recover, the decision was made not to euthanase for post mortem.

A blood sample was collected to assess for ketones which may indicate pregnancy toxaemia and blood calcium levels to rule out underlying hypocalcaemia.

Based on the stage of gestation, low energy diet, and high body condition score, the ewe was most likely affected by at least one of these conditions.

Blood results confirmed the presence of ketones and low calcium, confirming the ewe had pregnancy toxaemia, as well as hypocalcaemia. It was then recommended to the farmer that this ewe be treated immediately with 4 in 1, and a follow up treatment of propylene glycol (Ketol®) in an attempt to maintain blood glucose. In this case, it was strongly recommended that shearing be delayed.

In the following days after visiting the farm, a post mortem was conducted on another ewe that was found dead. This revealed marked jaundice throughout the body of the ewe.



Swollen, gunmetal-coloured kidneys.

Kidney and liver tissue appeared copper-black (gunmetal) in colour. Copper toxicity was determined to be the cause of death of this ewe.

DIAGNOSIS:

There were a number of disease processes impacting the ewes in this mob. The first was pregnancy toxaemia, coupled with hypocalcaemia. The second was chronic copper toxicity.

Hypocalcaemia - When coupled with pregnancy toxaemia, the inappetence that comes with this results in decreased intake of feed and therefore calcium. Other factors that cause low blood calcium at this time include low feed calcium levels at a time when the requirement is high as well as increased utilisation as a result of increased movement or inclement weather.

Chronic copper toxicity can occur for two reasons, primarily due to increased copper in the diet or secondary because of increased accumulation within the body as a result of liver damage.



*Marked jaundice throughout the body of the ewe, including the liver.
Photo from: www.ils.nsw.gov.au*

The animal may appear normal, but during a period of stress, such as transport, yarding, strenuous exercise, heat or cold stress, or, as in this case, being placed on low quality feed pre-lambing, the copper is released from the liver. The result is rapid haemolysis (breakdown of red blood cells) resulting in anaemia and death. The products from the destroyed red blood cells cause the animal to be jaundiced.

WHAT DOES THIS MEAN?

Late pregnant ewes, with high energy and protein requirements, placed on low quality feed just prior to lambing resulted in metabolic stress. The results of this trigger three syndromes that cascaded and were catastrophic in the individuals, resulting in the death of a number of valuable ewes and their lambs.

WHAT CAN BE DONE TO PREVENT?

It is important to ensure that pregnant ewes maintain access to high quality feed which meets their energy and protein requirements, particularly in the later stages of pregnancy. If a sheep has consumed hepatotoxic weeds such as heliotrope or Paterson's curse, then they are more at-risk of chronic copper toxicity. A subsequent stressful event such as time off feed pre-lambing can result in the haemolytic event that was seen in this case, causing rapid death of the affected ewe.

FOR FURTHER INFORMATION:

- <https://www.feedinglivestock.vic.gov.au/tools-calculators/useful-tables-sheep/>
- https://www.dpi.nsw.gov.au/__data/assets/pdf_file/0003/431724/Pregnancy-toxaemia-in-breeding-ewes.pdf
- <https://www.ils.nsw.gov.au/regions/murray/articles,-plans-and-publications/production-advice-april-2020/copper-toxicity-in-sheep>

Announcements and additional warnings

WHAT'S ON OUR RADAR

Grass tetany by District Veterinarian Emily Stearman

The current seasonal conditions have been highly conducive to cases of grass tetany right across the Riverina.

Risk factors for low blood magnesium:

- cattle under stress – particularly lactating cows (higher requirement for magnesium)
- breed predisposition – Angus, Murray Grey, Shorthorn's more susceptible
- warming day/night temps - $>8^{\circ}\text{C}$ night temperatures following four or more days of $<7^{\circ}\text{C}$ night temperatures when cattle are grazing grass or cereals
- rapidly growing short grass or cereals on high potassium soils.

Magnesium is required for normal muscle function and is important in many other metabolic processes. Clinically low magnesium levels occur when a combination of the above factors exists. If grass tetany is diagnosed on a property the risk of recurrence in subsequent years is high.

Grass Tetany is easily managed by supplementing the diet with magnesium, namely Causmag.

At this time of year many people are feeding cereal hays; Causmag can be applied directly onto the hay, on a daily basis. Various commercial and home mixed licks are also beneficial, however licks containing greater than 30% Causmag are quite bitter and animals will avoid them. It is common practice to mix lime and salt with Causmag for a dry lick, adding molasses to create a wet lick.

If you are experiencing sudden deaths or are concerned about your herd, contact your local district vet for specific advice.



RISK OF NITRATE/NITRITE POISONING

District Veterinarian Emily Stearman

With rain events predicted for the coming weeks, many winter crops across the region are being top dressed with urea. When applying urea, great consideration to grazing stock must be given.

The application rate of urea, temperature, moisture and sunlight all determine the rate at which plants will convert and utilise nitrates. Grazing animals can tolerate increased levels of nitrate in plants provided the introduction is gradual. The coming weeks' weather predictions may increase the risk of nitrate poisoning in livestock across the Riverina.

To discuss your on farm situation and assess the risk a crop poses to your livestock, please contact your local district veterinarian.

CHLAMYDIAL ARTHRITIS IN GROWING LAMBS

District Veterinarian Emily Stearman

We commonly link outbreaks of arthritis with management operations such as marking, mulesing or dipping, where bacteria can enter the circulation via an open wound. Chlamydial arthritis caused by *Chlamydia pecorum* can occur in rapidly growing lambs up to six months of age in the absence of these management practices.

Lameness characterised by a stiff, stilted gait, develops rapidly. When moved, lambs will often 'warm out of it', and re-join mob mates. Mortality rates are low, however morbidity rates can reach up to 50% of the mob in some cases. Animals are often lethargic due to the concurrent high body temperature.

A presumptive diagnosis can be made based on presentation and history. Joint culture of affected animals or testing for Chlamydia antibodies in blood >7days post first clinical signs, confirms diagnosis. Antibodies are negligible by 56 days post infection making retrospective diagnosis difficult.

While the triggers for disease are poorly understood, rapidly growing lambs less than 6 months of age, in a feedlot or grazing lush/irrigated Lucerne have been affected. British breeds are most at risk but Merinos have been over represented this year.

In an attempt to understand more about this disease, our veterinarians in Riverina are interested to know how many cases are experienced locally. If you wish to discuss chlamydial arthritis, please contact your local district veterinarian.

Upcoming events

THIS MONTH'S PICK OF EVENTS

Pastures in Practice webinar series - third webinar

All beef cattle and sheep producers are welcome to join Riverina Local Land Services for the last Pastures in Practice webinar on 23 June 2021.

The series will cover aspects of pasture production and management, and include presentations by our Guest Speaker Basil Doonan (Pinion Advisory), with support from Local Land Services staff.

The format will be our guest speaker's presentation between 8:00-8:25PM, followed by an open discussion until 9PM. All welcome. No cost. RSVP and receive a reminder.

Choosing perennial species for your perennial pasture mix. *8:00-9:00PM, Wed 23 June 2021*

- <https://www.lls.nsw.gov.au/regions/riverina/events/r-events/pastures-in-practice-webinar-series2>

Graham Centre Livestock Forum

The 2021 Graham Centre for Agricultural Innovation Livestock Forum will feature new research for beef and sheep producers to apply on-farm and panel discussions with industry experts. The opening session will bring together, researchers, industry and producers to talk about environmental sustainability, profit and the path to carbon neutrality.

Concurrent beef and sheep sessions will give a snapshot of new research. The final session will focus on building resilient livestock systems taking in biosecurity, hard-seeded legume pastures, the ecosystem services of dung beetles and a presentation crunching the numbers on restocking with current high livestock prices.

There'll be trade displays, a dung beetle identification workshop and the option to tour the new Charles Sturt Ruminant Research Facility.

Sponsored by Riverina LLS, Meat & Livestock Australia, Nutrien Ag Solutions, Animal Health Australia, ProWay Livestock Equipment, Sheep Connect NSW and Teys Australia. Check out the program and register:

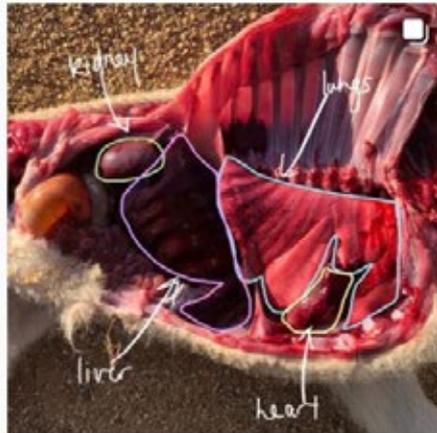
- <http://www.csu.edu.au/research/grahamcentre/2021-livestock-forum>

When: Friday 30 July 2021 9 am to 2 pm.

Where: At Charles Sturt University in Wagga Wagga and online through an interactive conference platform

Cost: Attend in person \$25 per head (includes morning tea and lunch) or join online \$10 per head.

Follow us at [@locallivestockvets](https://www.instagram.com/locallivestockvets) on Instagram to see photos and videos direct from the paddock!



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