



RIVERINA LOCAL  
LIVESTOCK UPDATE

May



Local Land  
Services

# Case study: Udder Disaster!

By Georgia Grimmond, District Vet

🔍 Sheep

## CASE HISTORY

A producer reported a series of sudden deaths in his 4-5 year old Merino ewe flock. The ewes currently have 2-3 month-old twin lambs at foot, and had been grazing a lush lucerne stand, with cereal hay and mineral supplements on offer ad lib.

The producer observed a few deaths around lambing – which he put down to dystocia. However, deaths continued to occur into lactation, with one ewe per week found dead. The producer reported that affected ewes would become lethargic, separate from the mob and be found dead within 12-24 hours.

He also had observed a few lame ewes in flock, with the occasional cough and nasal discharge. Following lamb marking two weeks ago the deaths climbed to 2-3 ewes per week.

Neither the lambs nor the other ewe flocks on the property were affected.

## CLINICAL EXAMINATION

On flock examination approximately 2% presented with a stiff gait and appeared lame in one hindlimb. Affected ewes were observed to reject lambs when they attempted to suckle.

Four of these ewes were caught and tipped for closer examination. All ewes presented with one side of the udder that was enlarged, painful, reddened and hot. Milk from the affected gland was pale pink and clotted. Only one ewe presented with nasal discharge, harsh lung sounds and had a temperature of 40.9°C.

This ewe and another which had died 12 hours prior, were submitted for post-mortem.

## POST-MORTEM

Both ewes presented with unilateral udder enlargement, which was firm with purple discoloration. Dissection of the affected udders revealed a fibrinous mass with areas of necrosis. Milk within the udder was scant, clotted, watery and pink in colour. One ewe's lung was acutely pneumonic, with consolidation, congestion with blood throughout and small micro-abscesses with a necrotic core.

Milk samples and lung tissue were submitted to the lab for culture and antibiotic sensitivity tests. Cultures of both milk samples and the lung tissue all grew a pure growth of *Mannheimia haemolytica* which was susceptible to ampicillin and tetracycline.



## DIAGNOSIS

Acute Mastitis – *Mannheimia haemolytica*

### WHAT DOES THIS MEAN?

Mastitis is an inflammation of the mammary gland, predominately caused by bacteria. It can present as a sub-clinical infection or clinical disease which can be acute or chronic in nature. There are a multitude of bacteria implicated in mastitis. In sheep the two major pathogens typically involved are 1) *Staphylococcus aureus*; and 2) *Mannheimia haemolytica*. However over 30 other bacterial species have been implicated. These bacteria are often normal inhabitants of either the sheep or their environment. Transmission of bacteria can either be from their environment or contagiously spread from sheep to sheep.

Risk factors for developing mastitis include; teat injuries, older (> 4 year old) ewes, multiple progeny, poor nutrition, cool and damp environment and poor udder conformation. Cases of mastitis will rise around lambing and during lactation; firstly, because during milking and suckling the teat canal is open, allowing for passage of bacteria into the udder, and secondly because the ewes immune system is weakened. Once bacteria enter the udder they proliferate and secrete toxins which damage the mammary gland and result in inflammation. This is quite painful and ewes often present with lameness on the affected side. Deaths occur in ewes when bacteria enter the blood stream resulting in septicaemia – as in this case. Mammary glands that become clinically affected often don't resume normal function, which reduces milk quality and quantity, resulting in lower lamb weight gain and increased lamb mortality. For each clinical case of mastitis there are typically 3-5 sub-clinical cases whereby milk production is reduced.

*Mannheimia haemolytica* was identified as the cause of the mastitis in this flock. This bacteria is a normal inhabitant of the respiratory tract of ruminants and is often implicated in cases of pneumonia, which was observed in this flock. As the bacteria has been isolated from the upper respiratory tract of lambs it is thought that lambs transmit the bacteria to the ewe's udder when suckling. When one ewe becomes infected, the contagious and transmissible nature of this bacteria means that the prevalence of mastitis slowly rises within the flock. In this case, the sudden increase in cases was likely due to yarding and mismothering of lambs during lamb marking 2-3 weeks prior.

### WHAT CAN BE DONE TO PREVENT?

Managing mastitis in the face of an outbreak can be quite challenging and not often practicable. Ideally affected ewes should be identified, treated with systemic antibiotics and then separated from the main flock to prevent transmission to other ewes. Early weaning of lambs would also reduce transmission but is not always possible. Cases of mastitis often rise following weaning due to milk stasis, and therefore weaned ewes should be put on a low plane of nutrition for 2-weeks to ensure a rapid dry-off. Whilst treatment may reduce mortality rates, damage to the udder is often irreversible and will result in reduced productivity in subsequent lactations. Ewes udders should be palpated either pre-joining or at weaning, and ewes with abnormal udders should be culled.

### FOR FURTHER INFORMATION:

<https://projectblue.blob.core.windows.net/media/Default/Imported%20Publication%20Docs/BRP-plus-Understanding-mastitis-in-sheep-180716.pdf>

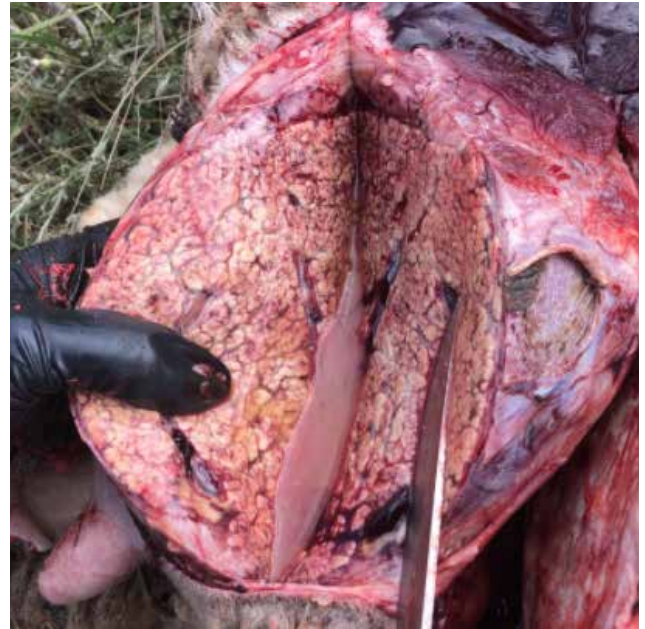


Image 1: Dissection of the udder showing the abnormal fibrinous mass with areas of necrosis.

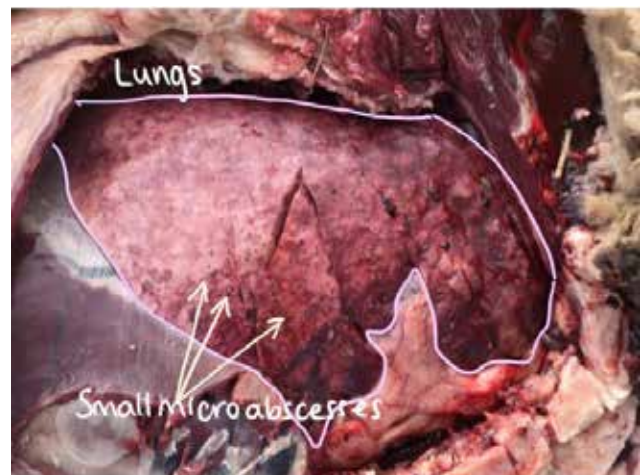


Image 2: The right lung fields at display stage. Discolouration, consolidation and the small microabscesses can be seen.



Image 3: Dissection of a lung lobe showing the small microabscesses throughout the lung.

# Case study: Pesky Pesti

By Kristy Stone (District Vet) & Kim Burgess (CSU final year vet student)

## 🔍 Cattle

### **CASE HISTORY:**

The District Vet was contacted regarding a mob of 30 Angus cows with approximately six month old calves at foot. Three calves had died over the past week, with one having died that morning. Another four calves appeared to be dull, ill-thrifty and some had diarrhoea.

### **CLINICAL EXAMINATION:**

A post mortem was conducted on the most recent dead calf which showed evidence of ulceration of the mouth, oesophagus and intestine.

The three sick calves were examined. They appeared small and ill-thrifty and had various clinical signs of drooling, noisy breathing, diarrhoea, fever, joint swelling and lameness.

### **LABORATORY RESULTS:**

Blood and tail hair were tested for pestivirus and came back negative for antibodies that are produced when exposed to pestivirus but positive for the virus itself, indicating that all four calves were persistently infected with pestivirus.

Blood results also showed that a chlamydia infection was circulating in the mob.

### **DIAGNOSIS:**

Persistent infection with Pestivirus (Bovine Viral Diarrhoea Virus).

### **WHAT DOES THIS MEAN?**

Pestivirus is a common virus among cattle. When healthy, non-pregnant cattle come into contact with the virus for the first time the signs of disease are usually mild and have very little impact.

When pregnant animals come into contact with the virus for the first time however, the impacts can be significant.

It is less common to see this many persistently infected calves in one mob but it certainly is possible - it all depends on cow immunity at the time of joining and pregnancy. In this case, it appears that a proportion of breeding females had no immunity to the virus and came into contact with the virus for the first time during pregnancy. If a dam is exposed to the virus for the first time between 40-120 days of gestation, a persistently infected (PI/carrier) calf can occur.



Image 1: Ulceration of the mouth.

Exposure to the virus before day 40 generally results in poor conception rates or returns to service, while exposure between day 120 and may cause congenital abnormalities, abortion, or weak calves. Exposure in the late stages of pregnancy will have little effect on the calf. The virus is spread through direct contact with bodily secretions (saliva, nasal discharge, urine, semen & faeces) from a PI animal.

It is unusual to see so many sick PI calves at the same time. Persistently infected calves have poor immune systems and therefore are susceptible to other infections. The presence of chlamydia may have contributed to the outbreak of sick PI calves.

#### **WHAT CAN BE DONE TO PREVENT THIS?**

Before joining you should ensure that heifers and cows have immunity against pestivirus.

This can be done by vaccinating with Pestigard with two doses of vaccine given 4-6 weeks apart, with the final vaccination being given 2-4 weeks before joining or insemination. Another option is to check breeding females for natural immunity to the virus.

A vet will collect blood from 10% of the breeding herd to test for antibodies against the virus, with the results showing if immunity is present or not. If no immunity is present then breeding females should be vaccinated prior to joining. This test can also show if the animals were exposed to the virus recently, or if the exposure was in the past. Natural immunity can vary year to year so regularly monitoring is important.

#### **FOR FURTHER INFORMATION:**

[Bovine pestivirus infection \(nsw.gov.au\)](http://nsw.gov.au)



*Image 2: Severe ulceration of the oesophagus seen on post mortem examination.*

# Announcements and additional warnings

## MANAGING LAMBING EWES

CSU Final Year Veterinary Student, Sammy Moxon

As producers recover from the prolonged period of drought, lamb marking rates are expected to rise, with the national flock population to increase 5.2% by mid-way through 2021 (Meat and Livestock Australia, 2021). To ensure maximum productivity in your flock, careful management of ewes at lambing is crucial. Various management strategies should be implemented with provision of adequate nutrition ensured.

### Management strategies

Unfortunately, many producers may be underestimating their mortality rates between lambing and marking compared to published data (Kopp et al., 2020). Reduction in mortality rates can be achieved through revision of the lambing management plan and implementing preventative strategies.

A good management plan should include;

- A designated low worm-risk lambing paddock with adequate shelter and pasture (move ewes into this paddock 4 weeks prior to lambing)
- Scan ewes and separate into multiple-bearers and single-bearers
- Separate maidens and ewes to reduce mismothering (particularly in Merinos)
- Single bearing maiden Merinos up to 300 head/mob.
- Twin bearing maiden Merinos up to 150 head/mob.
- Single bearing adult Merinos up to 400 head/mob.
- Twin bearing adult Merinos up to 200 head/mob.
- Avoid stressful events (i.e. yarding) within a month of lambing
- Before moving ewes to the lambing paddock, perform a worm egg count (WEC) and use an effective drench as recommended by your veterinarian if required - especially if significant recent rainfall (20-30+ mm)
- Vaccinate your ewes pre-lambing (at the same time as crutching/ shearing or drenching)
- Monitor lambing daily, however minimise assistance (as this can interfere with maternal bonding)
- Consider using a self-feeder if supplementation required, or feed after lunch to avoid ewe-lamb disturbance



### Nutrition Considerations

Ensuring sufficient nutrition of ewes in late gestation is paramount to maximising productivity. Considerations with regards to nutrition include:

- Manage ewe grazing to ensure ewes are no more than condition score 3.5 (Merino) at lambing (condition score 4.0 for crossbreds).
- Provide a gradual rising plane of nutrition to meet the high energy needs, especially multiple bearing ewes in the third trimester. Continue into lactation.
- Assess feed on offer and continue to supplement ewes during lambing if pasture nutrient levels are inadequate.

### References

Kopp, K., Hernandez-Jover, M., Robertson, S., Abuelo, A., & Friend, M. (2020). A Survey of New South Wales Sheep Producer Practices and Perceptions on Lamb Mortality and Ewe Supplementation. *Animals*, 10(9), 1586. <https://doi.org/10.3390/ani10091586>

Meat and Livestock Australia. (2021). Sheep projections | Meat & Livestock Australia. MLA Corporate. Retrieved 1 May 2021, from <https://www.mla.com.au/sheepprojections>.

[https://www.lis.nsw.gov.au/\\_\\_data/assets/pdf\\_file/0007/1280923/Final-Version-SELLS\\_Sheep\\_Calendar.pdf](https://www.lis.nsw.gov.au/__data/assets/pdf_file/0007/1280923/Final-Version-SELLS_Sheep_Calendar.pdf)

## CAMPYLOBACTERIOSIS

CSU Final Year Veterinary Student, Claire Moore

### What is Campylobacteriosis?

Campylobacteriosis ("Campy") is a common cause of abortion in ewes. This disease is caused by a bacteria called *Campylobacter fetus*. Abortion usually occurs in the last six weeks of pregnancy, however earlier losses may also occur. Due to the high level of infection in the environment during winter, it is important to take steps at this time to reduce the risk of your stock being affected.

### How can ewes get Campylobacteriosis?

Campylobacteriosis is transmitted several ways:

- Ingestion of contaminated food or water
- Direct contact with infected fetuses or placentas
- 'Carrier' sheep (some sheep may carry the bacteria in their intestine, resulting in ongoing transmission to others)

Although campylobacteriosis also affects cattle, this is a different subspecies, with differing modes of transmission. Whilst Campylobacteriosis is spread during coitus in cattle, this is not the case in sheep.

### How is Campylobacteriosis diagnosed?

If a campylobacteriosis outbreak is occurring, you may find aborted fetuses or ewes with blood staining on their perineal regions. Your veterinarian will perform tests to confirm the outbreak.

Ewes generally develop immunity to Campylobacteriosis following infection. Fertility in subsequent gestations is not usually affected.

### Are there any ways to prevent Campylobacteriosis abortions?

Control of campylobacteriosis involves preventing access of animals to infection, or eliminating the infection if it is already present. Strategies for reducing the incidence of campylobacteriosis include:

- Reduce stocking density (where possible)
- Promptly recognise and remove aborting ewes and aborted fetuses
- Following abortions, if possible, move remaining stock to alternative paddocks to reduce exposure
- Maintain excellent hygiene to reduce spread of the bacteria on clothing and equipment

Vaccination is an option for managing campylobacteriosis if it has been diagnosed on-farm, with the first dose required 6 weeks prior to joining, and a booster required 4 weeks later. An annual booster should then be given prior to joining to maintain immunity. It is recommended that you contact your veterinarian prior to vaccination, so that you can establish the level of immunity and exposure in your flock.

## THE FLOCK ROUND-UP

A newly established Facebook group by Animal Health Australia is providing a platform for sheep meat and wool growers to discuss and learn more about animal health and biosecurity issues.

If this sounds like something you would enjoy, join the group! [The Flock Round-up | Facebook](#)



# Upcoming events

## **LOCAL STRATEGIC PLANS – HAVE YOUR SAY**

Every five years we revise our Local Strategic Plan to ensure we are meeting the needs of our customers. Customer and stakeholder input is critical to the development of our priorities and programs at both the regional and state scale. Together with staff and key stakeholders, we have now drafted a one-page Local Strategic Plan and are seeking your feedback.

Our Local Strategic Plans have been developed here in the Riverina and are closely aligned with the Local Land Services State Strategic Plan. This ensures our customers receive regionally specific support while also contributing to our state-wide objectives, and is central to the four Local Land Services pillars: Grow, Protect, Connect, Support.

The local priorities identified in this plan are important to both primary industries and landholders – including natural disaster, biosecurity incursions and pest animal management. Being strategically positioned to respond to the needs of our customers is critical to our ability to be Here When it Matters.

We have provided several ways for you to provide feedback via [the Have Your Say platform](#), where you can make quick comment via a survey, or submit a formal written contribution via the submissions portal. Local Strategic Plans are on public exhibition until Sunday, 6 June.

To find out more and have your say, visit <https://www.haveyoursay.nsw.gov.au/lls-plans>

## **THIS MONTH'S PICK OF WEBINARS**

### **Pastures in Practice webinar series**

All beef cattle and sheep producers are welcome to join Riverina Local Land Services for the Pastures in Practice webinar series [this May and June](#).

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.

- Topic 1: Use of Nitrogen fertiliser & Gibberellic Acid. 8:00-9:00PM, Wed 26 May 2021
- Topic 2: Set stocking and the merits of rotational grazing systems. How to get the most from rotational grazing. 8:00-9:00PM, Wed 16 June 2021
- Topic 3: Choosing perennial species for your perennial pasture mix. 8:00-9:00PM, Wed 23 June 2021

Register here: [bit.ly/2R65iyJ](https://bit.ly/2R65iyJ)

To find out more about the series, contact Project Manager, Lisa Castleman, Agronomist, Riverina Local Land Services ([lisa.castleman@lls.nsw.gov.au](mailto:lisa.castleman@lls.nsw.gov.au) or 0427 201 963).

### **MLA's Productivity and Profitability Webinar Series**

MLA's Productivity and Profitability Webinar Series are a fantastic resource that can easily be accessed [via the MLA Website](#).

#### **What you need to know when retaining older aged breeding ewes.**

With many people holding onto older ewes this lambing season, Dr John Webb Ware's webinar is a timely discussion. It includes how breed types differ, what the impacts are on flock structure and what the key considerations in management should be.

#### **Deal with dystocia.**

Presented by Caroline Jacobson, new research on the hidden costs associated with dystocia is shared. The webinar includes methods to improve lamb and ewe survival rates and how to assess the impacts of dystocia for your own enterprise.

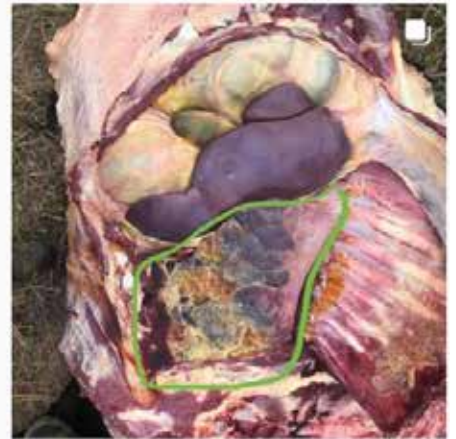
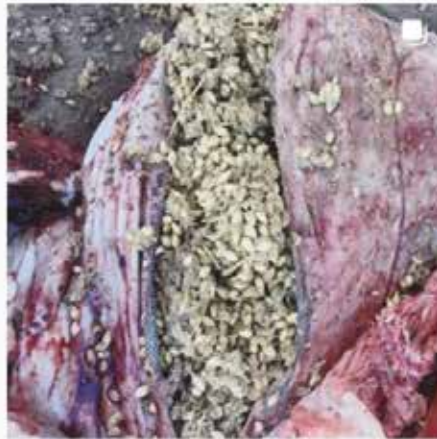
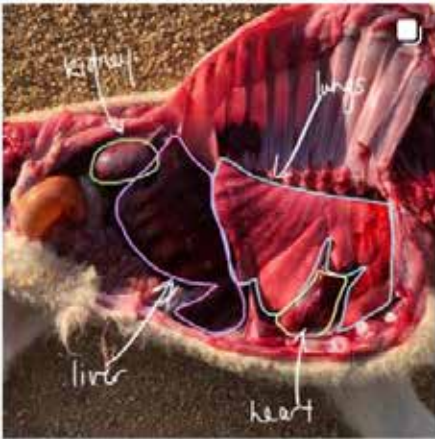
#### **An update on the 2019/20 Aggregate Consulting prime lamb benchmarks.**

Advisor Hilary Beech updates the industry on the key benchmarks of prime lamb enterprises from 2019/20.

[Productivity and Profitability webinars](#) | [Meat & Livestock Australia \(mla.com.au\)](http://Meat & Livestock Australia (mla.com.au))



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



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