RIVERINA ANIMAL HEALTH UPDATE

April
UROLITHIASIS (WATER BELLY)
District Veterinarian Evie Duggan
Urolithiases (commonly known as water belly) is a disease of male sheep. It is most commonly seen in wethers in feedlots, however the current season and reliance on hand feeding has resulted in some cases occurring in rams.

Urolithiasis is when uroliths (stones) form in the bladder, which can then get stuck in the urethra, blocking the passage of urine. When total obstruction occurs animals become depressed, show inappetance, stand quietly or lie down. They show a distended abdomen and swelling of the prepuce caused by leakage of urine into the tissue (see the image of the ram below). Once the bladder ruptures animals may show a temporary improvement before rapidly deteriorating and dying. Diagnosis is based on clinical examination and post mortem findings – typically a swollen pizzle, an abdomen full of urine and urinary calculi with or without a ruptured bladder.

What causes it?
There are multiple factors that contribute. These include:

- Grain based diet (inappropriate calcium:phosphorous ratio). Grain has high phosphorous compared to calcium. Ideally we want a ratio of calcium:phosphorous as 2:1.
- In a typical feedlot ration without supplementation, this ratio is more like 1:1.
- Hard water
- Decreased water consumption
- Vitamin A deficiency (Vitamin A plays an important role in maintaining mucosal lining)

The key is prevention. One of the most important preventative measures is providing adequate supplementation of calcium and salt. Lime should be included at 1.5% of the diet when in a feedlot scenario. Providing a loose lick of 50% salt and 50% lime ad lib is an easy option. Water quality is another important aspect that should be monitored as it will greatly influence water intake. Water troughs should be cleaned regularly (particularly for lambs) and dams should be monitored – especially as they get low.

Treatment is based on altering the pH of the urine and rectifying the causative factors. If you suspect urolithiasis contact your local district veterinarian and they will be able to discuss treatment further with you.

QUIZ – NLIS & FIT TO LOAD
District Veterinarian Dione Howard
1. Property-to-property (P2P) transfers must be recorded on the NLIS database within how many days?
2. Who is responsible for recording P2P transfers on the NLIS database?
3. Pigs under 25 kg live weight must be identified with what?
4. Pigs over 25 kg live weight must be identified with what?
5. What colour are sheep post-breeder NLIS tags?
6. What colour are cattle post-breeder NLIS tags?
7. True or false – an animal with a foot abscess causing lameness is fit to load.
8. True or false – an animal with fly strike is fit to load.
9. True or false – an animal that is blind in both eyes is unfit to load.
10. True or false – animals in late pregnancy are unfit to load.
RAM & EWE FERTILITY DURING A HEATWAVE
Final Year Sydney University Veterinary Student Sarah Hayes

Have you had low conception rates in your ewes after the summer joining period? Many producers in the region have reported lower than normal results at scanning or have had to extend their joining period this year.

When the ambient temperature is >32oC, sheep need extra energy to maintain their normal body temperature, resulting in stress and constraints on production. Heat stress on rams and ewes affects many factors related to reproduction – hormones needed to produce eggs and sperm, sexual activity, embryo and foetal survival and feed intake.

Heat stress decreases the production of hormones that are required for development of sperm and eggs. Heat also directly reduces hormone action in the reproductive organs. In ewes, egg development, ovulation and expression of oestrus behaviours are reduced. In rams, sperm quality is affected with lower concentration and motility, and increased abnormal sperm morphology. These changes to semen occur 2 weeks after the ram is heat stressed and can take 6-10 weeks to return to normal. Heat stress also dramatically reduces sexual behaviour and activity in rams and ewes. Therefore, a combination of ram and ewe factors have likely contributed to reduced conception rates in the heat this summer.

Increased ambient temperature >32oC for 3 days at joining can result in a 10% reduction in fertility in Merino ewes and an increased rate of return to service, likely due to early embryonic loss. It has been proven that heat stress directly affects embryos, reducing their survival.

Feed intake is decreased during times of heat stress because animals are trying to reduce their metabolism and heat production by the body. Depending on feed quality, this means ewes and rams may not be consuming enough per day to meet nutrient requirements needed for reproduction. Underfeeding of ewes is known to reduce embryo growth and quality. Ewes with a better body condition score (BCS) at joining have a higher lambing rate (+5-35 foetuses/100 ewes for each additional BCS).

**Management:**

*Reducing heat stress:*
- Provide adequate shade, especially for rams, and they will be able to maintain normal body temperature
- Shear rams 6-8 weeks before joining, also removing wool from the scrotum
- Reduce handling and stress on ewes in the first 3 weeks of pregnancy to prevent early embryonic loss

**Nutrition:**
- Aim to have ewes with body condition score 2.5-3.5 at joining and 2.5-3 at lambing. In times of heat stress and less feed intake, ewes and rams may require higher quality feed to meet nutrient requirements.
FOOD FOR THOUGHT

Final Year Charles Sturt University Student Belle Prunster

Dry conditions across the Riverina means most farmers are dependent on cereal hay and grains for maintaining body condition. These commodities are often naturally low in calcium, and subsequently clinical cases of hypocalcaemia have been occurring throughout the district. Hypocalcaemia is a metabolic disease where blood calcium levels fall below a functional level. This is caused by either an increase in the demand for calcium or a decrease in the dietary intake.

Pregnant/lactating ewes and fast-growing weaner lambs have the highest energy and calcium requirements of all stock groups and are therefore at the highest risk of developing hypocalcaemia. Dietary calcium deficiencies are commonly observed when high amounts of cereal grains and cereal hay are being fed without additional calcium supplementation. Feed factors combined with periods of time where livestock are off feed for shearing, crutching, transporting or walking to a new paddock are playing a big role in the current incidence of this disease (these events increase the utilisation of both energy and calcium and where animals are consuming low calcium diets preceding these, clinical disease and deaths often result).

Affected animals may initially display an abnormal walk and/or hyperactivity prior to becoming collapsed or comatose. You may see an S-shaped bend in their neck or they may appear to look over one shoulder when lying down. The diagnosis of hypocalcaemia is usually based on history, clinical signs and blood calcium levels. Hypocalcaemia can be complicated by high phosphorous levels which are occurring in some pelleted feeds at present. The ideal calcium to phosphorous ratio in feeds is 2:1. We recommend knowing the calcium:phosphorus ratio in any processed feed product, with any variation from normal being discussed with a professional.

To prevent hypocalcaemia during drought when feeding high amounts of cereal feeds, dietary modification with mineral supplementation is best. It is recommended that producers add 1.5% of limestone to their feed mix (1.5kg of lime to 100kg grain) with loose licks of lime, causmag and salt available concurrently. For more information contact your local district veterinarian.

QUICK WORM REMINDER!

District Veterinarian Evie Duggan

The recent rainfall and mild temperatures in parts of the Riverina have made perfect conditions for worms - don’t forget to do your pre-lambing and weaner WEC’s to keep an eye on what’s going on!
CASE STUDY: WHEN CATTLE EAT BATTERIES
District Veterinarian Sophie Hemley

Case History:
Four steers died suddenly over a two week period. Anthrax was ruled out in all cases. The owner had not noticed anything unusual about the animals prior to finding them dead.

Post mortem findings:
Three of the four carcases were in late stages of decomposition. The fourth carcase was found hanging over a boundary fence. This steer had hepatomegally (liver swelling), metallic chips in the reticulum (2nd stomach) ingesta, and no other clinically significant changes.

Laboratory findings:
Toxic liver lead levels at 34.5 umol/kg wet weight (normal reference range less than 2.0 umol/kg wet weight).

So what happened to the steers?
Unfortunately in this case the steers were able to access old car batteries. Cattle are inquisitive and like to eat the anionic salts in the batteries. In NSW lead residue in food producing animals is a notifiable disease, so all of the cattle that potentially had access to the batteries had to be bled and their lead levels examined.

Once ingested, the lead moves between the bloodstream and the internal organs (mainly the offal). If the cattle are bled less than 42 days since the exposure to the lead, animals with high lead levels are given a PB1 status and all animals with a low level (under <0.24 umol/L) are not at risk of being lead affected. No testing can be done between days 43 and 89 since the removal of lead. After 90 days to 364 days cattle bled with high lead levels are again given a PB1 status and cattle with low lead levels are given a PB2 status. Any animals with a status are quarantined and an early warning status will flag on the NLIS system against the property on which the RFIDs are associated. Cattle are taken out of detention when their blood lead levels are lower than the maximum allowable lead levels, or they are euthanised if the owner does not want to continue to manage them under detention. In some cases, the amount of lead consumer means some cattle can take years to return to allowable levels - in these instances, euthanasia is sometimes considered.

It is important for producers to ensure livestock can’t access lead. Common lead sources include batteries, “slag” taken from molten lead when recovering metal from the batteries, lead based paints, and sump oil.

Commonly with lead poisoning livestock will have changed mentation, neurological signs, or will be found dead.

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PREGNANCY TOXEMIA

District Veterinarian Emily Stearman

Pregnancy toxemia is a metabolic disease of sheep in late gestation and early lactation. It arises when the late gestation metabolic energy requirement cannot be met, typically in ewes carrying twins. However, a reducing plane of nutrition or sudden dietary retraction can predispose any pregnant ewe to this condition.

Classic signs of disease include dullness, anorexia, nervous signs, recumbency, comatose and then death. Initially signs may be as subtle as isolation from mob but regularly progress over a 3-7 day period. Once disease appears a number of ewes may be affected each day, unless the trigger for disease is acute then disease progresses more rapidly.

Typically two conditions exist, an undernutrition syndrome and a stress syndrome. Undernutrition occurs when feed availability is inadequate to maintain late gestation energy requirement; the stress syndrome is more acute occurring when ewes are held off feed for various reasons. Understanding the factors which predispose to pregnancy toxemia is critical to prevention.

Predisposing factors: (a combination of these factors typically occurs)
- Overcrowding causing feed restrictions
- Weather – restricting feed availability or which restricts intake but increases energy requirement
- Falling plane of nutrition in last 2 months of pregnancy
- Sudden feed restriction – yarding for shearing or crutching in late gestation
- General diseases restricting feed intake – footrot, foot abscess, internal parasitism, pink eye, hypocalcaemia and dental abnormality
- Older ewes are more at risk than ewes less than 2 tooth's
- Ewes with twins or triplets greater risk than singles

Impacts to production:
- Increased lamb deaths at birth
- Decreased birth weights (unless counteracted immediately)
- Reduced lactation
- Impaired mothering ability
- Reduced wool production
- Death in affected ewes is common

Prevention & planning:
Like most metabolic disease, prevention is better than treatment. Provision of adequate nutrition at crucial metabolic times is paramount. It is important to plan for the year ahead.
- Develop feeding programs that provide a gradual increase in energy intake – supporting fetal development without reducing body reserves
- Weigh ewes pre-tupping and mid-pregnancy - during pregnancy a ewe on average will need to increase bodyweight by 4kgs for a single fetus and 7.5kgs for twins
- Detecting twin pregnancies by ultrasound scanning - enables more efficient stocking rates and utilisation of feed availability
- Early disposal of lambs and dry ewes - paramount for provision of feed stores and availability of supplementary feed stores
- Considerations to fertilizer regimes – maximizing grass availability
- In rotation situations: lighter ewes should be selected and managed separately; generally, rotation time should be increased to maintain feed availability (if possible)
- Avoid mustering and holding off feed for prolonged periods especially pre-lambing crutching or shearing (if possible)
REMINDER - ZERO TOLERANCE

Following confirmed detections of both African Swine Fever and Foot and Mouth Disease in meat confiscated at airports by Department of Agriculture staff, Minister for Agriculture David Littleproud issued a press release. See below some information outlined in the release:

Australia remains free of both FMD and ASF - the Department of Agriculture ramped up screening and testing efforts last year when ASF was confirmed in China.

Background:
- Declared and seized pork jerky, sausages and pork products were collected over two periods – 3 December to 16 December 2018 and 21 January to 3 February 2019 and sent to the Australian Animal Health Laboratory for testing.
- During both periods, ASF virus fragments were detected in seized product.
- Testing confirmed six samples out of 152 contained ASF virus fragments in the first period, and that a further 40 samples out of 283 were contaminated with ASF virus fragments from the second period.
- Further testing was carried out on the products collected during the second period to assess the risk of FMD. Two samples out of 283 have been found to be contaminated with FMD virus fragments with one further sample being inconclusive.
- The two positive FMD samples and one inconclusive sample were from products declared by passengers.
- These results do not change Australia’s ASF-free and FMD-free status.
- Wherever possible, travellers who fail to declare will be issued with an infringement notice and fine for hundreds of dollars, for providing false or misleading information/IPC (Incoming Passenger Card) document. These actions are recorded and form part of future intervention approach for targeting non-compliant travellers.

QUIZ ANSWERS
1. Two
2. The owner of the animals at the destination property
3. Ear tag
4. Swine brand/tattoo or ear tag
5. Pink
6. Orange
7. False
8. False
9. True
10. True

Stock Chat

Do you follow us on Facebook? Stock Chat is a series of instructional videos featuring our veterinarians. They’ll step you through the symptoms and treatment options of common animal health issues, and give you some advice along the way.

Find Riverina Local Land Services on Facebook to keep in the loop!

CONTACT YOUR CLOSEST DISTRICT VETERINARIAN

Wagga Wagga | Emily Stearman | 6923 6300 | Dione Howard | 0427 418 006
Young | Eliz Braddon & Evie Duggan | 6381 4700
Narrandera/Griffith | Sophie Hemley | 0427 696 895
Hay | Courtney Simkin | 0427 418 006
Gundagai | Katelyn Braine | 0428 262 112