

RIVERINA LOCAL LIVESTOCK UPDATE

July



Local Land
Services

From the paddock

REMINDERS

SELLING SHEEP TO SOUTH AUSTRALIA

District Veterinarian Courtney Simkin

As of July 2019 SA producers will be able to buy sheep from anywhere within NSW and Victoria. Previously producers were restricted to buying only from Regional Biosecurity Areas due to Sheep Johnes Disease risks. This change in SA State biosecurity laws have been made to help restock numbers quickly when dry conditions lapse.

Visit www.animalhealthaustralia.com.au for more info

BUCKS FOR BRAINS

District Veterinarian Courtney Simkin

The National TSE (Transmissible spongiform encephalopathies) Freedom Assurance Project is used to prove that Australia is actively searching for and continues to remain free of Bovine Spongiform Encephalopathy (Mad Cow Disease) and sheep /goats TSE (scrabie). TSEs are a rare group of zoonotic, fatal brain diseases caused by prions. Prion diseases have been described in humans, cattle, sheep, goats, deer and other mammals. The prions cause tiny holes to form in the brain giving it a sponge-like appearance under a microscope. These holes result in gradual deterioration in the brain and other central nervous system tissues. There are no known treatments or vaccinations for TSEs. Currently Australia is free of all known animal TSEs and it has a 'negligible risk' status from the World Organisation of Animal Health. This gives Australian livestock industry export world market access.

To prove that Australia is actively looking for TSEs a mandatory number of brains must be submitted each year as a part of this active surveillance. The cattle and sheep brains are submitted from across Australia through private veterinarians, district/regional veterinarians and abattoir veterinarians. Bucks for brains can be accessed by producers through private and district/regional veterinarians. To be eligible stock (sheep and cattle only) must be within certain age brackets and exhibit a minimum of one to two distinct symptoms. The clinical signs will be analysed by your veterinarian to make sure they meet the criteria.

Cattle must be older than 30 months and less than 9 years. Cattle clinical signs can include changes in behaviour and neurological signs. Sheep must be older than 18 months and less than 5 years. Sheep clinical signs can include changes in temperament, mild behavioural and neurological signs.

There is a maximum of two animals per veterinary investigation. Producers received \$300 per eligible cattle brain and \$100 per eligible sheep brain.

If you have cattle or sheep displaying any of these signs, contact your veterinarian or your district veterinarian to see if you are eligible for an incentive payment

Visit www.animalhealthaustralia.com.au for more info

SHEEP FREEZE BRANDING - AN ALTERNATIVE OPTION TO MULESING

District Veterinarian Evie Duggan

I recently attended a demonstration of Sheep Freeze Branding (which has also been referred to as steining) held at Maurice Webb's property - an impressive and innovative new technology which is providing producers with a viable and practical alternative to mulesing. Dr John Steinfort gave a demonstration of the method and then a presentation explaining how the technology works.

The whole skin depth is targeted through the patented application process, resulting in a de-innervation or cessation of sensory skin nerve function, immediately post application, rendering the areas numb (Steinfort AgVet). If anyone has ever had anything burnt off their skin using liquid nitrogen they will remember it being painful - that is because it was a superficial burn compared to the whole skin depth that the Sheep Freeze Branding targets.

The effect is a nil animal impact on animal weight gains as verified by an independent trial study. The technique should be used in conjunction with improvements in animal genetics for plainer breeches while minimising associated lost wool production. Sheep Freeze Branding provides producers with an option to supply the market with non-mulesed wool.

The freeze branding is able to do up to 150 lambs an hour, at a cost of \$5 per head +GST. This technology is currently being rolled out commercially with contractors able to be trained by Dr Steinfort and provide sheep freeze branding to their clients.



Local Land
Services

TREE TOBACCO

**District Veterinarian
Courtney Simkin**

This upright, small, spindly tree with broad, elliptical, bluish-green leaves and pale yellow, tubular flowers is toxic to stock and humans. Luckily for the two producers who asked us to identify it, their livestock hadn't yet eaten it.

Nicotiana glauca (tree tobacco) is poorly palatable but hungry stock will eat it. Both producers – who were 150 kilometres apart – are now going to remove the plants from the paddock. If you noticed anything unusual in your paddocks please don't hesitate to contact us. Some plants can sometimes be identified from photos if you are unable to bring a physical plant in to the office.



GRAZING CROPS

District Veterinarian Eliz Braddon

Grazing crops are a great feed source in winter that allows pastures to have a rest and provide much needed nutrition to our livestock. They are generally highly digestible with good energy and protein levels ... BUT ... yes there is always a but! By the nature of them being so highly digestible, we can see some problems when grazing cattle and sheep on them. The trick is to be prepared for the issues and manage them accordingly.

GRAZING CANOLA

This is very similar to grazing a forage brassica or fodder rape as they are from the same family of plants

Risks: nitrate toxicity; photosensitisation; pulpy kidney

Nitrate toxicity - due to the plants rapidly growing +/- fertilisation of the crop can increase the risk of nitrates building up in the plants.

- Animals will adapt to the higher levels so Introduce Slowly and never put hungry stock on a crop unlimited!
- Provide hay or graze for a few hours / day slowly building up over a week to allow time for them to adjust to the feed.

Photosensitisation - common if you graze the crop too early.

- Observe any pre-grazing intervals (eg. sometimes 10-12 weeks from planting when plants have started to 'bronze off')

- Swollen heads, droopy ears - is a result of the high chlorophyll levels being converted to a phylloerythrin - which is a photoenergising agent ... which heats up in the blood and causes cell damage when skin is exposed to sunlight.

- Usually primary so once remove from the crop, animals should recover

Pulpy Kidney - Clostridial disease that causes toxins to be produced in the small intestine

- Usually a result of a sudden change of feed (eg. dry feed to the lush crop)
- Vaccination with 5in1, 6in1 or 8in1 are all protective
- Lambs/calves need to have 2 shots - one at marking/one at weaning to be fully protected. Adult stock should be boosted within the previous 3 months for full protection

GRAZING CEREALS - OATS / WHEAT

- Should wait until there is enough height in the crop to avoid 'chasing the green pick' ... eg. >5cm in height will provide >1200kg green DM/ha
- Risks are similar to grazing canola with additions of hypocalcemia / hypomagnesemia in relation to growing stock or pregnant /lactating stock
- Nitrate Poisoning / Photosensitisation / Pulpy Kidney - see the comments above for grazing canola!

Hypocalcemia / hypomagnesemia

- Cereal crops (like their grains) are naturally low in Calcium, Magnesium and Salt. Add to this that we often fertilise them with phosphorus based fertilisers and we exacerbate the mineral imbalance further
- Young growing stock (eg. lambs) and late pregnant / lactating classes of stock have a high demand for calcium and magnesium in particular so we can see problems in these classes when grazed on cereal crops without supplementation
- It is recommended to provide 1% Ca: 1% Mg: 0.5-1% Salt when grazing these crops to overcome the imbalance. The trick is getting stock to eat it! In some cases, loose licks will be sufficient and stock will go to them and 'self medicate' ... however, if they are not - then it may be necessary to put the mineral supplements in a grain mix to ensure they are getting a daily dose.
- Also if you are going to put lactating stock on these crops, the risk of 'grass tetany' increases as their milk production increases when the demand for Magnesium is at a peak. So it may be wise to try to utilise the crops prior to reaching peak lactation - eg. before 8-10 weeks post-calving /lambing - and then take them off the crop

All these crops are very low in fibre so providing an additional source of roughage in hay or a pasture paddock that they can go off to will reduce digestive upsets - this in turn, reduces scouring, improves production and weight gains and in the case of lactating animals, improves / maintains milk production as they need at least 20% fibre for good milk quality.



**Local Land
Services**

Case study: BUCKS FOR BRAINS

District Veterinarian Courtney Simkin

 Cattle

CASE HISTORY

Five angus cows in mid to late gestation were found dead over a two to three week period. The cows were grazing salt bush, dylon bush and lignum. There had been recent rainfall which had freshened the fodder base. The cattle appeared normal prior to being found dead.

CLINICAL SIGNS

- On the initial visit two down cows were examined. Cow 1 was in 2.5/5 BCS, unable to rise but was still bright, alert and responsive (BAR). Cow 2 was able to partially rise, but all limbs appeared weak. Both cows were treated with two bags of 4-in-1, which enabled the cows to stand with assistance.
- On the second visit Cow 1 had become anorexic, dull and was recumbent again. The cow was still eating and drinking. Due to the poor prognosis for this cow, the producer elected for euthanasia and post mortem examination.

POST MORTEM FINDINGS

- No intra-abdominal fat, and slightly yellow subcutaneous fat
- Enlargement of abdominal lymph nodes
- Singular foetus at six to seven months gestation
- Fibrinous adhesions (indicating chronic disease) between the diaphragm and the liver.
- The liver had scarring across the surface and some bile ducts appeared thickened

LABORATORY FINDINGS

- Moderate and wide spread bile duct fibrosis (a chronic change)
- Low blood serum phosphorus and calcium

OBSERVATIONS

- The scarring of the liver could be from previous liver fluke infection. Low serum phosphorus is rare to find in cattle as cattle have to be severely phosphorus deficient before serum concentrations are depressed. Phosphorus has an important role in the animals feed conversion, appetite and fertility. Deficiency can result in reduced appetite (and all consequences of this especially in young growing cattle), skeletal abnormalities and in severe cases spontaneous fractures, as well as reduced fertility.
- The low serum calcium would have contributed to the cows being down.

THE NEXT STEPS

- The owners elected to move all the cattle back to their home property to receive a full hand fed ration. The cattle responded well to the treatment but until the cows begin calving it is unknown as to whether the low phosphorus would affect the growing foetuses.
- Cow 2 and a third down cow were treated and responded to further 4in1 treatment but were not 'fit to load'. Owners elected euthanasia as they could not return to the property for the required daily treatment.
- The first cow was submitted for bucks for brains under the National TSE Freedom Assurance Project and the producer received \$300 for the brain as well as free sample testing at the laboratory.



Case study: **YELLOW EWES**

District Veterinarian Katelyn Braine



CASE HISTORY

A sheep producer bought a flock of 548 three year old ewes with around 537, four week old lambs at foot from the Victorian/New South Wales border. The tail end of the ewes were still due to lamb. It was understood by the producer that at the original property the sheep were grazing pastures and supplementary fed with grain. On arrival at the new property they continued to graze pastures and were supplementary fed barley. Within a couple of days of arriving at the new property, the producer was experiencing a large number of deaths in the ewes. At the time of the farm visit which was 10 days after the ewes had arrived to the new property, the producer had lost around 20 ewes. Prior to death the ewes became lethargic and the producer noticed that the ewes that died had a yellow colour to their udders. It was also noticed that following death some ewes would express urine which was red-brown in colour. No clinical signs were observed in the lambs. The ewes were not up to date with vaccinations or drenching prior to being moved to the new property. A post mortem was performed on a ewe which had died two to three hours prior to the farm visit.

POST MORTEM FINDINGS

- Mucous membranes (gums), ears and udder were jaundiced (yellow)
- Subcutaneous tissue and internal fat markedly jaundiced
- Skeletal muscle and most of the internal organs appeared darker than normal
- The presence of petechial haemorrhages (tiny red spots) over the surface of some organs
- Kidney was dark in colour with a similar colour in both the cortex and medulla.
- Haemoglobin was detected in urine sample using a urine dipstick

LABORATORY FINDINGS

- Elevated kidney copper levels 1.28 mmol/kg wet wt (normal range is 0.0 – 0.2 mmol/kg wet wt)
- Degeneration of cells in the liver and kidney were seen on histopathology



ABOVE: Dark kidney seen on post mortem (left) (note the cortex and medulla are the same colour) and normal kidney (right).

DIAGNOSIS

An acute haemolytic crisis secondary to chronic copper toxicity.

WHAT DOES THIS MEAN?

Given that the full history of the ewes at the previous property was unknown, we do not know for sure what the cause is, but the chronic changes seen in the liver at the lab were consistent with an underlying toxic insult such as the ingestion of pyrrolizidine alkaloids, aflatoxins or other toxic plants. It is suspected that the ewes had been grazing a toxic plant at the previous property over a period of time that has compromised the liver. Copper is naturally absorbed and stored in the liver, but when there is damage to the liver, the secretion of excess copper in the bile is impaired which allows copper levels to accumulate. It is suspected that the stress of transport and the nutritional stress of the high protein content of the barley was the tipping point of the copper levels and toxicity, resulting in the acute haemolytic crisis and the death of the ewes.

WAS THERE ANYTHING WE COULD DO FOR THESE EWES?

- Treatment is aimed at reducing the copper load in the liver and at preventing further deaths due to the haemolytic crisis. A drench containing 50 grams of epsom salts and 10 grams of sodium molybdate mixed in 1 litre of water (will treat 50 ewes) can be made up, and each ewe can be given 20ml of the drench orally as a ONCE off treatment.
- In this specific case, the mortality rate began to decrease and stabilise once the producer stopped feeding the barley and the ewes did not have access to the original toxin. The producer decided not to drench the ewes as the mortality rate had seemed to settle down and they were hesitant about putting the ewes back through the yards and potentially mismothering the lambs again. The producer kept monitoring the ewes over the following weeks and had the drench recipe on hand if deaths continued to occur or began to rise again.



ABOVE: Jaundice of subcutaneous tissue and fat.



ABOVE: Petechiations present on cardiac muscle.



ABOVE: Petechiations on the liver surface

EVENTS

July 23 – YOUNG - Flocks for the future

Hear an update on R&D, and join in discussion around genetic tools for improving your sheep flock.
Young Golf Club, 9:30am – 3pm, \$20 per person
RSVP: Sue Gordon - 0412 361 681

July 26 – WAGGA - Graham Centre Livestock Forum

Convention Centre at Charles Sturt University, 9am – 3pm,
\$25 per person
RSVP: Visit www.csu.edu.au/research/grahamcentre for full info

SURVEYS

RIVERINA SHEEP PRODUCERS!

Riverina sheep producers are invited to participate in a web-based questionnaire aimed at improving extension services available to sheep producers relating to animal health and nutrition practices associated with lambing.

Questions will be based around vaccination, nutritional supplementation of sheep and producer perceptions of management practices. The study is part of research being completed by PhD student Kayla Kopp at Charles Sturt University and will take participants approximately 15 minutes to complete. The study is completely confidential and participants will go into the draw to win a \$50 pre-paid Visa/Mastercard gift card.

To complete the survey visit www.surveymonkey.com/r/lambsurvey

THE IMPORTANCE OF HYDATID DISEASE IN THE AUSTRALIAN BEEF INDUSTRY

This survey is being conducted to understand current beef producer knowledge and level of concern about hydatid disease, and current farm management practices that might influence hydatid disease incidence and impacts. Producers who are currently involved in the Australian beef industry either as farm owners or managers are invited to participate in the research (participants must own or manage at least one beast that is, or will be used for beef production). The questionnaire is completed anonymously.

To complete the survey visit https://www.research.net/r/Hydatid_Disease



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 | 0428 115 134

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



**Local Land
Services**