Animal Health Update

South East Local Land Services

July 2020

LOCAL DISEASE WATCH

Alex Stephens District Veterinarian Yass.

This month the District Vets have again seen diseases caused by rain, clover and milder temperatures. Below is a list of diseases seen by the District Vets in the South East this month.

Dermo (otherwise known as dermatophilosis or lumpy wool) causes hard scabs to form in the wool, or in severe cases a hard shell in the fleece. It particularly affects young sheep, but cattle, goats and horses and humans can be infected. It is caused by the bacteria *dermotophilus congolensis,* which rapidly spreads when sheep are held in close contact after episodes of wetting, and sometimes outbreaks can be seen after prolonged wet weather. Most mildly affected sheep will self-cure, but more severely affected sheep should be drafted off for treatment with antibiotics. This needs to be done at least 2 months before shearing to allow scabs to lift. For more information see here.

Water belly (otherwise known as bladder stones or urolithiasis) occurs when calculi, small stones or sediment settle out of concentrated urine and block the urethra, usually at the tip or the penis, eventually causing bladder rupture and death. We see this disease caused by different circumstances, but this winter we have seen it in wethers grazing short green feed with a predominance of clover. Grazing of phyto-eostrogenic clovers can have a causative affect. Prevention is the best option by avoiding these pastures or encouraging more drinking and rumination by providing salt and roughage in the form of hay.

Bloat is continuing to cause occasional problems on crop and due to the high proportion of clover in the pastures with minimal roughage available. Bloat capsules are not currently available however you can feed the active monensin in loose lick products. These can be great options on crop where you are also needing to supplement calcium, salt and magnesium for ultimate performance. Monensin moderates the gut bacteria which also helps in decreasing the foam formation in frothy bloat. Care must be taken with this product as it is toxic to dogs and horses and cattle in excess. The other way to protect against the foam formation is to use a detergent or oil. Most commonly used is alcohol ethoxylate in bloat blocks or as a lick. For more prevention and treatment options see here.

MLA has a fantastic group of webinars on its website which are worth a watch, re bloat control, grass tetany and more.

Foot abscess in sheep. This winter will be one of our most challenging to control and minimise foot abscess in ewes. Stock are heavier, conditions are muddy and the high proportion of cape weed and clover in the pastures is keeping feet wet. Some of the key management factors are weight control in

the ewes, prior attention to foot health, minimising the movement of sheep through muddy gateways and yards, movement to a paddock where feet can dry and prompt treatment of affected sheep with foot paring and antibiotics. For more information see here.

Footrot in sheep. With current pasture conditions lameness may be seen due to foot abscess, benign or virulent footrot. Virulent footrot is a notifiable disease. If you see lameness you have a legal obligation to inspect the sheep and to call your district veterinarian if you see underrunning of the hoof wall. Please see our article in last month's edition. The following foot rot guide prepared for Tasmania explains the disease and control measures well.

Bovine Ephemeral Fever (commonly referred to as Three Day Sickness) is a viral infection transmitted by mosquitoes and other biting insects. It continues to be seen in the Shoalhaven area despite cooler temperatures. In early June three day sickness, which is typically seen in adult and heavily weighted animals, was confirmed in an 8-month-old calf. Cattle may show signs of fever, profound muscle weakness, lameness and stiffness. A handful of cows in the same herd had displayed these symptoms 6 to 8 weeks prior and recovered uneventfully without intervention. In this case, the calf presented with sudden onset severe lethargy, high fever, drooling, poor appetite and not drinking. The affected calf recovered after 7 days of intensive supportive therapy.

Sporadic cases of diarrhoea have been reported in the Illawarra area affecting young calves anywhere from 1 to 6 weeks of age. Please contact your nearest veterinarian for advice if you are concerned that scours are spreading throughout your herd despite preventative measures, and if affected calves are deteriorating rapidly and are un-responsive to administered supportive therapies such as electrolytes and/or drenches.

Early stage abortions/failure to join has been investigated in sheep flocks with disappointing scanning results. While we will not always get a diagnosis, diseases such as toxoplasmosis, border disease (pestivirus), campylobacter, or selenium deficiency can be ruled in or out by blood testing a sample of the dry ewes. The sooner the sampling is done the better. **Late stage abortions** can be caused by campylobacter and may be noticed due to breach staining at pre-lambing crutching or foetuses seen in the paddock. Donning some gloves and carefully collecting the foetus and any visible birth membranes to submit to the lab via your district vet is best way to get a prompt diagnosis. Blood tests of the ewe mob at the first opportunity can also yield results.

Brucellosis ovis is a profit thief and an important reproductive disease of sheep. It is important to monitor for it with yearly palpation of the ram testes. We have checked a few flocks this month, winter is a great time to check your rams as it gives you the maximum amount of time to diagnose and eradicate before the next joining. Your district veterinarian would be very happy to teach you this skill and be on hand to blood test any rams that palpate abnormally.

Late state abortion investigations in cattle can be particularly frustrating, as even when all the best samples are submitted to the laboratory a diagnosis is only obtained 30% of the time. The usual suspects are pestivirus, leptospirosis, vibriosis, neosporosis, Q fever, and 3-day sickness but grazing on toxic plants and moulds can also cause abortions. Vaccination against leptospirosis and **pestivirus** are highly advisable, which is a good reminder that now is the time to start vaccinating your heifers, or give the second shot, in time for joining.

Selenium deficiency is highly likely to be seen this year due to the high proportion of clover in the diet. Testing of a mob or ewes in Yass this month showed selenium deficiency. It can affect both cattle and sheep causing infertility or early embryonic death, ill thrift in weaners, deficiencies of the immune system and white muscle disease in newborns. It can be easily tested for with a blood test from a sample of animals. It is prevented using pasture based or short or long-term selenium supplements. Talk to your district vet about testing or supplementing. Learn more here.

Grazing oats have been causing some issues this month with deaths occurring due to hypocalcemia and photosensitisation. There have also been indications that stock are seeking fibre. Providing a source of roughage to ensure best rumen function along with salt, calcium and magnesium will help to ensure best performance.

Worm watch. This month there have been a number of cattle properties tested for fluke using the pooled fluke ELISA. These results have varied from negative, to low positives to highly positive. The results usually indicated the amount of grazing into fluke infected creek lines. The positive blood test, even when cattle are looking good, demonstrates the need for monitoring and a strategic winter drench. It wipes out the adult fluke in winter while the snails are inactive and breaks the fluke life cycle to lessen the effect of fluke in the herd in the next summer.

Testing of ewes pre lambing has in many cases returned low worm counts. But care is needed before deciding not to drench. Culture of some of the faecal egg counts from around the district has shown 50% barber's pole where there are some occasional sheep with higher counts. The average may still be low (i.e. <200) but drenching is advised to avoid bringing barber's pole through the winter and contaminating lambing paddocks. Ensure that these ewes are not drenched with a triple drench or a primer, with the long acting mectin (as barbers pole worms have a strongly emerging resistance to the mectins and drenching with a long acting mectin will heavily select for mectin resistant barber's pole worms.

Monitoring of weaner sheep has been very valuable as many flocks are showing low counts with only ongoing monitoring advised, probably reflecting the current excellent nutrition available and the baking that the pastures received over summer. Monitoring saves unnecessary drenching, or undetected production loss. Some of these counts are coming back with high tapeworm counts. Tapeworm can be treated with a drench containing praziquantel but is generally not considered necessary as tapeworm are not thought to cause production loss.

LAMBING ON THE SMALL-SCALE FARM

Lou Baskind District Veterinarian Palerang

While not exhaustive, the following list should help you in supporting the ewe in these last weeks and get ready for lambing.

Ewe Nutrition

- The ewe has substantial nutritional needs in the last six weeks of pregnancy, but at the same time her capacity to eat is much reduced - the lamb is taking up all the space! This effect is exacerbated if she's carrying twins, or triplets. Ewes receiving less than required nutrition in late

pregnancy have poor mothering instincts, and the resulting low birthweight lambs have poorer survival rates.

- The disease caused by not getting enough calories in the last weeks of pregnancy is called **Pregnancy Toxaemia** and is sometimes referred to as Twin Lamb Disease. Affected ewes will stand away from the mob, remain still when approached, seem “depressed” or drowsy and may appear blind. They may stand in water, lapping or “sham” drinking. By the time the signs are recognised it is often too late to reverse the effects. To have a chance at success, treatment must be intensive.
- To prevent pregnancy toxaemia the ewe needs high energy food in a small package - this is where **grains or pellets** are a good option. She needs a few weeks for her rumen to get used to the high energy foods in order to **avoid grain poisoning.** So **start slowly** at just 50g per day and increasing by a little each day. Her overall diet must be at least **20% roughage/hay** - she needs this to keep her rumen healthy and to produce milk.

Vaccinations

- Before introducing grain or pellets the ewe should have received her **6-in-1 clostridial vaccinations**. If it’s been a few months since her last shot, it’s cheap insurance to give her another booster.
- Vaccinating the ewe will also ensure antibodies in good levels in the colostrum to pass on to her newborn lambs and bolster their naïve immune systems.

Worming

- During late pregnancy and for a couple of months after lambing the ewe’s immune system is weakened and she is much more susceptible to the effect of worms. This is the ideal time to collect a poo sample and send away for a worm egg count. Local Land Services has collection kits or you can request kits directly from NSW DPI. Worm testing is a simple and accurate way to decide whether chemical drenches are needed.

Lambing assistance

- Plan for the absolute **minimum of interference** when the ewe gives birth. Disturbing the ewe can disrupt the birthing process or the stop the bond between the mother and her lamb from forming. Over-participation by you, the enthusiastic and anxious “grandparent”, can result in more lamb deaths than allowing the process to progress undisturbed. **Invest in a good pair of binoculars** and observe from a distance. Then seek advice from a vet or an experienced stockperson before approaching. Gather these few items just in case but try to avoid intervening unless absolutely necessary.
    - a few litres of obstetrical/veterinary lubricant (essential)
    - old newspapers or clean empty feed bags
    - clean and dry towels
    - soap
    - buckets
    - gloves.

Prepare yourself

- Birthing fluids carry the risk of transmitting Q fever, a disease that spreads from animals to humans and causes severe flu-like illness, occasionally with chronic complications. Vaccination is the most effective way to prevent Q fever. Take proper precautions by wearing a P2 mask, eye protection, gloves and protective outer clothing if in the vicinity of birthing membranes and fluids. For more information about Q fever go to the health.gov.au or safework.nsw.gov.au websites.

ZOONOSES - ANIMAL DISEASES THAT CAN INFECT YOU

Zoonotic diseases are animal diseases that can infect and cause disease in humans. Anyone working with or handling animals needs to know about zoonoses and the precautions they must take to minimise the risk to themselves and their family. Examples of zoonotic diseases are: Hydatids, Q fever, Leptospirosis, Salmonella, Campylobacter and Hendra Virus.

South East LLS district veterinarians will be running a series of articles providing information on Zoonoses. The second in this series is about Q Fever.

Q Fever

Henry Clutterbuck District Veterinarian Goulburn

Q fever is a zoonotic disease caused by the gram-negative, intracellular bacterium, Coxiella burnetii, that was first identified in Australia. C. burnetii is present in every country except Tahiti, New Zealand and the continent of Antarctica.

History in Australia

Q fever has been a nationally notifiable disease in humans in Australia since 1977 with Queensland historically reporting the largest number of cases. Increasing numbers of abattoir-associated cases in the 1980s prompted the need for control. In 1989 the Commonwealth Serum Laboratory (CSL) released the first licensed vaccine, Q-Vax, after conducting clinical trials in Australian abattoirs. Despite the availability of a vaccine from 1989, numbers of reported Q fever cases increased. This was likely due to the low uptake of the vaccine by the at-risk workforce. In 2000 the Government responded to the increasing Q Fever notifications by introducing the National Q Fever Management Program (NQFMP). The program provided a subsidy to eligible people to receive the vaccine. The program was ceased as planned in 2006. Whilst the program was running the overall trend of reported Q fever cases decreased nationally. The economic benefits of increased uptake of the Q fever vaccine in the meat and agriculture industry has been shown to be a cost-effective way to reduce the public health risk posed by Q fever.

The Disease

C. burnetii is highly infective, requiring only one bacterium to cause infection. Forty per cent of those infected will show clinical symptoms, which can vary from mild influenza-like signs to severe illness requiring hospitalisation. If contracted during pregnancy, Q fever can cause complications such as abortion, premature birth or low birth weight depending on the trimester of infection. If not treated in the acute phase, hosts may mount an immune response and limit bacterial replication to within

macrophages. Chronic Q fever “syndromes” may subsequently develop with endocarditis most commonly reported. Infection with C. burnetii can also result in so-called Q fever fatigue syndrome. Development of the chronic disease state has been shown to be linked to immunodeficiency.

Transmission

The main route of transmission of Q fever to humans is inhalation of aerosols in the form of contaminated droplets or dust. This route of transmission can be widespread. Domestic ruminants are generally considered to be the main source for human C. burnetii infections however it has been identified in a diverse range of other vertebrates worldwide including pigs, cats (domestic and feral), dogs, rabbits, coyotes, foxes, rodents, skunks, raccoons, rabbits, deer and birds. The bacterium is shed in the placenta, amniotic fluid, milk, urine, and faeces of ruminants. These excreta are readily aerosolised with as many as 109 /gram bacteria shed at parturition. In domestic animals, C. burnetii is a cause of abortion, placentitis, infertility and low birth weight. The clinical significance of infection in other animals is not well understood.

NSW Epidemiology

As has previously been identified domestic livestock still pose the greatest exposure risk in NSW and Australia more broadly. More recently however, the number of notifications reporting no livestock related risk exposures has been increasing. Reported contact with native animals alone and a further 86 reported contact with multiple animal categories (Table 1). Exposure to livestock remains the most common risk exposure both in NSW and nationally. This is consistent with increased exposure to known sources of Q fever and participation in high risk activities. In urban LGAs there was more variation in the supposed source of exposure (Table 1). In rural settings livestock remained an important risk exposure in urban settings, contact with native Australian animals seemed to be noted more commonly than in rural settings.

Table 1: **Q fever notifications by occupation, animal exposure and local government area (LGA) classification in New South Wales, 2011-2015 (n=722).** The nature of animal exposure is also detailed for 641 cases that reportedly had contact with animals.[1]

LGA Classification	Urban			Rural		Total
LGA Sub-Classification	Metropolitan Developed	Regional Town/City	Fringe	Agricultural	Remote	
Total	18	366	18	315	5	722
Occupation						
High risk occupation	5	131	9	198	2	345
Other occupation	11	199	9	95	1	315
Unknown *	2	36	0	22	2	62
Animal exposure						
Yes	18	315	17	287	4	641
No	0	28	0	12	0	40
Unknown *	0	23	1	16	1	41
Nature of animal exposure						
Livestock - direct	7	136	8	193	1	345
Livestock - indirect	1	30	4	27	0	62
Livestock - contact not specified	0	8	1	7	0	16
Native/feral animal - direct	1	11	0	2	0	14
Native/feral animal - indirect	4	46	3	6	0	59
Native/feral animal - contact not specified	2	30	0	5	1	38
Companion animal, including horses	0	10	1	4	0	15
Other	0	3	0	3	0	6
Multiple	3	41	0	40	2	86

* Includes cases where data was missing or stated as unknown.

See Supplementary table for detailed explanation of classifications

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