

Animal Health Update

South East Local Land Services

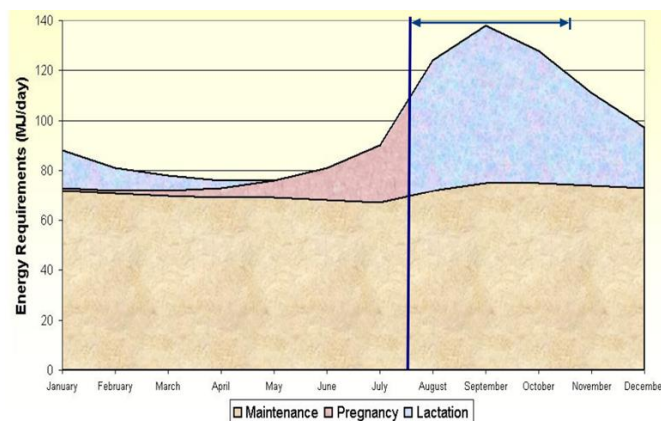
June/July 2018

Local disease watch

Fiona Kelk, Yass district vet

Your cows in late pregnancy require energy

The South East DV team recently attended a regional meeting with DVs from other Local Land Services regions. There was a discussion about an increase in downer cows 6-8 weeks pre-calving. From the collective experience the most common cause stemmed from a lack of nutrition, most importantly energy (represented as Megajoules of metabolisable energy MJME).



This graph shows the rapid increase in energy requirement for cattle in late pregnancy and lactation. Now, at this critical time of pre and post calving, it is important to increase the energy and protein components of the cows' diet to prevent general weakness or ketosis. If full hand feeding, the following rates are a suggested MINIMUM.

Daily cow requirements for maintenance		
MJ ME /kg	Crude Protein %	
7	6-9	Survival
8	8-9	Pregnancy
9-10	12	Lactation

Most regions have been supplementary feeding for some months, and the majority of cows have been supplemented with hay (for example oaten ~ 8.5 ME, 6% crude protein). In a fair few cases lower than maintenance amounts of feed have been offered, which has allowed slow weight loss. Weight loss is acceptable to a point, however once cows get to a lower condition score and have lost their reserves maintenance rates must be fed.

Feed options: Minimum weight (kg) per day 'as fed'					
Stock type	Grain only (12ME)	Hay only (8.5 ME)	50:50 Grain:Hay	80:20 Grain:Hay	Silage (35% DM, 9ME)
Adult dry stock (500kg)	5	7.8	6.2	5.5	18.6
Breeder, Late pregnancy (500kg)	6.1	9.3	7.4	6.6	22.4
Breeders, lactating (500kg)	Not suitable	12.5	9.9	8.8	29.8

Tables from B. Littler livestock nutritionist

Lou Baskind, Palerang district vet

Leptospirosis causing abortion in cattle

In the South East region we have recently had a case of leptospirosis causing abortion in cattle. With most heifers and cows in late pregnancy, now is a good time to consider a vaccination program with 7-in-1.

'Lepto' can cause disease in different ways depending both on the type of leptospirosis organism and the species which is infected. In cattle, there may be multiple late-term abortions without any other symptoms of illness in the cows themselves. It can cause sickness, usually in young calves which may have high fevers and malaise.

Cattle often become infected from carrier, or "reservoir" animals, either cattle or other species. Carriers have a persistent infection in the kidneys, often without showing outward signs of illness. Infectious organisms then pass in the urine.

One source of 'lepto' that is of great concern in our region is feral pigs. Pigs get intense infections which shed for long periods of time (up to one year in young pigs and two months in sows). Their infected urine contaminates watering and feeding areas, and cattle become infected through abrasions in their skin, nose and mouth.

Other species that are a potential source of infection are wild deer, wild dogs and rats.

There are two main methods to control infection of 'lepto' within your herd. The first is to eliminate access of feral pigs and other pests, especially to standing and stagnant water. The landholder has an obligation to control pests, but controlling feral pig access to stock watering points can be a major challenge in dry times.

That is why it is important to combine pest control with a vaccination program using a 7-in-1 vaccine. 7-in-1 vaccines include the clostridial diseases of the 5-in-1 vaccine plus two serovars of leptospirosis. These vaccines are very effective at preventing infection and they reduce the spread of disease within the herd from carrier cattle. Another great reason to use 7-in-1 is to minimise the risk to yourselves and your workers as 'lepto' is zoonotic, meaning that it can infect humans and cause illness.

Initial vaccination with 7-in-1 should be given twice, four to six weeks apart. The first vaccination can be given to pregnant heifers and cows now, about a month before calving. This vaccine also protects the young calf for the first month of life, by passing the immunity on via the colostrum. Calves should then be vaccinated with 7-in-1 at calf marking, and then boosted again at 4-6 weeks later. All stock should then be boosted with a 7-in-1 annually.

Petrea Wait, Monaro district vet

Phalaris Poisoning

Phalaris (*Phalaris aquatica*) is a temperate, or cool season, perennial grass which grows mainly in late autumn, winter and spring. It is a valuable pasture species for its properties of drought resistance, persistent survival, ability to suppress weed infestation as well as tolerance to heavy grazing, insect infestation, flooding and moderately saline soils. In addition, a well-managed phalaris pasture has the ability to carry more livestock per hectare and often also gives more production per animal relative to most annual and native grass pastures.

Unfortunately, phalaris can sometimes poison livestock, including sheep, cattle, goats and horses. Different forms of phalaris poisoning have been identified including chronic phalaris staggers, as well as two sudden-death syndromes – PE (polioencephalomalacia)-like sudden death and cardiac sudden death. Under certain conditions Phalaris is able to produce toxic substances, although the poisonous potential of Phalaris is a dynamic function of interacting plant, animal, environmental and management factors.

CHRONIC PHALARIS STAGGERS

This neurological syndrome results from prolonged ingestion of certain alkaloids present in the plant. Symptoms occur when the flock is disturbed or mustered and animals often show a generalised muscle tremor including head nodding and jaw champing. They will display in-coordination with frequent falling and some lack the ability to rise and struggle when approached. Knee-walking is frequently seen and the animals may 'bunny hop'. The affected animals remain conscious throughout, however if recumbent for a prolonged period, may become comatose and develop convulsions. Death or recovery can occur over the ensuing weeks or months, depending on the chronicity of ingestion and the severity of clinical signs. Symptoms can develop as soon as 1-3 weeks following the introduction to the pasture especially with the older cultivars. However, with the new varieties such as Sirolan, much longer periods of grazing (3-4 months) may be needed to induce staggers. Clinical signs can occur even after being removed from the incriminating pasture, with cases developing up to 3-4 months later.

There is no effective treatment for phalaris staggers, but animals should be immediately moved to phalaris-free pastures. Protection against this form of poisoning is possible via Cobalt bullets placed in the rumen. It is advised that two bullets are given to prevent a calcium carbonate coating building up around the bullet, which would decrease effective absorption of Cobalt. Intraruminal grinders are also available for this purpose. Two bullets should be given every three years.

Alternatively, top dressing the pasture with Cobalt or individually drenching each sheep weekly will allow potentially toxic pasture to be grazed with no adverse consequences.

ACUTE CARDIAC SUDDEN DEATH SYNDROME

The cardiac form of sudden death on phalaris pastures involves a sudden onset of a cardiorespiratory disorder without neurological signs. Outbreaks can occur as soon as 24 hours following introduction to the pasture, however in some reports sheep had been grazing the toxic pastures for 2 weeks before outbreaks occurred. The clinical course of the disease ranges from minutes to hours; clinical signs being induced by flock disturbance or when the animals are forced to exert themselves. Symptoms include collapse, respiratory distress and affected animals will have blue discoloration of the gums. Generally about 1% of the flock will be affected and most affected sheep die, however some may spontaneously recover.

The toxin responsible is unknown, although it is considered that ruminants are able to detoxify this toxin provided it is not ingested too rapidly or in excess. Toxic levels of cyanide have been measured in affected pastures, although nitrate compounds have also been postulated as the causative agent, as they too have been measured in pastures in levels considered poisonous to sheep.

Again there is no treatment and stock should be removed immediately from the paddock with as little stress as possible to avoid further mortalities. Once moved, there should be no more new cases. Cobalt administration is not preventative for these cases. The incidence of cardiac sudden death syndrome does appear to be greatest during the first few months of new growth, typically autumn to early winter so it is recommended to avoid grazing phalaris dominant pastures during this period.

PERACUTE PE-LIKE SUDDEN DEATH

'PE-like sudden death' involves a rapid onset of neurological signs and death that differs greatly from those of phalaris staggers. The animals display in-coordination, decreased awareness, apparent blindness, aimless walking and head pressing and often die during a seizure episode. No disturbance is needed to precipitate the clinical signs. The greatest mortalities occur within 48 hours following the introduction to the pasture, with the highest incidence of disease seen during autumn through to late winter. The noxious pasture is only poisonous for several weeks during this season though. As with cardiac sudden death, the toxin responsible for this condition is unknown although substances that inhibit the uptake of thiamine (Vitamin B1) or interfere with urea detoxification have been proposed given the symptoms of PE and the elevated blood ammonia levels found in affected animals.

Again, there is no treatment or consistent method of preventing outbreaks of 'PE-like' sudden death. Outbreaks occur more commonly when hungry stock are put on phalaris dominant pastures that have been spelled or involved in rotational grazing where an abundance of new shoots has been available. The toxic potential of phalaris pastures also seems to increase when rain has followed a period of moisture stress or a heavy frost. From autumn through to late winter it may be wise to test the toxic potential of a paddock by placing a group of sentinel sheep onto the paddock 48 hours before the entire flock is given free access.

PREVENTION

The application of cobalt bullets are an effective measure to protect against Phalaris staggers, and allow potentially toxic pastures to be grazed. It is important to remember however that they do not prevent the other forms of poisoning. Producers should try to avoid putting hungry stock on freshly-shooting phalaris dominant pastures, especially following periods of frosts or moisture stress. If the stock have been held for a period of time without access to food, they should be fed before being placed on the pasture. Continuous grazing to keep new growth at a minimum especially during the autumn and winter months may also assist.

Man Chiu Tso final year student DVM Sydney Uni

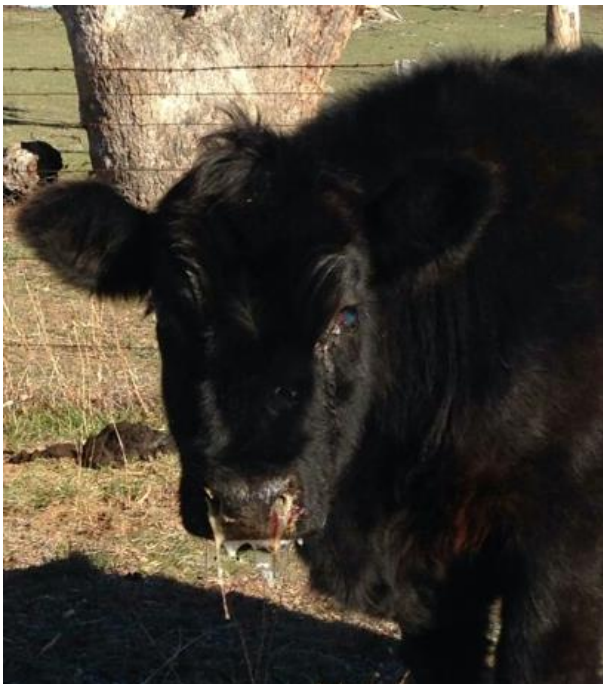
Malignant Catarrhal Fever – A potential risk when grazing cattle with sheep

Malignant catarrhal fever (MCF) is a rare but deadly disease that is seen in cattle in Australia. This disease is sporadic and usually affects only an occasional animal within the herd. Although few cattle are affected by this disease, the death rate in infected cattle that show clinical symptoms ranges from 80-90%.

Ovine herpesvirus 2 (OvHV-2) and alcelaphine herpesvirus (AIHV-1) are the two most common viruses responsible for causing MCF. The reservoir host for OvHV-2 and AIHV-1 is sheep and wildebeest respectively. Reservoir hosts act only as carriers of the virus, and they are not susceptible to the disease. Wildebeest-associated MCF is not seen in Australia mainly causes problems in eastern and southern Africa. Sheep-associated MCF can be found worldwide where sheep and cattle are kept together. Reservoir hosts can transmit the virus to the clinically susceptible hosts including; cattle, deer, bison, and pigs. The virus is excreted in fecal matter, nasal and eye discharge. The virus then infects susceptible hosts via direct contact, ingestion or inhalation of aerosols. Pasture contamination and fomites are also common routes of transmission between herds.

With sheep-associated MCF, susceptible hosts exposed to the virus may have a variable incubation period from

3 to 10 weeks and even up to 6 months. Head-and-eye form is the typical acute form seen in cattle with MCF. Depression, fever and discharge from the nose and eyes are common clinical signs shown in the first few days. Affected animals look very ill and may have muzzle and oral ulceration, difficulty in breathing, clouding of the eyes, photophobia and even blindness. Ulceration may also be found around the feet, vulva and teats. Affected animals can also possess neurological signs such as sensitivity to touch, tremors, incoordination, paralysis, rapid involuntary eye movement and aggressive behaviour. Other possible signs include weakness, diarrhea, dehydration, weight loss, separation from the herd, trouble urinating, blood in feces and urine, dermatitis, lameness, swollen joints and generalized lymph node enlargement. Infected animals that have shown clinical signs usually die in a few days, although some have been reported to survive for several weeks. Recovery from the disease is rare, and animals that did recover do not return to full productivity.



A recently confirmed case at Murrumbateman.

Unfortunately, the prognosis is grave once the animal is diagnosed with MCF. There is no effective treatment available and only supportive therapy can be given. The use of antibiotics can only prevent secondary bacterial infection rather than curing the disease. Even if the animal does recover; it may become a disease carrier. Luckily, it is near impossible for transmission between cattle and this disease poses no threat to human health. At this moment, there is no effective vaccination available for MCF. The primary preventative method is to physically separate clinically susceptible species from sheep and goats. It is important to note that there have

been cases where cattle are infected even with 70 meters separation from sheep.

Sheep-associated MCF is not a notifiable disease. However, the clinical signs are not specific to this disease and can be mistaken with other notifiable diseases such as Wildebeest-associated MCF, foot-and-mouth disease, rinderpest and vesicular stomatitis. If you suspect any animals that are showing the symptoms listed above, you must report to your local veterinarian or contact the Emergency Animal Disease Watch Hotline on 1800 675 888.

Helen Schaefer, Far South Coast district vet

Do you have one pig or more? DON'T FEED SWILL!

One of our responsibilities as Authorised Officers under the *Biosecurity Act 2015* is to conduct periodic inspections of properties holding pigs to ensure that pigs are not being fed swill. We have conducted a number of these so called "swill feeding inspections" over the last month in the Bega Valley and have been somewhat surprised by how many pig owners are not aware of why they can't feed some things to pigs. Fortunately, we didn't find any problems, but given the potential significance of this issue for our entire livestock industry we thought it wise to highlight it here.

Swill feeding is the traditional name for feeding food scraps to pigs. What many people don't know is that it is **illegal to feed any meat, meat products, or food which has been in contact with meat products, to pigs**. Swill Feeding is alternatively referred to as the "Feeding of Prohibited Substances". It is also illegal to run pigs with ruminant stock (sheep, cattle, alpacas, goats, deer).

The reason this practice is against the law is that we now know that the most likely source of the 2001 Foot and Mouth Disease (FMD) outbreak in the UK, which resulted in the deaths of well over 6 million animals, was a piggery in North-East England where unprocessed meat and meat products were fed to the pigs as swill.

Once pigs consume meat containing the virus, the FMD virus replicates in the body rapidly and the pigs then shed this virus which is extremely contagious to all other cloven hoofed animals. Pigs are recognised as being "amplifiers" of the FMD virus. This outbreak cost the UK over \$22 billion dollars.

Australia is currently free of FMD but, as was demonstrated in the UK, it doesn't take much for an emergency outbreak of this contagious disease to start

and cause social, economic and trade losses which would be catastrophic for our country.

Foods which ARE ILLEGAL to feed to pigs include:

- Pies, sausage rolls, bacon and cheese rolls, pizza, deli meats, table scraps that contain meat or have been in contact with meat etc
- Household, commercial or industrial waste including restaurant food and discarded cooking oils which may have been in contact with or contain meat
- Anything that has been in contact with prohibited pig feed via collection, storage or transport in contaminated containers (such as meat trays and take-away food containers).

You CAN feed pigs:

- Milk, milk products and milk by-products either of Australian origin or legally imported into Australia for stockfeed use
- Eggs
- Dry meal made from meat, blood or bone (processed by commercial hot rendering and purchased from a reputable produce store or feed merchant)
- Non-meat bakery food substances
- Fruit, vegetables and cereals

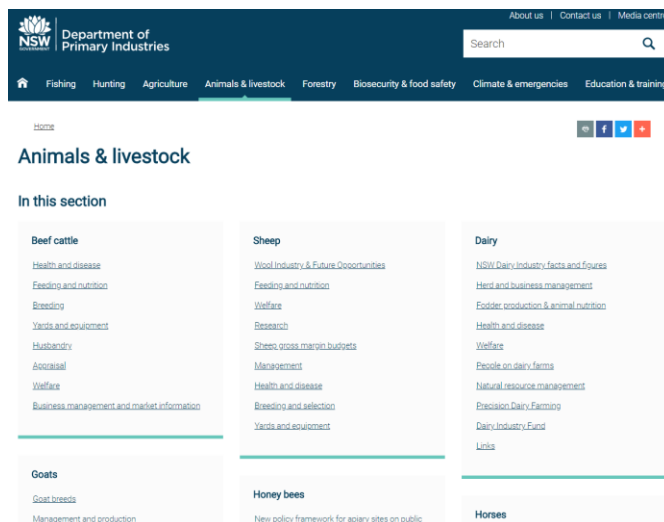
If in doubt, don't feed any food without checking first. Don't graze pigs with other stock and limit the contact they have with the faeces of other ruminants. Make sure a lapse in judgement doesn't lead to a lapse in our national biosecurity and food safety.

If you would like more information about feeding pigs, PigPass, NLIS requirements for pigs, ear tagging of pigs, and more!, please contact your LLS office and ask for a "Pig Pack".

Do you want to know MORE ?

An excellent source of information on livestock and other animals on topics such as health and disease, feeding and nutrition, welfare, and much more, is via the NSW Department of Primary Industries Animals and Livestock website. The link is below, as is part of the home page to demonstrate the wealth of information available.

<https://www.dpi.nsw.gov.au/animals-and-livestock>



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