

## Special points of interest:

- The clinic will be open on the weekends during calving and lambing, from Saturday 12th August to Saturday 1st October. Weekend delivery will be available at these times. Please ring the normal clinic phone number if you require a veterinarian.
- If you bring in abortion samples, please include the placenta if possible. Samples should be brought to the post mortem room, not the front counter. Please ask for directions if required.

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## Zoonotic disease

Not only do we share our companionship with the animals in our lives, we also share some of their diseases. In fact, over three quarters of new diseases in the last century have come from animals.

Some of the disease we risk getting from animals, such as roundworm larvae from cats and dogs, pose a very low risk (ie no case ever reported in NZ), but the impaired vision and blindness caused by a vagrant larvae burrowing through the tissue at the back of the eye really does beg the question of why weren't those hands washed after playing with the puppy or kitten? These larvae can 'wander' aimlessly through all manner of human tissue, including the lungs, brain, and liver, for many years before becoming dormant or encapsulated in an abscess or granuloma (a gritty walled off fibrous lesion).

Some of the zoonoses are much more easily contracted off animals, but have a less debilitating consequence. Ringworm, which is a fungal condition, is an example of such a disease. This disease is spread by direct contact, with the young being more susceptible than older animals and people. Sometimes the animal may not have any obvious lesions, as it may not be the primary host of that particular fungus, but it can then onspread it to an in contact human, who will then show the

typical semicircular lesions with infected hairs. Interestingly, dandruff in humans is due to an allergic reaction to a common fungal infection in our own scalp.

Some diseases in our environment can be contracted by both animals and humans. We can share diseases such as listeria with animals. In humans as in animals it will cause brain infections, fever, and kill an unborn foetus. The bacteria can be found in water, the faeces of animals (birds, fish, and insects etc) soil, and food. It can be particularly high in milk from a cow that has aborted from listeriosis.

Zoonoses such as leptospirosis have dire consequences, and many of our husbandry and food processing procedures place humans at great risk of contracting this disease. So much so, that dairy farmers vaccinate their herds in an attempt to stop leptospirosis from being shed in the urine of cows. A cow with leptospirosis sheds enough bacteria in one urination to infect every human in NZ, and this bacteria can enter the human through urine being splashed in the eye, in cuts, or via the mouth. Just smoking or eating food without first washing your hands or breathing in the vapour mist of such an event could result in you contracting this disease.

Exotic zoonoses, not present in NZ, are also of a real concern. A trip to Queensland could expose

you to a rhabdovirus in fruit bats. If you were to contract this disease in any other country you would be diagnosed as having rabies, but our Australian cousins skirt around the issue of declaring themselves as free of rabies by simply giving the virus another name.

The next time you get the urge to rush down to the beach to assist with a pod of beached whales, be mindful that these creatures could be carrying brucellosis. *Brucella ovis* is the only strain of brucellosis in New Zealand, and thankfully this is the only strain which cannot be transmitted to man. Whales infected with brucellosis are a concern in the UK, and it seems likely that southern whales share disease with their northern counterparts.

Zoonoses to look out for this spring are rotavirus, cryptosporidia, salmonella, and campylobacter. These are food poisoning organisms which can affect children as severely as they do young animals. It is important that you remain mindful of just what environment you are exposing your children to as you go about your daily chores.

At the end of the day, the sky won't fall on our heads, but good hygiene, being tidy with boots and overalls, and being mindful of our animal interactions will help in preserving our good health.

## Heifer grazing



Many sheep farmers have decided to diversify their businesses in recent years by taking on dairy stock for grazing. When taking on dairy stock, having set, measurable targets, makes the relationship between farmer and grazier much easier. Scales are an absolute necessity, and regular measurement of weights will ensure that targets are met.

As a guideline, it is realistic to expect calves to arrive at the grazier's at or over 100kg. All calves should be weighed and recorded on arrival. For quick reference, heifers should be at 30% of their adult liveweight at 6 months, 60% at 15 months, and 90% at 22 months. This means Jerseys should be at 270kg prior to mating, and large Friesians should be between 330 and 360kg. The farmer can give an idea of the expected mature bodyweight for his calves.

In order to achieve these targets, obviously good quality feed is crucial. However, it is also important to ensure that the heifers have all the minerals they need. The three major mineral problems we see are selenium, copper, and B12 (cobalt) deficiency. Many of you will be familiar with B12 deficiency in your lambs. If you know your farm is B12 deficient, it will be important to ensure heifers also receive B12, especially before they reach their first winter. Selenium is a much more important mineral to cattle than sheep, so heifers may need supplementation even if sheep never did. Copper is mostly an issue in the wintertime, as soil ingestion decreases copper availability. If you are unsure of your farms mineral status, testing the heifers for mineral levels will allow not only adjustment as required, but also provide

information for a future mineral plan for all heifers coming on your farm. Most dairy farmers are used to routinely mineral testing their stock and will be happy to share their results with you. Ideally calves will be tested before winter, and heifers before mating. This will allow optimal mineral status and optimal growth.

Drenching is also important, and the frequency and type of drench required will be specific to the farm and heifers. How involved the farmer is in the daily management of the calves depends on the contract. Even if they are not involved on a daily basis, encourage frequent visits or photo emailing. Keeping the farmers updated on their animals' progress generally makes for an easier relationship with no surprises on either side.

## Update on Salmonella Brandenburg

Unfortunately, we may be facing difficulty with Salmonella brandenburg this season. There has been a reduction in vaccinations and disease outbreaks in recent years, but brandenburg has certainly not gone away. Historically it has been cultured from sheep yards months after an outbreak has ceased and even on farms with no known cases of disease. It is in the environment and can come onto your farm from many off-farm sources, including black-back gulls, surface flooding from contaminated waterways, or bought in stock.

The result of reduced disease and vaccination is likely to be an increase in the naïve sheep population which is also more susceptible to enteric salmonella. Enteric salmonella has been uncommon in recent years, but there were a lot of cases across South-

land this autumn.

Brandenburg seems to change over the years. Fewer ewes tend to die after aborting and cases have increased in dairy herds, with first calvers in early spring most at risk, often aborting a rotten calf and subsequently dying. What has been most unusual this season is several confirmed cases of dairy cattle aborting earlier than usual and not only heifers. Additionally strange is that the foetus is sometimes fresh, and the heifer/cow survives.

It is a risk to us and our families, causing a very unpleasant diarrhea (just ask Justin!) Hence, caution is advised when in contact with brandenburg. We request material for examination to be brought around the back of the clinic to the post mortem

room. We also like to know about cases which you have self diagnosed please, so we are up to date with what is happening.

Vaccination will reduce the severity of the disease in sheep, almost eliminate it in dairy herds, but is of little benefit in the face of a brandenburg outbreak. Hence, it should be considered as part of your animal health programme.

On sheep farms, increased risk of salmonella is found in highly performing, intensively farmed flocks, and any stress such as bad weather, handling, a feed check, or feed change is likely to trigger an outbreak.

Please contact the clinic for further discussion and advice applicable to your farming system.

## Toxic pasture plants

Every year we will see some farmers with outbreaks of disease due to toxic pasture plants. Losses from these sorts of toxic insults can be severe, and discouragingly, are often preventable.

Most toxicities have a seasonality; we see nitrate poisoning in the autumn and spring; yar and fathen in the summer; acorns in the autumn.

Sheep and cattle are reluctant grazers of toxic plants, as most plants demonstrate their toxicity by bitter or unpalatable taste, or

bright colours and unpleasant smell. For this reason, we usually see toxicity when the animals are already hungry and their ability to fight disease is decreased, so toxicity will be more severe.

Management of pastures infested with toxic plants can be difficult. In some cases, harvesting the feed and drying it can reduce the toxicity, but this is dependent on the type of toxic particles in the plants. In other cases, the toxicity can remain or even be increased by drying or preservation.

If you are concerned that your stock are showing signs of toxicity, or would like help with identification of potentially toxic plants, we are happy to help.



Plant name	Toxic parts of	Clinical signs	Toxic when pre-
Ragwort	Entire plant	Illthrift, diarrhea, ataxia,	yes
Fathen	Entire plant	Abnormal breathing,	yes
Yar	Entire plant	Milk fever like signs,	
Ryegrass endophyte	Lower sheath, summer and autumn	Abnormal gait, jerky movements	n/a
Acorns	Unripe acorns are worse	Depression, anorexia, diarrhea, death	n/a
Buttercup	All parts, especially flowers	Excessive saliva, abdominal pain, black faeces	Not when made into hay
Foxglove	Entire plant	Loss of appetite, death	yes

## Johne's

Ever wondered why those tail-end ewes just don't seem to respond to the good feed and drench that you put into them? One infectious disease that should be considered is Johne's disease (*pronounced Yo-nees*). Here's a quick run-down of the condition:

-Johne's is caused by a mycobacterium that is similar to the tuberculosis bug

-It causes intestinal malabsorption in adult ewes, followed by severe condition loss and sometimes diarrhea and 'bottle

jaw' (loose, flabby skin under the jaw) Affected ewes are generally older than 2 years, although infection occurs early on in life.

-Clinical disease is usually brought on by stress - cold weather, pregnancy, feed restriction, parasite burdens and other diseases

-Diagnosis is based on post-mortem changes, and can be confirmed by sending samples of the intestine or lymph nodes to the lab. There are blood tests available but these are not very good at picking up the 'silent'

cases that are harbouring disease but not yet sick

-There is no treatment

Control involves identifying and culling clinically affected ewes, improving farm hygiene (e.g. lambing in clean paddocks) and improving nutrition and parasite control in ewes. A vaccine is available which prevents wasting but not infection.

So what do you do if you think you might have Johne's on your farm?



A sheep showing signs of OJD.

## Selenium in sheep

Livestock owners have several choices as to how to supplement their herds with selenium. Convenience vs. cost, time available to correct the problem and hopefully efficacy will all factor in deciding which option is best for you.

Selenium prills are often chosen. The timing of their application is important for the successful treatment of a deficiency. Unlike phosphate there is not a retention factor in soil so deficient soils after years of selenium application will not have reserves of selenium banked up which can then be drawn down if you choose to skip a year of application.

Cool weather slows down the initial uptake of selenium from the soil into the plant. Five

months post initial application the selenium concentration in the pasture and soil returns to the original base level. This determines what is the best time to apply the selenium prills to get their full benefit. For example, if you apply selenium in February it may take until April to get satisfactory uptake into the pasture and the stock will be off pasture and onto the wintering paddocks by the end of May. You have effectively only supplemented your stock with selenium prills for 6 weeks as once the stock are put out for lambing the selenium levels of the farm will have been returning to base levels. Under this scenario the use of selenium prills to supplement your stock has been ineffective.

If the selenium prills had been applied in December, then levels would be up in time for mating and continue until the ewes go onto their winter paddocks.

The use of blood and liver biopsies can be an important tool to audit and monitor for deficiency and to gauge the efficacy of the supplementation programme that you have chosen to undertake. Many farmer find an Optigrow programme taken from cull ewes at the works in the autumn the easiest method of monitoring.

The clinic has trace element packages that allow you to budget and integrate the appropriate tests into your animal health programme.

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