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## Yersiniavax<sup>®</sup> – getting it right

**Ginny Dodunski**

*As Yersinia is everywhere it is not possible to eradicate – so we must manage around it.*

Yersiniosis is a bacterial disease that can cause severe scouring and death in young deer. Yersinia bacteria are carried in the faeces of many animals and survive well in soil and on pasture, especially in the cooler months.

When young deer are under stress their gut slows down which can allow proliferation of the Yersinia bacteria to massive numbers. The bacterial toxins damage the intestines leading to diarrhoea. The resulting dehydration and toxin absorption into the bloodstream frequently result in death unless picked up and treated early. Mass medication with injectable antibiotics usually puts the brakes on an outbreak most reliably. This is very expensive and time consuming, plus you have usually lost a fair number of fawns before taking this step – **prevention is much better than cure!**

As mentioned above Yersiniosis outbreaks are precipitated by stress, and common tipping points are:

- Underfeeding
- Sudden changes of feed (including an inadequate lead-in time when introducing grain supplements)
- Sudden cold/wet weather especially if associated with either of the above
- Prolonged yarding and/or transport
- Weaning
- Parasitism

Obviously, you have no control over the weather, and fawns must be weaned at some point, so it's difficult to eliminate these stressors, but the others are manageable.

A really good tool for reducing the risk from Yersiniosis is the Yersiniavax<sup>®</sup> vaccine. However, it does require some attention to detail to get the most out of it.

The first point to be made is that the vaccine will not prevent 100% of fawn deaths from Yersiniosis. In the original field trial work (which was carried out on 'high risk' farms) around 20-30% of unvaccinated animals developed Yersiniosis, whereas in the vaccinated animals this was reduced to 4-8%. We often quote 5% as a loss rate in vaccinated animals where other stressors are at play. Five dead weaners in a mob of 100 can seem like a lot when you have gone to the effort of vaccinating. Read on, as timing of this vaccine is critical. On many farms, this could be improved.

## 2018 Fishing Competition

Saturday 24th March

Launch from Castlecliff boat ramp, Wanganui.

All registered boats to have VHF radio.

\$20 per entry (conditions apply).  
Entry fee can be charged to your current Tararua Veterinary Services account.

Full details and entry forms can be obtained from [Carla.Sheridan@tvgs.co.nz](mailto:Carla.Sheridan@tvgs.co.nz)

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# Looking ahead

Potential animal health issues, tasks to consider and reminders for **February** include:

## DAIRY

- If not done already get your **pregnancy scanning** booked in today as the longer you wait to do it, the less information you gain! Pregnancies are best aged between six and 12 weeks after mating.

- **Clinical mastitis** – monitor cows and be aware of a rising bulk milk somatic cell count (BMSCC) particularly if feed is tightening and milk volume is decreasing. Prepare early for drying off and book in your Milk Quality Consult with your vet.
- **Lameness** problems have been widespread and challenging in the first half of the season and may worsen with dry hard ground. Monitor cows daily and act as quickly as possible to assess and treat those with sore feet.
- **Facial eczema** was a huge problem last year so, farm location and weather depending, preventative zinc treatment should have been started. See **article P2**.
- For those who **winter milk**, monitor Autumn calving cows' condition, BMSCC and your feed quality/quantity. Dry off according to calving dates and administer dry cow therapy where appropriate.

## Facial eczema – are we doing enough?

**Greg Smith**

The short answer to that is no. Often our first mistake is to think that if only a few animals are showing clinical signs then we have things under control.

Facial Eczema is primarily a disease of the liver that sometimes shows up as photosensitivity. Animals with visible signs are just the tip of the iceberg and the downstream effects for the rest are on production and fertility.

It is clear the variation in spore counts between farms (even on the same road) is greater than previously thought. The differences in contour, shelter, pasture management, soil types and fertiliser policy, to name a few, are specific to each farm. Start zinc prevention too early and you have to continue (and exceed the 100-day recommendation) or stop and leave animals exposed at the end of the season. Start too late and liver damage will have already occurred.

**When the spore counts start to rise or fall at surveillance sites start spore counting your own farm.**

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Yersiniavax® is quite sensitive to the presence of antibodies that the fawn may still carry from its mum's colostrum. If Yersiniavax® is administered too early, the colostrum antibodies can remove the vaccine before the animal's own immune system recognises it as something it should be responding to. In this case the fawn does not produce its own antibodies in response to the first shot of vaccine. Come the second dose of vaccine these young fawns will only be partially protected and can be more susceptible to Yersiniosis than they should be.

This effect of colostrum antibodies has normally worn off by 10-12 weeks of age. If you read the packet it does say not to administer until after 12 weeks but 10 is probably OK. Thus, if you are vaccinating

pre-rut in mid-February, anything born after the end of November will be too young to respond properly to the first shot of Yersiniavax®.

Solutions to this issue include:

- Identify your late hinds at scanning (talk to your vet about getting the timing right for this) and manage them as a separate mob. Vaccinate these fawns later
- Start your early Yersiniavax® programme as normal but add a third shot for late/small fawns three to six weeks after the second shot

**And of course, work to keep fawns well fed and healthy, with minimal changes to routine, to minimise stress and reduce the underlying risk.**



## SHEEP and BEEF

- Monitor for signs of **Barbers Pole** (pale gums, depression, exercise intolerance, increased breathing) and drench at the first sign of trouble – **article P4**.
- **Mating preparations** – ensure all ram palpations/testing has been completed and reproductive vaccines are ordered.

## DEER

- Early in the month is a good time to vaccinate hinds against **Leptospirosis**, whilst later in February or March,

depending on birth date, fawns can also be given their first Lepto shot, along with Yersiniavax® for **Yersiniosis** – **article P1**.

## EQUINE

- **Weaning** is a stressful period for youngsters so ensure excellent nutrition for young stock. Consider the need, and plan ahead, for branding, identification/registration and vaccination(s).
- Horses travelling to shows and events and competing require access to fresh water and keep **electrolytes** on hand.



# Protein supplementation – do we need to?

**Peter Aitken**

Proteins are chains of amino acids and are found in all the cells of the body as structural components (especially muscle) but are also broken down to be used in DNA, enzymes, hormones, the immune response, blood cells etc. They are important building blocks for most of the body and its functions.

When we talk about protein in cattle diets, we usually refer to it as crude protein (CP) (measured as Nitrogen (N) x 6.25) as N is incorporated into protein and the rumen bugs utilise it to create protein. It is an effective indicator of N availability for dairy cows.

Dairy cows require a variable amount of CP but **table 1** can be used as a basic rule of thumb, remembering however that New Zealand pastures range in CP from 9 – 35% depending on the time of year and growing conditions.

Stage of Lactation	Crude protein (% of total Diet)
Early Lactation	18%
Mid Lactation	16%
Late Lactation	14%
Dry period	12%

**Table 1.**

There are many factors that will affect these requirements so only use the information in **table 1** as a guideline. Things that will affect these levels are:

- Energy status
- Milk production levels
- Metabolisable Energy (ME) levels in the diet
- Amino acid components of the protein
- Ambient temperature
- Exercise levels

More is not always better when you consider supplementing with protein due to the cost involved in feeding higher protein feeds.

They are always generally more expensive than the basic energy feeds and it is often the energy that is the production limiting side to the diet. Work undertaken by John Roche (DairyNZ technical series notes 2011) looking at protein supplementation by modelling against different energy level diets, showed that only in certain circumstances where the diet was very low in CP (less than 12%) would cows benefit from protein supplementation.

In most of these cases, use of cheap protein supplements such as grass silage or palm kernel extract can be used to overcome these deficits without the need for more expensive protein supplements (i.e. soya bean meal).

Before looking at supplementing with proteins it is well worth considering undertaking pasture analysis to see what it is that you are feeding to your cows. Knowing how much and of what quality is being fed is an important part to understanding what is going to be required.

Similarly, looking at how we are feeding supplements will have a significant effect on how they are utilised.

We need to remember that we are feeding the bugs in the rumen first, they in turn are feeding the cow when it comes to protein in the form of microbial CP. They need energy in the rumen however to make use of the protein that is being delivered with every mouthful of grass.

**Using energy supplements correctly, maintaining rumen health whilst acting to substitute for pasture intake, will help to relieve pressure on pastures and hopefully reduce the impacts of the weather conditions on pasture demands and availability. Protein supplements need to be considered in certain circumstances but on pasture based systems the requirement for this may often be limited.**

# Beware ... barber's pole is prowling

Steve Harvey

I was asked at a discussion group meeting; how does barber's pole infection kill so many sheep? My answer was...

Having some knowledge of barber's pole worm (*Haemonchus contortus*), and its debilitating effect on sheep mobs, is vital to combatting the disease. Barber's pole is a seasonal worm which tends to overwinter as low numbers of adults in sheep, only to feature as disease outbreaks in the warm moist late summer period.

A barber's pole outbreak can be prevented by having a parasite management plan incorporating the provision of low parasite larvae pasture and a structured drenching programme over the summer period.

Firstly, the long uterus of the female worm may produce thousands of eggs per day - up to 10,000. Also, given ideal sub tropical conditions, they can grow to infective larvae in just one week.

Secondly, unlike most intestinal worm species, large intakes of worm larvae can literally bleed a sheep to death before they even lay a single egg.

You **cannot** rely on faecal egg counting.

Barber's pole outbreak is literally an infection of blood sucking worms.

Sheep, particularly lambs but all ages of sheep, may succumb if faced with a large larval intake, and need to be observed for classical blood loss signs like lethargy and paleness of the eyes and gums.

Drenching with a triple active anthelmintic will minimise the selection of worm species present due to its excellent efficacy (>99.9%) against the resident population, and no selection for incoming resistant larvae in the days or weeks following drenching.

In the face of a barber's pole outbreak all stock need to be treated and preferably moved to a paddock of known nil or low infectivity. Often this "clean" paddock is purely fictional within the constraints of practical farm management, and using a product with persistent activity against barber's pole becomes the only realistic option. Check with your veterinarian for prevention options.



**TREAT AND LET LIVE**  
**Face-Guard**  
Zinc Bolus for the prevention of Facial Eczema this season.

**BUY FACE-GUARD™ AND BE IN TO WIN A \$500 HUNTING & FISHING NEW ZEALAND GIFT VOUCHER\***

For all Cattle 90kg - 660kg, Sheep & Lambs 25kg and over.

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