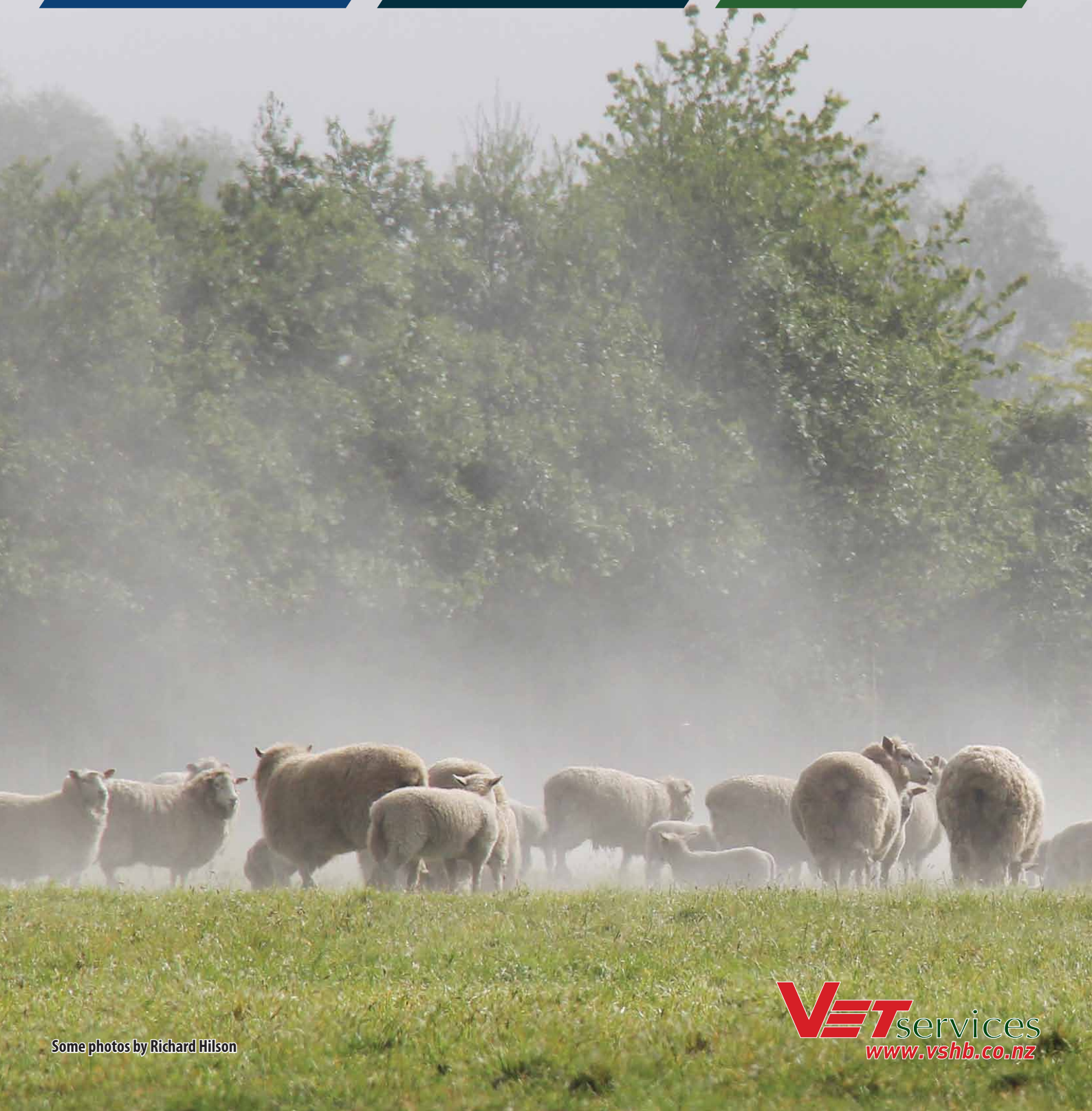
JULY 2018

VET NEWS

FODDER BEET FEEDING

NITRATE POISONING

WORLD FIRST



Some photos by Richard Hilson

VET services
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FODDER BEET FEEDING — IT'S A COMPLEX SUBJECT

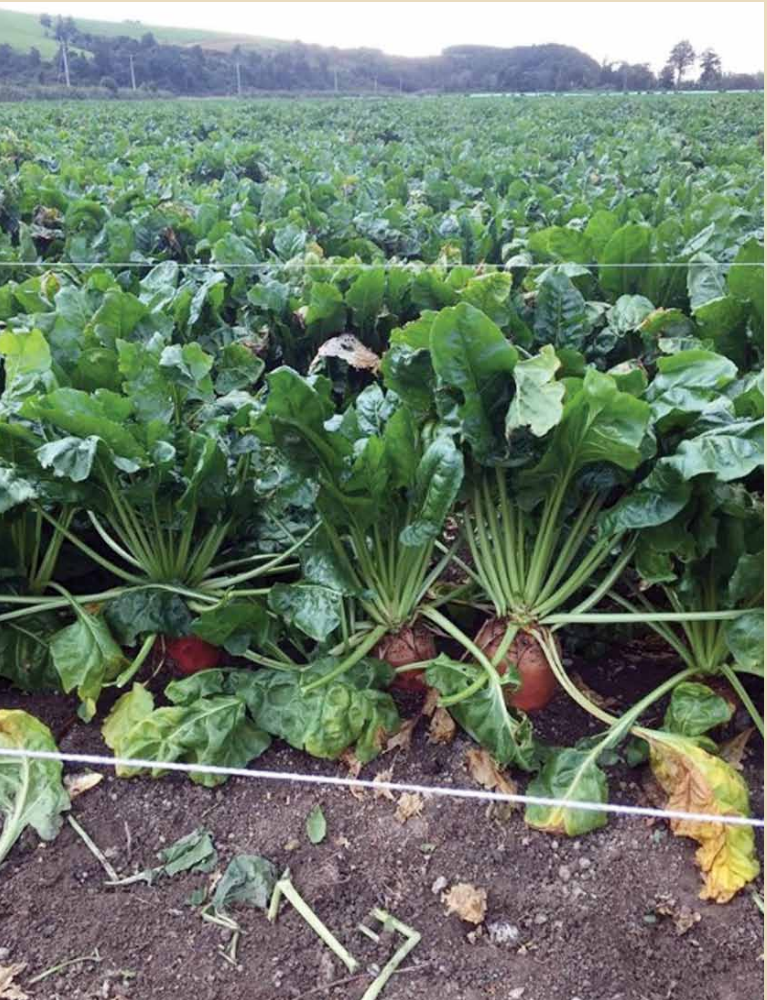
STUART BRUERE

Introduction
Fodder beet is now widely grown and fed to sheep and cattle mainly as a winter feed crop on the East Coast of the North Island. It can be a great crop to feed sheep and cattle if the diet is well balanced, but as with most crops there are some risks that need management.

Feed value
It is a high energy (ME – 12), low protein, low fibre food source so any use of this crop needs to be balanced with other feeds such as hay, baleage or rough grass. If it has plenty of leaf, it will have protein value of around 11% and if it has been eaten out such that there is low leaf then the protein will drop to around 7%. Well grown crops can yield up to 30 tonne/ha.

The transition process
This process determines the success of using this crop**.** As with grain feeding, the high energy presents a significant risk of acidosis if the transition process is not handled well. The obvious outcome of this would be deaths and production loss. When the fodder beet is introduced it is very important to make sure the animals are well fed with a high fibre feed such as hay and then introduced to the fodder beet. It is also very important to make sure there is a good reliable clean water supply. Over a period of 14 – 21 days you can build the level of fodder beet in the diet up to 70% of the ration. This process may include having to "on/off" feed the crop onto a neighbouring grass paddock. Once on the crop you will need to include a fibre source such as hay. This needs to be about 30% of the diet. The role of the hay is to balance the pH (most hay has a pH of 7) and provide protein and fibre.

It has been observed that sheep may require higher levels of protein than cattle, so don't be surprised if you may need to make the fodder beet/hay:pasture ratio about 50:50.



Lucerne hay is particularly good as it is high in protein, but good quality meadow hay is also a good feed.

Break feeding
Field observations show that it is better to use smaller breaks and change these more often than giving big breaks, and holding the animals until they finish the break. In most cases the maximum break is 3 days.

The role of Fibre
Fibre is an important part of any sheep or cattle diet. It helps slow the digestive process so the rumen micro-organisms have time to extract feed value from the crop. The fibre also "irritates" the rumen pilli so that they remain at a normal size. This is important for optimising feed value. In some cases where fibre levels are insufficient, the pilli and rumen size reduces and in turn this increases the risk of red-gut, a form of intestinal torsion that causes death which is common on lucerne crops.

The role of water
Apart from the obvious need for hydration, water is important for saliva production. Sheep and cattle use a lot of saliva, particularly when they are chewing their cud. The components of the saliva assist the digestion of their food. In most circumstances allow for water consumption of 50 litres per day per cattle beast.

Rumination time
Sheep and cattle like to be able to lie down to ruminate. Apparently laying makes this process much more efficient. If you can, try to provide a flat area in the paddock where they can lie down. This may mean at the time of paddock preparation some areas are left unploughed and not sewn in crop and designated as "rumination pads".

Trace elements
Trace element problems can occur if animals are fed on this crop for extended periods of time. It can be useful to check these prior to starting the feed. In cattle this would generally be copper and selenium and in sheep selenium and cobalt.

Other diseases
As fodder beet is high in sugar, there is a possibility of fast growing animals becoming infected with clostridial bacteria (Pulpy Kidney). It is recommended that all animals are given a booster two weeks prior to going on the crop.

Bloat is possible on all crops. It is usually a function of inadequate fibre management. The classic scenario is to run out of your fibre source well before the crops runs out. Animals continue to engorge on the crop but as there is little or no fibre present, the gut fill becomes exaggerated and animals become bloated and often die.

In the case of unexpected deaths, make sure you carry out an autopsy examination. It is easy to assume animals have died of acidosis, when in fact they have died of bloat or other diseases.

Problem animals
As with most crop options, some animals do not adapt well to the new diet no matter how long they are fed it. In these individual cases it is prudent to identify these ones early and remove them from the crop and place them back on pasture.

It is important to remain attentive to how well the animals are feeding. We strongly advise to check the animals daily so that any problems observed can be dealt with rapidly, before a more significant problem arises.

For any further information on how to get the best out of your fodder beat crop or help on making decisions on its use on your farm, get in touch with one of our vets.

NITRATE POISONING – BE CAREFUL!

CORINNA MINKO

Nitrate poisoning can cause significant stock losses. A quick and easy test of plant nitrate levels in clinic can help avoid disaster.

Plants are the main source of nitrate to cattle and sheep. Usually plants take up nitrate from the soil and quickly use it, however when a plant's energy supply is low; nitrate will accumulate within the plant. The sun is the major source of plants energy and thus it is on cloudy, overcast days that nitrate levels are likely to increase in plants. Frost, application of nitrate fertiliser and wilting during drought can also lead to increased nitrate levels in plants. Ryegrass, cereal grasses and Brassica species (eg turnip and kale) are some of the plants commonly associated with nitrate poisoning. Nitrate levels are highest in young plants and in the stalks and roots of plants.

Bacteria in the rumen of cattle and sheep rapidly convert nitrate however when this pathway is overwhelmed there is a build-up. This excess is absorbed into the blood stream where it lowers the oxygen carrying capacity of the blood. Essentially the animals can't oxygenate their tissues properly and this is the cause of death.

Clinical signs of nitrate poisoning include: salivation, diarrhoea, urine dribbling, rapid breathing, collapse, seizure and death. Abortions can occur in animals that survive.

Death can occur as quickly as 1 hour post-ingestion, to up to one day later. Stock should be removed quickly but carefully from the suspect source, don't push them and stress them as this will exacerbate clinical signs. Contact your vet as soon as possible.

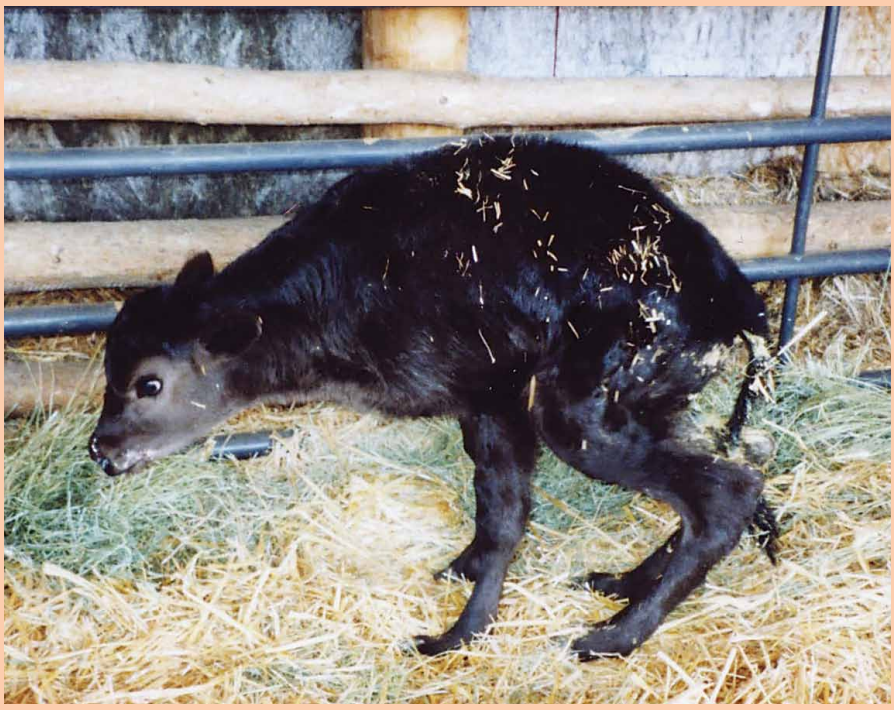
The nitrate levels of plants can be tested in clinic. The full test takes about 35 minutes to run in clinic. Provide a sample of the whole plant that way we can test both the leaf and the stalk and make a more accurate recommendation. Remember that nitrate poisoning can occur on grass.

When moving onto new pasture; don't move them hungry. A hungry animal is more likely to rapidly consume large amounts of new plant and is more susceptible to the effects of nitrate. Feeding later in the day allows the plants more sunlight hours to utilise the nitrate resulting in lower levels of nitrate in the plant.

ROTA VIRUS VACCINATIONS IN COWS: ROTAVEC OR SCOURGUARD

GEERT GELLING

Calves are born without immunity - there is no transfer of antibodies from mother to calf before calving. Calves need to receive their first dose of antibodies, and more goodies like protein and energy, through their colostrum intake. During the recent calf rearing seminars, the importance of adequate colostrum feeding has been discussed - cleanliness, timeliness and adequate quantities!



Antibodies against the main causes of calf diarrhoea (rota virus, corona virus and E. coli K99) need to be absorbed from the colostrum intake as well. Vaccinations of cows, in order to increase the antibody levels in their colostrum, are only useful if colostrum management is up to speed. Having made that statement, vaccinations are really effective tools to increase antibody levels against those calf diarrhoea causes and certainly have their place in the management of calf scours prevention.

Rotavec Corona has been around for a long time and is still seen as the "gold standard" vaccine. It boosts antibodies against rota virus, corona virus and E.coli K99. It is an oily vaccine, which has the benefit that one shot will create a strong immunity. The down side is that the oily injection will cause tissue irritation and sometimes abscesses when injection sites are contaminated.

In the last couple of years more vaccines have arrived on the NZ market. These vaccines are water suspension based - they cause less tissue irritation, but, at first vaccination, they need 2 shots at a minimum 3 week interval to create an adequate antibody response. Follow up vaccinations in following years will only need one shot. We have been using ScourGuard 4(K) over the past years successfully.

Both vaccines have proven their effectiveness under NZ conditions. With cows wintering off farm pre-calving, it is often complicated to get the vaccination timing right. The last shot (ScourGuard) or the only shot (Rotavec) needs to be applied 2 weeks before the start of calving at least. This often coincides with cows coming home pre-calving. Getting the first shot in (ScourGuard) at least 3 weeks before the second shot means this needs to happen when cows are away on a run off or on a winter grazing property.

NZ research has shown that cows primarily vaccinated with Rotavec can be boostered in following years with ScourGuard. This opens the opportunity to use Rotavec for primary vaccinations and Scourguard for follow up vaccinations.

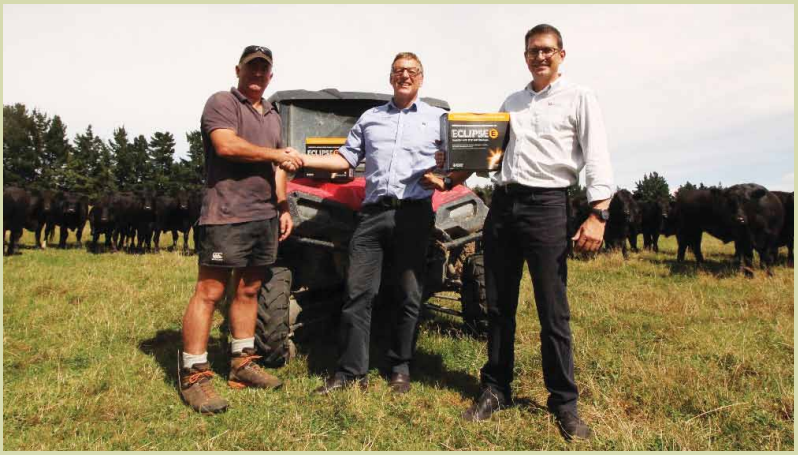
The goal of this article was to clarify the difference and the usefulness of both vaccines. If I have not succeeded and have left you properly confused please call your clinic. We are happy to discuss the options and to draft the appropriate plan for your farm situation.

WORLD FIRST!

ARRON SCOBLE

In an exciting world first, Vet Services Hawke's Bay Waipukurau sold the first Eclipse B12 plus Selenium injectable to Ngaruru Station.

ECLIPSE E B_{12} and Selenium injection has recently been launched and is the first of its kind worldwide. The limiting factors that commonly keep healthy young stock from growing to their genetic potential are parasites and mineral deficiencies. If these are controlled well on farm young stock can thrive.



Parasite Control

We hope by now that you're using a dual or triple active drench in young stock. This is necessary to kill all types of roundworm in calves. There are 3 types of drench actives for cattle 1) levamisole, 2) BZs and 3) MLs (a.k.a. the 'ectins). The drugs ending in 'ectin are called endectocides (end – inside; ecto – outside; cide – kill) because they kill parasites on the inside and outside of animals. Don't forget though, that injectable 'ectins won't be able to kill biting lice because the biting lice don't suck blood so they're not exposed to the drug. If you use injections and/or oral drenches you'll probably need to treat for lice at least once a year with a pour-on product. For young stock you need a drench with active ingredients from at least two of the three groups. ECLIPSE E contains eprinomectin (abamectin modified five-fold to produce a more potent drug) and levamisole. Eprinomectin is particularly good at killing the parasite *Ostertagia*. The levamisole is very good at killing the parasite *Cooperia*, so both actives work together to kill the two most important internal parasites in calves.

Minerals

Minerals are essential to life. Some are classed as macrominerals, for example calcium and magnesium. Others are called trace minerals, for example copper and cobalt, simply because animals only require a small amount. Vitamin B_{12} and selenium are both important trace minerals. Selenium helps animals fight disease, grow and reproduce successfully. Vitamin B_{12} is very important for the rumen microbes, and the animal itself, to be able to produce energy from grass. To make B_{12} the rumen needs cobalt. To correct a vitamin B_{12} deficiency, cobalt can be supplemented orally or B_{12} can be directly injected. Interestingly, it's been shown that an animal's ability to fight parasites in the stomach is better when there's adequate vitamin B_{12}; and selenium can make a virus weaker as well as supporting the immune system to fight it off.

SEASONAL UPDATE

HASTINGS/NAPIER

DAVE WARBURTON

I write this update at the end of a very wet 2 days and we are now water logged throughout the Northern Hawke's Bay region!

Worm burdens in hoggets have still been high to this point which reflects the pasture contamination on farm from taking lambs to heavier weights due to attractive market signals.

We are finding trace element deficiencies causing poor performance not previously seen before on farm. There can be several reasons for this which I won't get into, but safe to say that in general there has not been enough animal monitoring to stop the deficiencies from limiting performance before it happens. We also don't always want to assume that the levels in one class of stock reflect that in another age group, especially if mineralised drenches are thrown into the equation for one stock class and not the other. Soils, pasture and animals all need regular monitoring, the main minerals to check for animal performance are selenium, copper and cobalt (these don't affect plant growth so can easily be forgotten about when doing sample analysis).

Dairy farms are now dried off and everyone deserves some R&R for what has been a successful production season. (The Vet wouldn't mind a trip to Fiji too!)

WAIPUKURAU

ANYIKA SCOTLAND

This wet weather is really putting a dampener on things! The ewes have been a struggle to get shorn, and have made a mess of the yards at scanning time. However, the scanning results so far have been pretty good with the ewes in great condition.

The cloudy days have led to increased nitrate levels in the winter crops with some cases of nitrate poisoning already. Best to get the crop tested before stock go on.

We are still getting a few cases of lungworm in weaner deer due to the warmer autumn weather, so please keep on top of the drenching and check for any coughing when shifting the mob. Deer scanning has been going well with the hinds in tip top shape.

On the dairy side, teat sealing has nearly finished and just be aware that we have had a few cases of bloat.

DANNEVIRKE

TIM HOGAN

A fantastic autumn has come to a bit of a wet and sticky end as winter takes hold. Most of the region is saturated and any heavy rainfall is causing some slips and damage to farm infrastructure.

Sheep and beef farms have had the best of it with most stock in good condition and good results from the early ewe scanning. Feed levels are generally very good and grass is still growing, although this will change if it doesn't stop raining at some point!

The picture looks a bit different on most dairy farms where many cows were dried off in lighter body condition than ideal and there is a reduction in the amount of winter supplement available courtesy of the tough summer.

Otherwise everything is really positive despite the nerves reverberating around the beef industry due to M.bovis. I hope you can take the time to get off farm and freshen up over the winter months, bring on spring!

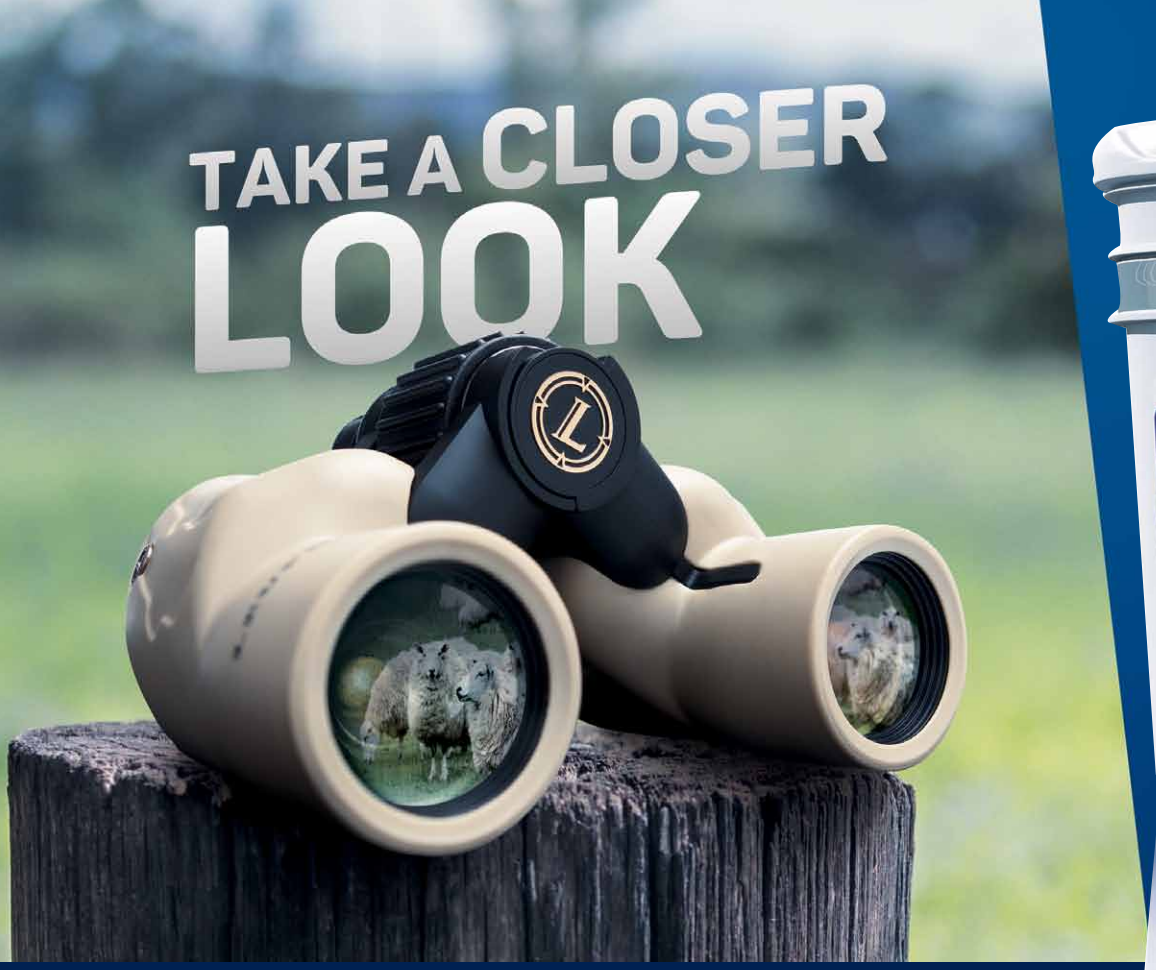
WAIRARAPA

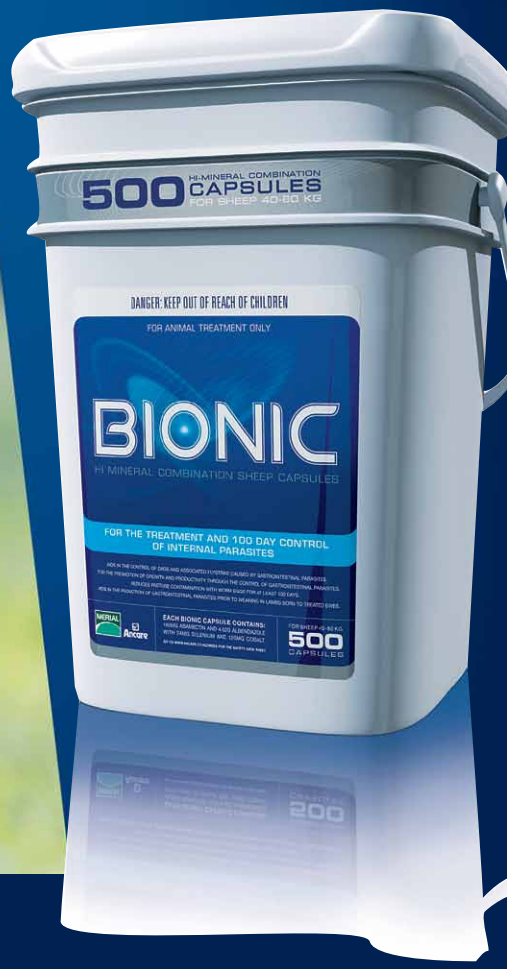
SARA SUTHERLAND

Winter weather is well and truly upon us and with it the urge to hibernate until the sun comes back. Sheep scanning is well underway. We were concerned about low scanning particularly in 2-ths due to the unusually bad Facial Eczema (FE) season this autumn, but early scanning results are promising. Hopefully the good feed around tupping time made up for this to a certain extent. It will be interesting to see how this year compares with other years after the very unusual summer and autumn. The next challenge for ewes affected with FE in the autumn will be the metabolic demand of lambing. Some ewes with affected livers will not be able to cope. For those who do lambing beats, it is a good idea to get some metabolic solution ready in your bikes. For those who don't, you will see the effect as greater ewe and lamb wastage. Whether you get your money from a good scanning depends a great deal on lamb survival. Many of the things which increase lamb survival are out of our control, but some are. Remember if iodine is deficient they need to be supplemented when the lamb's thyroid gland is forming - at least six weeks pre-lamb. Giving oral iodine with your pre-lamb vaccinations may be too late. I'm also very interested in seeing if the autumn flush of feed will result in a bearing year or not. Time will tell. Bring on spring!

OUR VET TEAM

Napier & Hastings:	**Clare Ryan, Dave Kruger, Dave Warburton, Georgina Campbell, Helen Crawford, Ian Leadbetter, Joao Dib, Mark Matthews, Neil Stuttle, Rachel Griffiths, Richard McKenzie, Roger McKinley, Sharné Boys, Stuart Badger, Veronika Pipe and Vicki Gilchrist.**
Waipukurau:	**Annelise Enslin, Anyika Scotland, Camille Flack, Caroline Robertson, Geert Gelling, Harry Whiteside, Kathryn Sigvertsen, Lucy Dowsett, Mike Fitzgerald, Nicolette Adamson and Richard Hilson.**
Dannevirke:	**Corinna Minko, Ingrid Meijer, Johnny Atkins, Kate Matthews, Naomi Barrett, Simon Marshall and Tim Hogan.**
Masterton:	**Elke Blommers, Jacques Van Zyl, Louisa Broughton, Nicola Haglund, Sandy Redden, Sara Sutherland, Sarah Wolland and Stuart Bruere.**





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