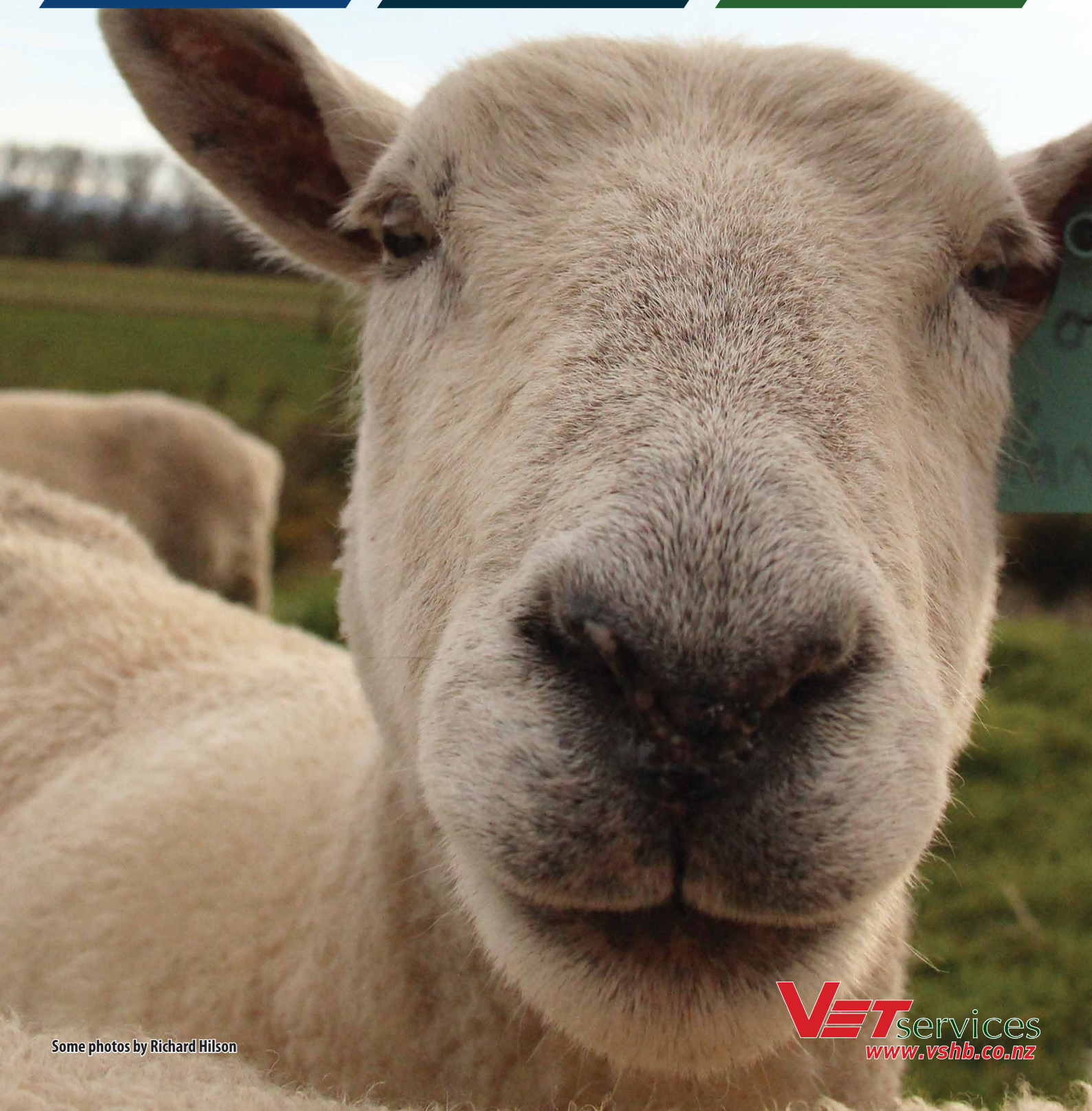
MARCH 2018

VET NEWS

BVD

TECH UPDATE

FAECAL EGG COUNTING



Some photos by Richard Hilson

VET services
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COMING, READY OR NOT…

RICHARD HILSON

In the spring of 2017 we repeated our survey of the effectiveness of pre-lamb anthelmintics products. Once again it was a big undertaking as the farmers involved took samples at quite specific times from mobs of ewes treated with any of a variety of long acting anthelmintic products. We didn't limit the possibilities so we had samples from a range of client's farms and a range of ewe classes. We did faecal egg counts and also had the samples cultured at the laboratory to see which species any resistant worms belonged to. This created lots of important information for the farmers involved and in many cases added to data that was generated for them by the survey the year before. Vet Services has covered the costs of this work as we saw this as the only practical way to get as much farmer buy-in to the survey as possible.

What have we learned? A significant observation is that the farmers involved are extremely engaged in understanding their results. A significant proportion of the farmers have already completed at least one faecal egg count reduction test (FECRT) on their farms so they have a good idea how well the various actives work for them. Several were also part of the 2016 survey and have therefore added even more information since. Knowing how well these products work has added confidence (if the answers were good) or created change (if the answers were not so good). It is pretty simple monitoring but has added hugely to our understanding of parasites and drenches on those farms.

We have also learned that the drenches are not working as well as we'd like. The result sheets are not covered in zeros and the majority of farms have a degree of drench resistance. This is not good news. There is resistance to single active products and to combination products. That is not good news either. As a result of this finding, several farms also did an exit drench. An exit drench has long been a recommended procedure for those using capsules and/or injections but is rarely done. Exit drench is aimed at removing stubborn resistant worms with a different active so that they don't continue to proliferate. In these cases, we also covered the cost of the monitoring of the effectiveness of the exit drench and this has worked really well. So that is good news.

In all cases we have also learned that farmers were happy with how their ewes looked – they were doing well and did not appear to be suffering from parasitism. For ewes, all is good. That is good news too but the monitoring does show that while the sheep don't currently care about a few resistant worms, we do have a problem looming and it is only by looking really closely like this that we can see it coming and take the opportunity to slow the process down.

What to do? Get your head around a parasite management plan and understand how to effectively and efficiently manage the use of drenches, know what is effective on your farm, understand all there is to know about refugia and protect what you have now. Our production animal vet team can do all that with you, easy peasy.

And think about incorporating a Knock Out drench such as Startect into your autumn drench programme. By using a novel drench that parasites have not seen at all (or often), the aim is to "knock out" any resistant parasites that have been surviving the drenches used all spring and summer. This stops them doing any additional breeding and contributing too much of their genetic material to the growing autumn larval contamination on your pastures. This technique seems a no-brainer to me for any self-replacing flock where the ewe lambs and a relatively small number of trade lambs remain on farm in March/April.

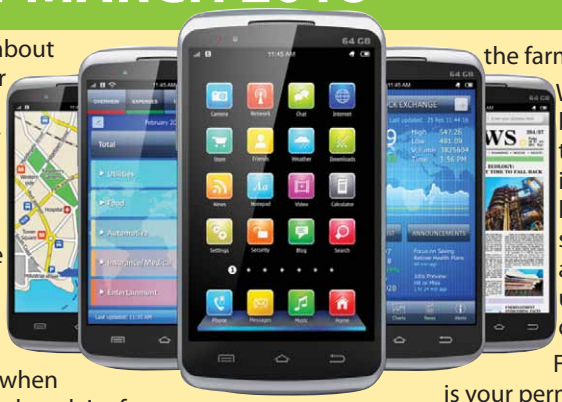
It is sobering to think that when you reach the point of triple resistance, there are basically no options left as there are literally no new drenches on the horizon - just mixtures copying other mixtures. In NZ we have worms about pretty much all year and if we go to the drench cupboard and find nothing useful in there then it might be time to think about planting pine trees. Or grapes.

Make those drenches last as long as possible as making them last "forever" is unrealistic, given what we can see coming locally. Drench resistance: coming, ready or not…

TECH UPDATE #1 MARCH 2018

SIMON MARSHALL

We have decided to start writing articles about interesting new tech stuff we either use or see and read about. Obviously, this space is speeding ahead faster than we will ever be able to keep up with but sometimes it isn't until someone mentions something to you that you may take a look at it! For this first update I thought we would make mention of the tech stuff we use in our daily lives on farms and in the clinic.



Infovet is a really amazing piece of software that we use in a lot of situations when we are working with cattle. It is mainly used on dairy farms especially when we are carrying out pregnancy testing. The basic function of it is to synchronise with the mating records from the farm and allow us to type in a cow number into our touch screen pad and then view all the matings recorded for that cow. We save the relevant pregnancy to that cow, synchronise the data and it is recorded against that cow forever. A list of cows and calving dates is produced and a list of empty or recheck cows is available also. Many other reports can be produced such as fertility focus reports, these are very useful when assessing a herd's reproductive performance. The data is then available to the farmer through their MINDA software.

We can also use Infovet for recording body condition scores, non-cycling treatments and any other animal health issue that may be seen in a cow. It can look at mastitis records and bulk tank somatic cell counts. It can alert us when a grade may be going to occur and give us a dash board report about the milk quality of a herd.

For us to use Infovet on a herd all we need is your permission to access the data and away we go.

Some other very obvious tech stuff that is related to pregnancy testing is the ultrasound scanners we use to do the pregnancy testing. This may be reasonably old technology but it still amazing to think that we no longer need to pregnancy test manually anymore and we can tell the approximate age of the foetus!

That is all for this issue, keep an eye out for the next one, if you have any interesting tech stuff that other farmers would want to hear about drop us a line.

BOVINE VIRAL DIARRHOEA (BVD) IN BEEF CATTLE

SIMON MARSHALL

Bovine Viral Diarrhoea or BVD, is a disease that affects cattle in New Zealand.

As its name suggests BVD is caused by a virus. This virus is present amongst the general cattle population in varying amounts depending on geographical location and awareness of the disease amongst farming communities.

BVD is passed from animal to animal via direct contact with bodily secretions i.e. faeces, saliva, semen etc. Animals called **Persistently Infected** or **PI's** are responsible for the majority of spread due to the large amount of virus they are passing in their secretions.

A **PI** is an animal that is always infected with BVD and is constantly shedding the virus. A **PI** cannot raise an immune response to the virus. **PI's** play a major role in the transmission of the disease between cattle. A **PI** is created in two ways:

- A previously non-infected, pregnant animal comes into contact with the BVD between 30-120 days of the pregnancy a Persistently Infected calf will be born
- The second way a **PI** is created is when a **PI** cow becomes pregnant, her calf will always be a **PI.**

A **PI** animal may be born without any signs of being infected and in some cases, may go on to enter the herd if female or become a breeding bull if male. Generally, PI animals will die before they are 18-24months old. They will either succumb to another disease due to having a lowered immune system or develop mucosal disease and die. **Mucosal disease** is the end stage of the disease in a PI animal. They develop ulcers in the mouth and intestine and develop a scour and become ill thrifty before dying. This is often when we first see the disease and make a diagnosis.

Before mucosal disease develops the PI will have been shedding the virus to any other animal it has come into contact with. Because of the high level of virus they shed they are an integral part of the transmission of the BVD virus.

What are the effects of BVD on your herd?

- Decreased conception rates
- Early embryonic/foetal loss therefore higher returns to service
- Spread out calving pattern
- Abortion of pregnancy
- Premature births and still births
- Weak/dummy calves
- Calves born with defects
- The birth of **PI** animals
- Animals born **PI** and then developing the end stage of the disease and dying
- Decreased milk production
- Reduced growth rates in growing stock
- Increased risk from and more severe effects of other diseases eg parasites.

There are a number of tests available to check for BVD as follows:

- Blood test for antibody. This tells us if the animal has been exposed to the virus. Carry out a pooled antibody test on 10-15 yearling cattle or a pooled antibody test on 10-15 animals from different age groups in the herd
- Blood test for the virus/antigen. This tells us if the animal is persistently infected. A blood test and/or an ear punch test are available to determine if an animal is a PI.

There are many approaches to dealing with a herd infected with BVD

1. <u>The 'do nothing' policy</u>
   This should not be considered as a control policy.
2. <u>Use of a **PI** animal as a 'vaccinator'</u>
   Due to a number of obvious risks associated with having a **PI** animal in the herd <u>and</u> the fact that an effective vaccine exists, this option should not be used. **PI's** are known to be ineffective as vaccinators.
3. <u>Eradication</u>
   This is possible with the available laboratory testing we have available to us. We can either blood sample or ear punch to check for **PI's. PI's are then culled**
4. Once we have eradicated BVD from the farm it is very important that a closed herd status is maintained and any cattle that are brought onto the farm are blood tested before entry. This is because the immunity to the virus will now begin to decrease as all the **PI's** are gone.
5. Eradication requires commitment, understanding and enthusiasm.
6. <u>Vaccination</u>
   An effective commercial vaccine is available. Unvaccinated animals require 2 shots before they are mated, an annual booster thereafter is recommended. Bulls are also recommended to be vaccinated. Different approaches to vaccination have been used depending on different on farm circumstances.
7. <u>Eradication and vaccination</u>
   Can be done in conjunction. Will ensure that a BVD free herd is protected from re-infection. The gold standard approach to BVD control that will lead to the most rapid and complete resolution of all BVD related problems within the herd.
8. <u>Sale Bulls</u>
   Bulls being sold for use in breeding herds should be tested for BVD antigen prior to sale. This is now more common practice.

ONLY AVAILABLE AT VET SERVICES: SECURING THE LAST NEARLY-EXTINCT DRUM

RICHARD HILSON

Isn't it neat to see an endangered species close up? A kiwi in a darkened display aviary, a kokako at Mt Bruce, a whale at Kaikoura? Well, here at Vet Services we can wander out the back and marvel at the entire national population of Startect, sitting comfortably on the roost.

Startect is a really important part of our options in endoparasite control for sheep. In the battle against drench resistance, the "novel" anthelmintics are very important as an option. Startect contains abamectin (an ML) and derquantel, one of the two new anthelmintic actives. It has found an excellent place as a Knock Out drench in parasite management programmes, a technique that has grown in popularity. The price has largely been prohibitive as a frontline drench option but as a Knock Out drench it is used as a single drench in late summer or early autumn to remove smaller numbers of stubborn resistant worms that would otherwise contribute a disproportionate amount to the autumn larval numbers on pasture. This programme has been thoroughly computer modelled and makes good sense: uptake amongst farmers with replacement ewe lambs and not too many trade lambs has been steady over the recent years.

Additionally, it has unfortunately found a place as a frontline drench on some farms. Triple drench resistance is a new reality for us and when the three main drench families all fail in combination, there are only a couple of options left. Beyond those two, we are essentially buggered, sorry. So Startect has an important role in slowing the pace at which most farms get to that point, as well as allowing some farms to keep operating in NZs wormy environment.

So when the suppliers of Startect notified all their clients last year that they had decided that the product volume was too small to continue distributing it in NZ, we had serious heart palpitations. While it was possible that it could be produced again in future, the Aussie market was massive and NZ was guaranteed to miss out. Within a few hours and some time after the end of normal business hours we have secured virtually the entire NZ stocks, which represented three years supply for us at our current levels. This was a response to the difficult position we felt we would be in if this important drenching tool suddenly vanished from the options available to our sheep farming clients. That Vet Services did this was a source of some amazement to virtually all vets in the country and we have subsequently had to turn away many out-of-town purchasers.

Never fear, there is enough here for the next three years for Vet Services sheep farming clients. And we reckon that the suppliers will start bringing product in on occasion in future, which we will also be part of. But we have definitely stepped out of our comfort zone in protecting the latest endangered species in the country so that your sheep can enjoy it for generations to come!

POOHS AND EGG COUNTS: THE OLD FASHIONED WAY FOR NOW

RICHARD HILSON

One of the least glamorous but most useful tools that we have in production animal clinical work would be faecal egg counting. Internal parasitism is a big deal in any production animal system and we utilise this tool many times a day: for single sick animals, whole mobs of healthy or illthrifty stock, regular monitoring and as part of decision making processes. And diagnosing impending drench resistance is totally reliant on faecal egg counting. The technique hasn't changed in decades and we rely on the McMaster technique which involves weighing a known amount of faeces, mixing it thoroughly in a saturated salt solution and counting the various worm eggs in a defined area of a special slide under a microscope once the eggs have floated up against the top of the slide. It is messy and smelly but it is also strangely rewarding work!

So it does somewhat fly in the face of Simon's accompanying article regarding technology to proudly point out that we use old technology as well. Given that we have come to rely on the amount of information this technique can provide, we will stick with the tried and true. Our system is slick and we do quality control checks at various points along the process to be sure we continually get it right. And we pride ourselves in the direct link to vet input and reporting, all in good time for prompt on-farm decisions.

We have always been keen to see individual samples tested rather than composite (bulk) counts. Knowing what ten individual counts are instead of a single bulked average is immensely more useful in most cases. This data often relates well to what farmers report they see in their flocks and herds. A couple of high counts can seriously sway a mob average but it is likely that farmers will report that the mob as a whole look okay but has maybe recently developed a tail end or some animals have scours. Individual counts are also more useful when you are trying to eliminate errors in important information such as faecal egg count reduction tests or drench checks. If one animal misses a drench it is more obvious as an individual count.

Bulk counts have a place in some cases. They are cheaper, they do give a rough "snap shot" in time and if used on a regular basis do still build a picture for a farm or a mob. We do use bulk counts a lot at scanning time and during droughts for a basic look at the level of parasitism.

We do much more than egg counts too. We also do lungworm counts for deer and cattle, which are an intriguing job as we are counting larval stages of the lung worm, coughed up and passed out in faeces (yep, more messy work). The larvae are alive and wriggling, making them more interesting than a sedentary egg! We also utilise larval cultures, where the eggs in a sample or bulked sample are hatched out and then counted by species to give an idea of the relative abundance of the various species. This is an important adjunct to drench resistance testing as certain worm species may be killable while others are resistant. Larval cultures in recent Vet Services work with drench efficacy surveys have proved very valuable.

So we may always be looking for the 'next best thing" but we will also evaluate what it offers our clients or our business in the first instance. In the case of poohs and centuries-old internal parasites in our part of the world, we will be sticking with the old technology for some time yet.

SEASONAL UPDATE

HASTINGS/NAPIER

HELEN TAYLOR

We have definitely all had some rain and cyclone Gita might have brought us some more (hopefully with no damage) by the time you read this.

Spore counts are rocketing with 400k plus spores on the board as i write. These muggy nights are not good for sleeping. Make sure your stock are protected before letting them eat down into the dangerous last few cms of pasture.

Cow pregnancy testing is underway and there are some whopper weaners at foot already. Some of these beauties have benefited from an early drench - pastures must have plenty of worm larvae surviving on them in the favourable conditions. Dairy cows have struggled in the heat - making milk is already a high energy process so staying cool is much harder for them. If this is the future then we need to be planting more trees for shade.

I've seen some amazing spiker velvet and wrestled some big spikers to retrieve it. Stags look superb! Hinds are cruising and seem not to be bothered by the heat.

Across the whole country there appears to be a feeling that even the gold standard fly treatments aren't lasting the distance and I can well believe it. There is a high fly challenge and lots of moisture so don't rely on the label claim - ewes are fat and flushing should be achievable with this season so it would be a shame to fall at the last hurdle.

WAIPUKURAU

CAMILLE FLACK

These last few months we have seen very warm and wet Central Hawke's Bay conditions. With this comes grass but also a myriad of animal health worries. Be vigilant, continue to monitor and remember to take a break every now and then. Don't worry about the things we cannot change, try to concentrate on the things we can change. Hopefully you have zinc prevention in place where necessary and possible. Continue to be on top of drenching intervals in your lambs. Ensure all vaccinations have been done in your sheep. Make sure the easter bunny knows where you live and have a great easter.

DANNEVIRKE

TIM HOGAN

It has been all go as pregnancy testing of cows gets into full swing. Results in dairy cattle have not been great and reflect the tough spring conditions. Conception rates seem to have taken a real hit around the 3-6 week mark of mating which has followed through to poor 6 week in-calf rates and higher empty rates.

The warm, humid weather of late has also brought some seasonal animal health issues to the fore. Some of the more prominent problems include Salmonella in ewes, flystrike in sheep, flies worrying dairy cattle, internal parasites and more internal parasites. Of the parasites Lungworm in cattle has been prominent and we have seen a lot of Black scour (Trichcostrongylus) and some Barbers pole (Haemonchus) in sheep. Please contact us if you think you're getting a poor response out of your drench products as often this can done better!

The high humidity and warmth in mid-February has seen the local Facial Eczema spore counts rise, hopefully we don't see a repeat of last year. Any at risk areas should have control programs well under way. Talk to us if you are not sure.

WAIRARAPA

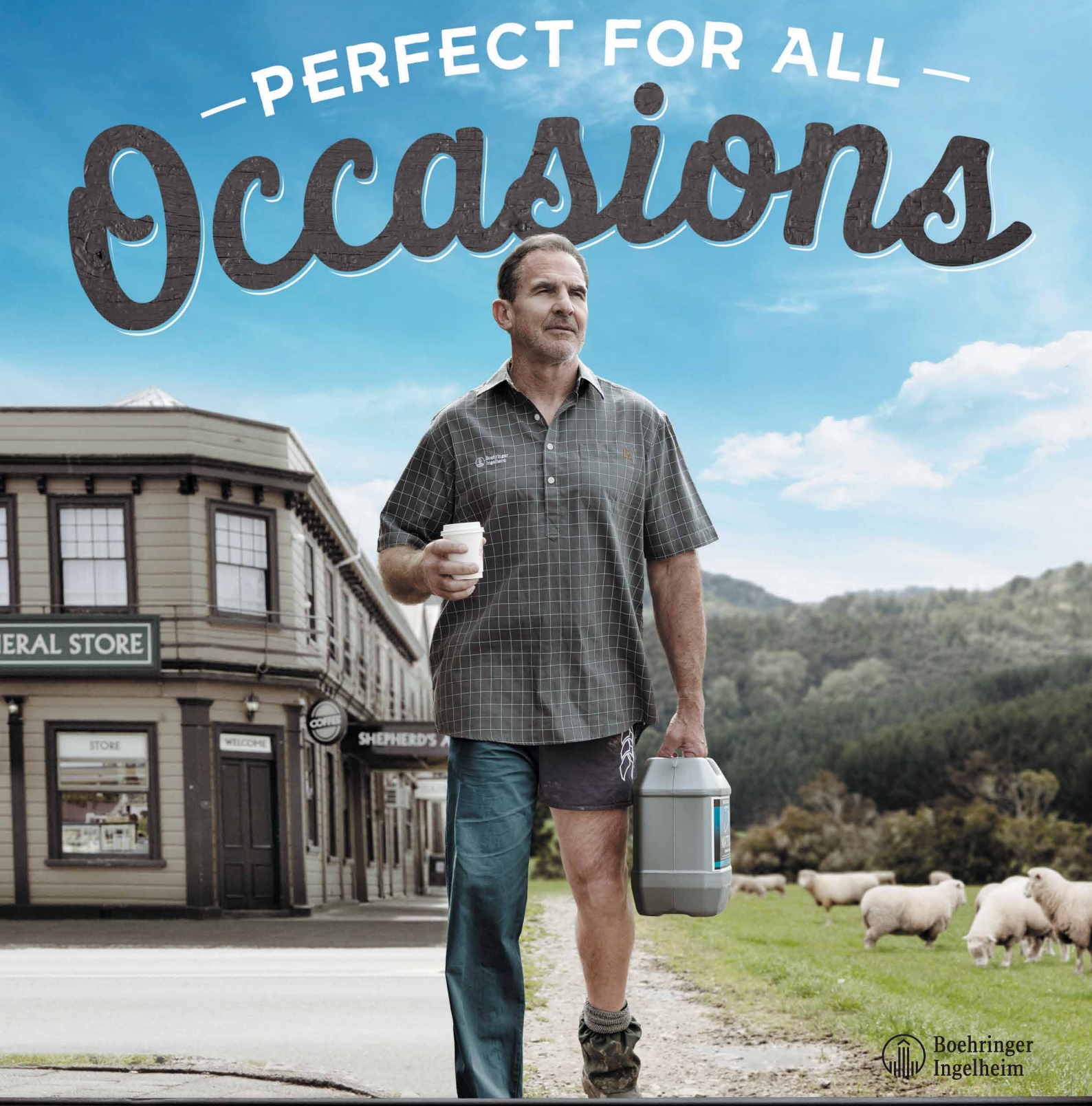
STUART BRUERE

The Wairarapa has received a few "get out of Jail Free Cards" with the tail end of tropical rain storms over the last few months. This has allowed the feed to hang on and give everyone a bit of a breather heading into ewe tupping. The usual array of cases such as worms, flystrike and trace element deficiencies have been seen by our farm vets in sheep and cattle. To date cows have scanned fairly well over the district. Most farmers took notice of our advice and decided to vaccinate their ewes against Salmonella. The way they were putting on condition it was setting up to be a "good one" if you were a Salmonella bug!! The clinic vets have seen numerous cases of Parvo virus in pups – if your dogs are not up to date with their vaccinations please call the clinic so we can sort this out for you.

OUR VET TEAM

Napier & Hastings:	**Clare Ryan, Dave Kruger, Dave Warburton, Georgina Campbell, Helen Crawford, Helen Taylor, 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.**

— PERFECT FOR ALL —
Occasions



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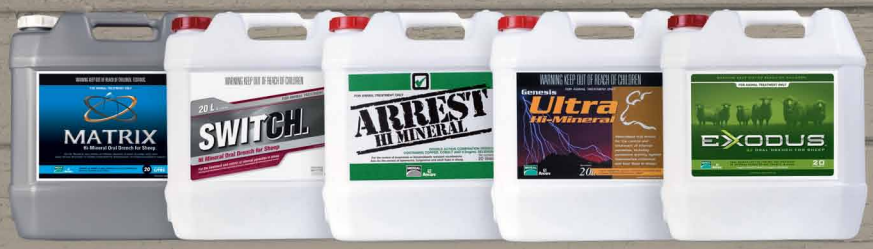
Yours with qualifying purchases while stocks last.



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