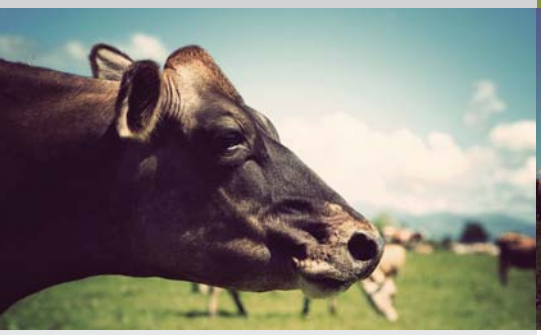
TOTALLY VETS
ANIMAL CARE & EXPERTISE

VET notes

YOUR TOTALLY VETS NEWSLETTER ALL ABOUT ANIMALS ON YOUR FARM

AUGUST 2014



Theileria alert

We have had several diagnosed cases of Theileria in the Manawatu, confirming that the disease has spread to our area. There is concern that the stress of calving will act as a trigger factor for the disease and we may see a spike in the number of cases around this time.

Be mindful of biosecurity, particularly if purchasing cattle from out of the area. Inspecting and treating for ticks, at least FIVE days PRIOR to transport, as part of a quarantine procedure is advised, but bear in mind that treated cattle still potentially carry the parasite in their bloodstream.

As calving approaches, stay vigilant for signs such as cows lagging behind, increased respiratory rate/effort, non-responsive metabolic disease etc. If you suspect Theileria, or would like further information, then call the team at Totally Vets.

The low down on metrichecking

Ryan Carr

Endometritis is basically an internal infection of the uterus that develops post calving. Often these cows are referred to as "dirty cows".

Studies suggest that around 17% of cows in NZ herds will have endometritis. Some herds will be higher than this. In these cows the bacteria, pus and inflammation associated with the infection can have a major impact on their reproductive performance come mating time. Cows with endometritis will take longer to cycle, longer to conceive and ultimately will have a higher empty rate… all of which cost you money and will negatively impact next season's mating.

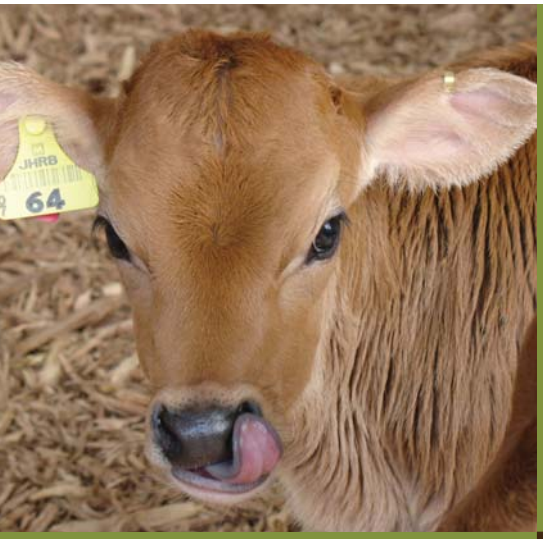
The metrichecking system has been used since 2007 to find dirty cows and is the most convenient and efficient way to detect infected cows in a herd. Some people like to draft out their at-risk cows (assisted calvings, twins, retained foetal membranes, induced cows, skinny cows, sick cows, down cows) and only get those cows metrichecked. However this method risks missing 30% of the total number of dirty cows in the herd.

A better option for finding dirty cows is to metricheck the whole herd three weeks before the planned start of calving. By this time most of the cows who were going to cure themselves will have, and there is still enough time for cows who need to be treated to heal.

The best option for curing dirty cows is to treat them early, 14 to 28 days after calving, which means metrichecking the herd in batches. This is less convenient than the method above but can usually be done in three visits without too much hassle.

Once metrichecking has identified those cows with endometritis an antibiotic is infused through the cervix to treat the infection and allow the uterus to heal and prepare for mating.

Have a think about what dirty cows might be costing you and take the time to talk it through with your vet to work out the best option for your herd!

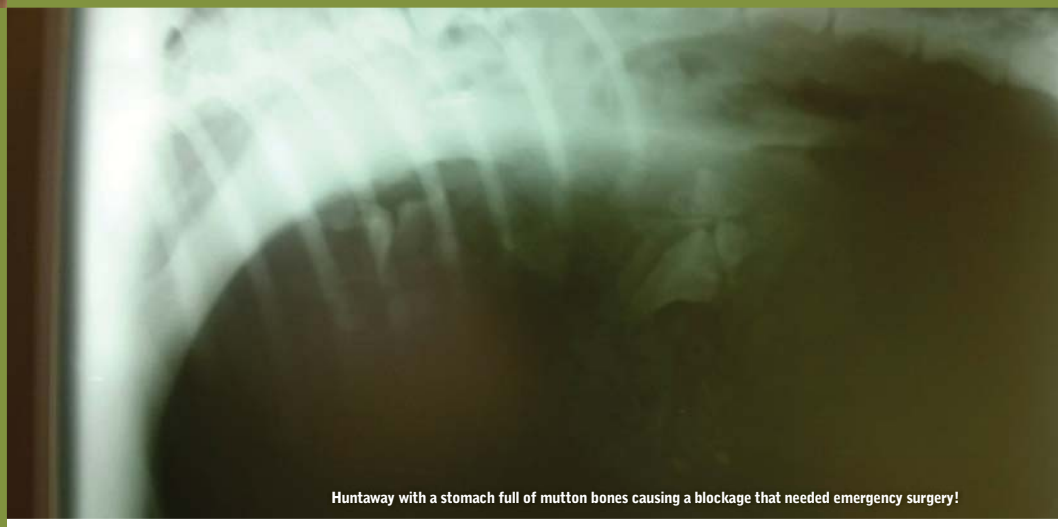


Totally Vets current stock health

Dairy

The new season is underway and so too are the associated calving problems, particularly cows going down in late pregnancy. These are frustrating cases to deal with, compared to metabolic cases after calving, as the complications of paralysis and fatty liver are more frequent. Response to treatment, which may include induction of calving, is variable and they are best treated by a vet.

Common factors associated with these cases are starting the springer mob too late; mis-drafting of cows for the springer mob; incorrect feed allocation due to the changing mob sizes; poor feed quality for the



Huntaway with a stomach full of mutton bones causing a blockage that needed emergency surgery!

HA HA

Calving through the eyes of a child

Spring had sprung and Joe Farmer was helping one of his cows give birth when he noticed his five year old son standing wide-eyed at the fence taking in the whole event.

Mr Farmer thought, "Oh, this is great... he's only five and I'm going to have to start explaining all about the birds and the bees! I won't jump the gun though, I'll just let him ask and I'll answer".

After everything was over, and the cow was successfully calved, the man walked over to his young son and said, "Well son, do you have any questions?"

"Just one Daddy", gasped the still wide-eyed young boy. "How fast was that calf going when it hit that cow?!"

Dogs and bones

Natasha Smith

It is common practice on farm for owners to feed bones to their working dogs. Although bones can provide a source of extra nutrients and boost dental health, they should be fed with caution as there are many perils associated with this practice!

The main, and potentially life threatening, conditions seen include constipation, gut blockage, perforated gut and twisted stomach (gastric dilation and volvulus or GDV). These conditions are seen when owners feed bones that dogs can chew up and swallow, such as mutton bones or small beef bones. It is especially seen in dogs that gorge food (many of our huntaway dogs!).

When a dog swallows pieces of bone there is potential for the pieces to get lodged in the stomach. This can cause an obstruction and potentially a GDV, both conditions being a surgical emergency. If the bone passes through into the small intestine it has the potential to perforate through the bowel and into the abdomen. If the dog is lucky enough for the bone to pass unharmed to the large intestines, there is potential for severe constipation as the faeces become very hard and sharp, and pooing can be very difficult! Most of these cases end up at the vets and require treatment to un-block the dog, which is usually very painful and unpleasant for all involved!

Totally Vets recommends feeding bones with caution and, if you do decide to feed them to your dog, only feed raw bones (no cooked bones as these can splinter!) and ensure the bones are large enough so they cannot be chewed and swallowed. ONLY give bones that can be **chewed on** NOT **chewed up**!

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dry cows leading to chronic weight loss for less dominant cows; or even a period of bad weather can be the "straw that breaks the camel's back".

There have also been problems associated with feeding silage or hay that is at the end of its shelf life. In one case a number of animals in the dry mob developed clinical Listeria and managing the sick ones was not easy, as they preferred to walk through fences than tracking down races! In another case Listeria was confirmed as a cause of late term abortion which is also a feature of this disease. It is frustrating to lose pregnancies or cows so close to calving, so avoid feeding supplements that are past their best to pregnant cows.

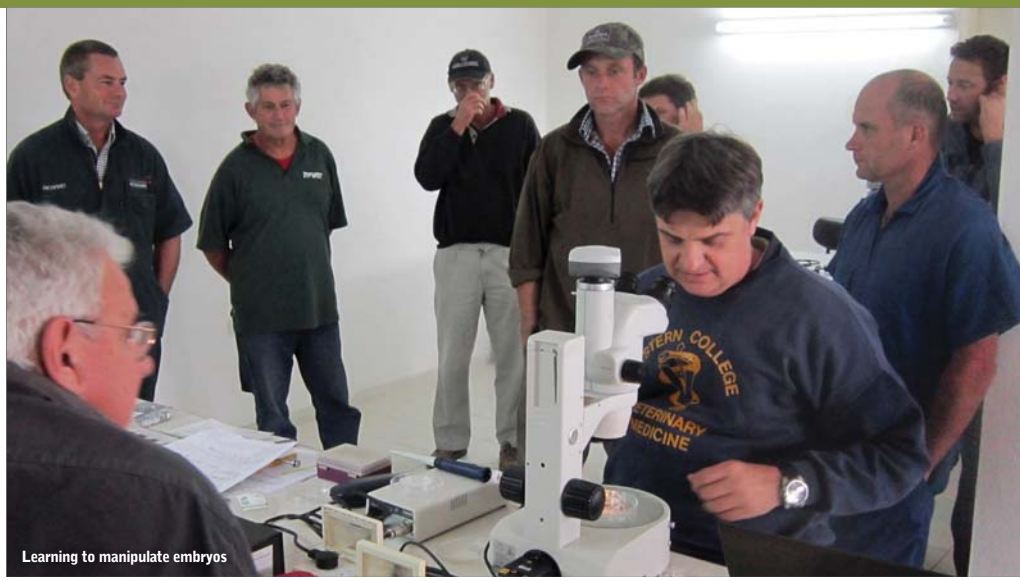
Sheep

Scanning is mostly complete and percentages from early matings have been OK, however later ones are slightly down. Keep an eye on ewe health, particularly those carrying multiples... there have been several cases of sleepy sickness and bearings can be a cause of much frustration at this time of year.

It is also timely to consider whether a pre-lamb drench of ewes would be appropriate. See Ginny's article on page four for more on this!

Feilding to Argentina... Dairy repro worldwide!

Hamish Pike



Learning to manipulate embryos

Early in May 2014, Barny and I attended an advanced bovine reproduction course in the Cordoba district of Argentina. The course, which was fully funded by Bayer, was held at a cattle breeding facility outside a small town called Jesus Maria.

Over the week, we learned about the bovine reproductive cycle and how cattle breeding programs could be used to manipulate the cow's cyclic activity with respect to the treatment of the non-cycling cow and the synchronisation of oestrous in heifers and cows.

We learnt that the main reason that cows fail to get pregnant to fixed-time AI is probably because they fail to ovulate in the first instance. The incorporation of eCG (equine chorionic gonadotrophin) into our non-cycling cow programs greatly improves ovulation rates in non-cycling cows (by about 17%) and improves their overall pregnancy rates to subsequent breedings. This is backed up by NZ trial work which showed a 6% increase in pregnancy rates to fixed-time AI when eCG was incorporated into CIDR®/Cuemate® programs. This also means that the use of eCG is more likely to result in less cases where the results are disappointing, i.e. where pregnancy rates of less than 43% to fixed-time AI are experienced.

We also had discussions around why the modern dairy cow is experiencing a decline in reproductive efficiency. Only when a cow has satisfied all other body functions requiring energy, such as essential body processes (heat regulation, locomotion and lactation), will she then expend energy into getting in calf. That's if she has any energy left after all of that! This provided a partial explanation for the decline. It must also be recognised that a dairy cow in a negative energy balance in early lactation will have a decreased ability to not only grow follicles on her ovaries, but the steroids produced by her reproductive tract will also be undergoing heavy metabolism by her liver as her dry matter (DM) intake increases (increasing DM intake improves the blood flow to the liver and hence steroid metabolism). How quickly a cow recovers from a negative energy balance post-calving determines how quickly she will then recommence follicle development, and hence ovulation.

Remember that a negative energy balance not only affects a cow's cyclicity but also her ability to produce a quality egg which is then capable of being fertilised.

Barny and I also got to get up-close and personal with a few Argentine cows (Brahman X mainly) and practice embryo transfer work which included superovulation of donors, synchronisation of recipients, donor egg collection and transfer to recipient cows. Freezing of embryos was also covered.

We also got to experience the culture - lots of traditional food and wine and, as a result, lots of Argentine coffee!!!

We would like to thank Ray Castle and Bayer for a very informative and enjoyable experience!

Pre-lamb drenching 2014

Ginny Dodunski

So, let's begin with what we already know about pre-lamb drenching:

- Production and economic responses are variable and can be hard to predict:
  - Ewes treated with a capsule or other long acting treatment prior to lambing will have less dags at weaning, but whether a 70c dagging job or a $2.00-$3.00 anthelmintic treatment is more economic, is a farm by farm decision!
  - Other production responses (lamb weaning weight, ewe bodyweight) seem to vary greatly from farm to farm and year to year
- Pre-lamb monitoring, especially faecal egg counts (FECs) can be more difficult as high FECs are not always predictive of a production response at this time.
- The results from a collection of pre-lamb drenching studies show no consistent response to drenching light ewes at **pre-lamb** time.
- In these studies the level of feeding after the drench was more important than the treatment itself.
- The question of whether parasite control earlier in the winter could be more important has not been clearly answered yet, however our own work has shown:
  - Ewes that are light in early winter will almost always have higher FECs than their better-conditioned flock-mates
  - These ewes perform better drenched at this time rather than left to fight it out with the parasites

An extensive capsule study has been run in Wairarapa over the past two seasons, comprising 15 separate on-farm trials comparing production and economic responses from Bionic® capsule treated twinning ewes versus their non-treated flock-mates. The non-capsule treated ewes were given an equivalent amount of B12 and selenium to approximate the supplementation given via the Bionic® capsule.

The full analysis is yet to be completed, but some preliminary results are:

- Capsule treated ewes were cleaner at weaning.
- Capsule treated ewes were heavier at weaning.
- The responses in lamb survival, lamb weaning weight and weight of lamb weaned per hectare were variable, with nil, positive, and negative responses to capsule treatment all seen.
- Much of the latter group's negative response may have been due to different ewe survival outcomes - overall there was a lower survival rate in capsule treated ewes, though it is not possible to say whether the capsules were the cause of this.
- Some of the positive responses were found to be due to the trace element component rather than the drench treatment!
- Positive responses to a capsule were much more likely when pasture was short (1000kgDM/ha or less) at lambing.
- A worrying aspect was that on a number of farms ewes maintained positive FECs in the face of a combination product.

If you are considering pre-lamb worm treatment of your ewes talk with your Totally Vets veterinarian about how you can maximise your chances of getting a good result, with an eye on sustainability. We have some clear guidelines on capsule use that will help address the latter aspect. In the long term, setting up a system where ewe condition and feed supply are better at lambing will be the way forward!

Gossip

At the end of July **Eliza** left us to take maternity leave to have her third baby. We wish her all the best with the new addition to her family and look forward to her return. **Megan** has been working closely with Eliza and will ensure things run smoothly while Eliza's away.

Meanwhile we welcome **Sue Payne** to our Feilding clinic as our new Procurement Officer. Sue comes to us from Elders in Dannevirke and we are privileged and excited to have her on board as part of the Totally Vets team.

In September **Selena** officially moves from her current business support role at Awapuni into the role of production animal technician. This will enable her to be out on farm as a technician and to utilise her excellent hands-on skills, while at the same time still allowing her to give invaluable administrative and organisational support to our production animal vets!

Sandy is now very close to finishing a qualification through the British College of Canine Studies (online learning) which has taken almost 3 years to complete. She will be able to call herself a 'Qualified Dog Behaviour Practitioner' very soon. Great work Sandy!

Out in the field **Sarah** continues on her crusade to help retired greyhounds find new homes. These dogs make great companions and she is now on the lookout for a girlfriend for Max.

Congratulations to **Cormac** who has been selected for the Manawatu Senior Rugby Development Squad. This is the next stepping stone in his rugby career - great stuff!

Key calf windows of opportunity

Sarah Clarke

Calf rearing is an intensive period but the time and effort invested during the first hours, days, weeks and months of a calf's life can shape its entire future and are vitally important!

Within the rearing period there are several key health events that need to be undertaken within a **defined time period** to help ensure a healthy calf. These include:

INGESTION OF COLOSTRUM

Calves MUST have 10% of bodyweight in colostrum in the first 24 hours of life (e.g. a 40kg calf needs two feeds of two litres, the first within 12 hours of birth and the second within 24 hours of birth). Colostrum should come from mature cows (not first or second calvers) and Jersey colostrum contains more immune cells per litre than Friesian.

CHANGE TO ONCE DAILY FEEDING

The timing of the change from twice daily to once daily feeding of milk is important. A recent study by Katie Denholm from Anexa has highlighted that two to three weeks of age is best. In basic terms, earlier increases the risk of scours and inadequate provision of energy, later slows rate of rumen development.

VACCINATIONS

It is wise to vaccinate calves against leptospirosis and clostridial diseases (tetanus, blackleg etc). Administration of a primary shot of 7in1 (lepto plus clostridial) between four and eight weeks of age with a booster four weeks later, and then annual boosters, is advised. The key component here is that the vaccination interval for lepto should never exceed 12 months.

DISBUDDING

Removal of the horn bud between four and eight weeks of age will prevent horn growth and a lifetime of dehorning. The timing is important as it is in this window that the bud is apparent (i.e. we can find it!) but it is still small enough to remove completely.

DISEASE MONITORING

Of particular interest is Bovine Viral Diarrhoea (BVD). Recommendations will vary depending on your farm's situation, but for most use of ear notch testing at 35 days may be best.

Discuss your situation and particular needs with your Totally Vets veterinarian to make sure you have a plan in place so as not to miss the window for your calves!

The nose knows!

Rebekah Willink

At Queen's Birthday weekend Kayla, Sandy and I attended the Association of Pet Dog Trainers NZ annual conference in Wellington, on the fascinating topic of K9 Nosework®.

Presented by Jill Marie O'Brien, the co-founder of the American National Association of Canine Scent Work LLC® (NASCW™), the conference was an amazing opportunity to learn more about the many possible applications and uses for nosework within the veterinary and dog training worlds.

THE SCIENCEY BIT

Did you know? A human has approximately 5 million olfactory receptors and a dog has upwards of 220 million, and about 30% of the dog's brain comprises of the olfactory lobe (the part of the brain involved in interpreting odours).

WHAT IS K9 NOSEWORK®?

Nosework, or scent work, is the term used to describe the canine scent detection activity which has been developed to give companion dogs and their owners a fun and easy way to learn and apply scent detection skills for fun and enrichment.

WHO CAN SNIFF?

ANY dog! While some breeds of dog (i.e. bloodhounds) may have an especially heightened sense of smell, every single dog has an amazing nose and can "sniff" - no previous experience required!

SOME OF THE MANY BENEFITS OF NOSEWORK

- A way to burn mental and physical energy
- Dogs engage and tap into a naturally-occurring behaviour
- No prior training is needed and no obedience is needed
- Shy or fearful dogs build confidence
- Elderly or physically compromised dogs can still be mentally fulfilled
- Reactive or boisterous dogs have an outlet for their energy
- The dog and handler bond is strengthened and owners learn how to observe and understand their dogs behaviour and body language
- Searches can be performed anywhere - the whole world is a search environment; you can be as creative as your mind will allow!
- Dogs who are recovering from surgery or who have exercise restrictions in place are given ample amounts of mental exercise instead

In the companion dog world K9 Nosework® is primarily a fun activity and in the working dog world it can be used to help train drug detection dogs, search and rescue dogs, police dogs and more.

The emphasis of K9 Nosework® is on creating learning experiences for the dog while supporting its independent problem-solving skills - celebrating the dog and its amazing abilities!

Fertility testing of bulls

Hamish Pike

Reduce the risk of introducing sub-fertile bulls to your herd by using Totally Vets' fertility testing service for dairy and beef bulls. Our testing provides assurance that your bull team is sound rather than uncovering problems during or after mating.

Semen is collected via an artificial vagina while the bull mounts a teaser heifer or cow. This not only allows us to collect a reliable semen sample (compared to using an electro-ejaculator), but also to visualise the bull's penis in the erected state, his libido, ability to mount, scrotal measurement assessment and disease testing. This service may also be combined with semen collection for freezing. Semen is examined on-farm under the microscope to assess sperm numbers, motility and conformation.

Guy Haynes gets up close and personal

In regards to disease testing, it is prudent to remember the importance of testing bulls for Bovine Viral Diarrhoea (BVD). The introduction of a persistently infected (PI) bull with BVD virus to a herd of cows risks infertility, embryonic loss and perpetuation of infection within the herd. Testing of all bulls well before sales ensures that only non-PI bulls are sold, and also acts as a surveillance test on the farm. Other samples can be collected for testing at the same time if required (such as for Enzootic Bovine Leucosis and Trichomonas).

We recommend that if vaccinating bulls for BVD that Hiprabovis3 vaccine is used. It does not have a claim for foetal protection (not required in bulls as they're not carrying calves!) but gives protection for both BVD and Infectious Bovine Rhinotracheitis (IBR). IBR contracted at mating can result in temporary infertility and disastrous mating results. We also recommend, if at all possible, bulls are on farm at least three to four weeks (preferably six!) prior to use. This allows them to settle into the environment and be exposed to, recover and build immunity to any new disease challenge.

At just $45+GST per bull (for the first twenty) the cost for bull fertility testing is one you can't afford not to have! Where there are larger numbers to be tested this price is discounted, however travel is extra as is blood sampling/testing for disease. The time taken is variable but can range from one to twenty bulls per hour. All you need to provide are yards with good footing and with strong rails to attach the teaser bale, a race, a quiet non-pregnant heifer/cow (similar size to the bulls being tested), and two people to help.

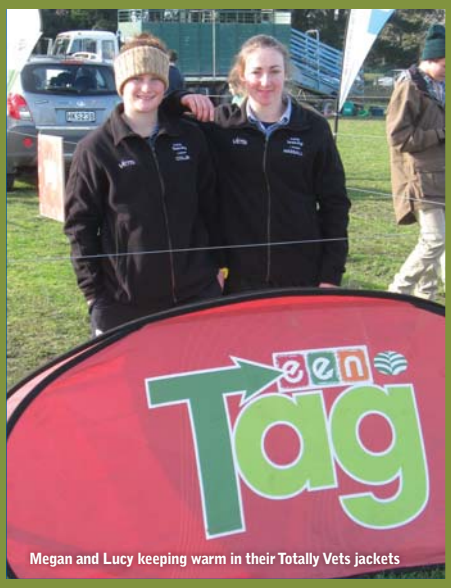
There are things that you need to do prior to the day of collection, so if you wish to stop firing blanks call the team at Totally Vets to discuss your situation and to organise your testing!

Teen Ag Final 2014

Megan Hassall

Lucy Collin and I travelled to Christchurch last month for the Teen Ag finals. This event runs alongside the prestigious ANZ New Zealand Young Farmer of the Year competition, which show cases New Zealand's top up and coming young farmers and the multitude of skills that they need to lead the industry. Teen Ag is the high school version of Young Farmers and Agri Kids is for the primary school age group.

To make finals we had to first be placed in the top three of our regional competition, which consisted of modules and a race-off for the top seven teams. This meant that at finals there were 21 teams, three from each region. Lucy and I came third in the East Coast regionals.



Megan and Lucy keeping warm in their Totally Vets jackets

The finals were held at Lincoln University, which produced an appropriately cold and frosty morning! First up was the **practical** modules section of our competition. We had an hour to complete all the seven eight minute stations with things like putting on a ram harness, attaching a water trough and irrigation sprinkler to a main pipe, and other farm-based tasks.

The **observation** section was next, which was new this year. This got us more involved in all the competitions that were happening around us. After watching a video on how to make a DIY light bulb and construct it, we were given a booklet that had us answering questions about sponsors for certain sections and similar things.

Last was the **written** section, this we both found challenging. Answering questions from general knowledge, including particular sheep and cattle breeds, to writing an essay on sustainability, was a bit out of our comfort zone!

Although we didn't make it into the final race-off it was great to meet others our age interested in farming and was a very rewarding experience!

Parasites in your dairy herd

Reuben Harland

Adult cattle generally have good immunity to internal parasites, but the energy and protein cost for the immune system's response to parasite challenge can lead to production losses in some situations.

Analysis of 87 studies on drenching adult dairy cattle showed that 80% reported positive milk production responses, with an average increase in milk production of 0.04kg milk solids (MS) per cow per day. The range reported in all 87 studies was between 0.0 to 2.1kgMS per cow per day, but this range is likely to reflect variation in herd parasitism levels, age structure, farm system and location, production levels and time the drench was administered. New Zealand research showed treating cows at calving produced 0.03 kgMS per cow per day extra over 247 days compared to their untreated cohort.

So, given that drenching dairy cattle has been shown to increase milk production, let's crunch the numbers to see what dollars are involved:

- Producing of an extra 0.03 kgMS per day for 247 days = 7.4 kgMS per cow.
- Cost of drenching a 500kg cow with Eprinex® is $5.15 per head.
- 7.4 kgMS @ $7 per kg = $51.80 less drenching cost $5.15 = $46.65 return on investment.

Now it's your turn… Multiply this return on investment by the number of cows you milk and hold on to your chair!

But don't go booking your holiday just yet, thinking drenching your cows is going to pay for it, there is no doubt that drenching cattle that do not have worms will just cost you money. So the question needs to be asked, how do you determine if a herd will likely benefit from drenching, and is yours one of them?

This question can be hard to answer because unfortunately tests to accurately determine the level of parasitism in adult cattle are limited. Both faecal egg counts (FECs) and blood pepsinogen levels are good, reliable tests in young stock but must be carefully interpreted in adult cattle. Positive FECs indicate the presence of worms but the absence of eggs does not confirm the absence worms in adult cattle. Blood pepsinogen values can be difficult to interpret in mature dairy cattle as levels rise naturally with age but this can be a useful tool in high challenge situations.

A further test we have for assessing worm burden and likely herd response to anthelmintic treatment in dairy herds is the measurement of Ostertagia antibody levels in a bulk milk sample (B-sure test). However this also requires careful interpretation, and often an assessment of the farm's system and history is the best means of making a call on the likely requirement for worm treatment so it is recommended you consult your vet early if considering testing.

Herd factors that MAY increase the likelihood of a positive response to drenching include:

- Pasture-based systems, especially with cows of high production potential.
- Pastures that were dominated by young stock prior to dairy conversion may take several years for the numbers of worm larvae to fall.
- Farms where calves are grazed on the dairy platform after weaning.
- Lots of young cows in the herd, especially if under nutritional stress.

On top of milk response I think it important that the reproductive benefits also be investigated. In a NZ trial heifers were found to benefit most reproductively from drenching at calving with significantly more treated heifers getting in calf at first insemination, bringing the average calving date 12.9 days earlier for treated vs untreated heifers. There were also indications of higher pregnancy rates from treated heifers vs untreated. For mixed aged cows calving to conception interval was reduced by 4.8 days in a large Australian trial drenching during the dry period, and by 9 days in a New Zealand trial.

Contact the team at Totally Vets if you would like to discuss anthelmintic treatment of your dairy herd.

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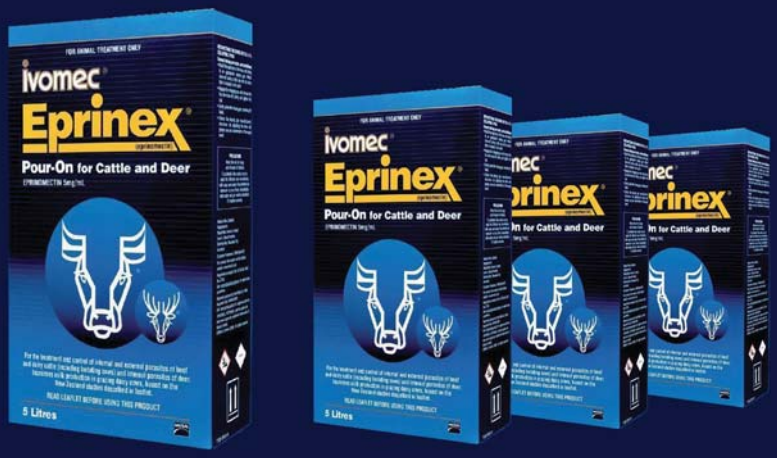

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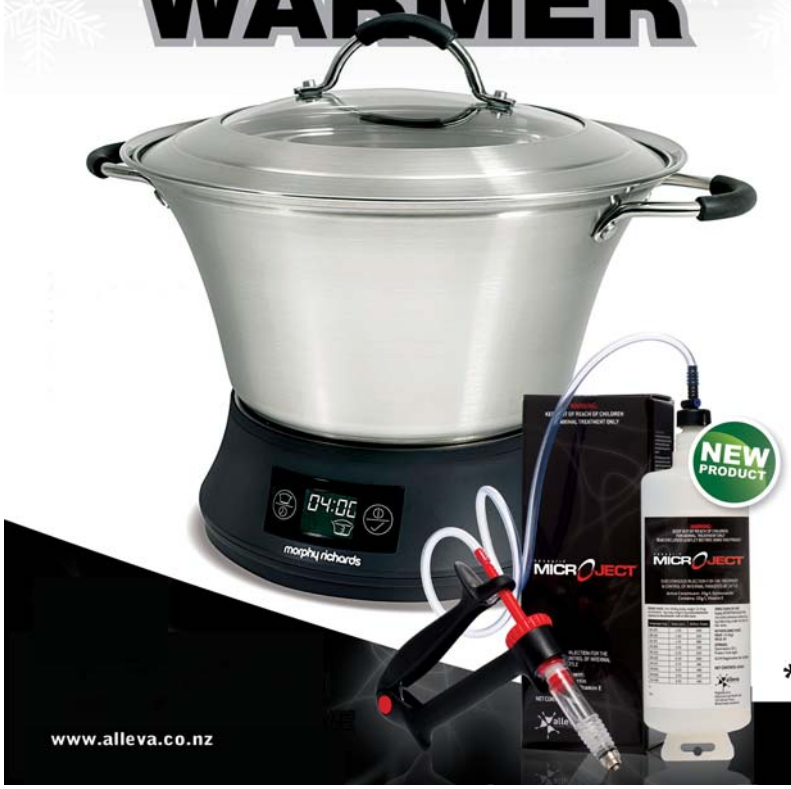

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morphy richards

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