



VET notes

YOUR TOTALLY VETS NEWSLETTER ALL ABOUT ANIMALS ON YOUR FARM FEBRUARY 2010



Above Paul Olsen

Paul Olsen

Paul Olsen is the current regional chairman of Young Farmers Clubs in Taranaki and Manawatu districts. Paul represents the largest YFC region in New Zealand with 12 clubs and 306 members - this is an increase in member numbers of 75% in one year. Nationally YFC membership has grown by 46%.

With his brother Sean, mother Maree and Uncle Terry, Paul manages a 700-cow dairy herd, as well as growing and grading a few hundred acres of potatoes in Opiki.

As regional chairman, Paul's goals for YFC are to add to the personal growth and development of members plus grow the interaction between clubs and maintain membership.

Totally Vets resource needs

Nigel Coddington

In 1998 we had 10 vets and 14 support staff working out of the existing building in Feilding. We now have 20 vets and 28 support staff operating in and from the same facility. The efficiency of the workplace has suffered as we have loaded more people and more equipment into the same space. We now have people lining up to get to a work station. On top of that, there are other ongoing structural problems that need to be urgently addressed.

During investigations initiated over two years ago, when it was recognised that the current building no longer met our needs, an opportunity arose that provided an excellent chance to secure our medium to long-term future. Options were rapidly reduced to putting another floor on our existing building or building a new clinic on a new site.

With little difference in cost between option

one and two, the decision came down to other factors. Altering the existing building, no matter how the plan was re-jigged, could not be made to deliver on our requirements. Add the disruption to our clients and team and the decision to build a new facility on a new site was taken.

A new opportunity led to the acquisition of the old ITM site directly across the road from our existing building. The new site is four times the size of our current site and the new building will be almost double the size to accommodate administration, the hospital and the public area. All this can be achieved, with the same address - the corner of Manchester and Eyre Streets - and room for future growth if required.

The land and building will be owned by a consortium of private investors, including the Feilding and Districts Veterinary Club. Totally Vets will lease the building.

If you have any questions or concerns, please don't hesitate to contact Nigel at 06 323 6161. He would welcome the chance to explain and show you what has been talked about.

Below Architects' impression of front entrance





Totally Vets current stock health

Cattle

Identifying cows for early dry-off can be difficult without information. Pregnancy status, production and cell count are useful, followed by condition and pasture cover.

The current induction code will lose its status on 18 October 2010. A review being undertaken by Dairy Cattle Vets, Federated Farmers, Dairy Companies Association of NZ and Dairy NZ is to be decided in February

2010. If you intend to induce in 2010, you will need to comply with the selection of cows for induction, including early pregnancy testing (13-16 weeks from the planned start of mating) to accurately age pregnancies so that candidates for induction have accurate dates.

If you haven't already started vaccination of young dairy and beef animals for leptospirosis, you should be starting soon. Two shots four weeks apart.



HA HA

Playing the game

A young boy enters a barber shop and the barber whispers to his customer, "This is the dumbest kid in the world. Watch this." The barber calls the boy over, puts a ten dollar note in one hand and two \$2 coins in the other and asks, "Which do you want son?" The boy takes the coins and leaves the note. "What did I tell you?" said the barber. "That kid never learns!". When the customer leaves and walks down the street, he sees the same boy coming out of the ice cream shop and says, "Hey son, why did you take the coins instead of the note?". The boy licked his ice cream and replied, "Because the day I take the note, the game's over!"

Be sure you don't play any 'notes' games with customers or staff - they may have worked out how to beat the odds!

Deer - some things to think about at weaning

Ginny Dodunski

Whether to wean before or after the rut was a hotly-debated topic when deer were all over the Manawatu. Those who remain in the industry have generally settled on whatever policy seems to best suit their environment and marketing plan for their young deer.

The list of health issues for fawns around weaning time is well known. The relative importance of each disease varies depending on whether weaning is pre- or post-rut.

Yersiniosis: Pre-rut weaned fawns are more susceptible to this cause of scouring and death, and therefore more likely to be vaccinated. Severe outbreaks have been recorded in fawns weaned post-rut, so late weaning is not necessarily insurance against yersiniosis.

Worms: Early-weaned fawns are more susceptible to outbreaks of lungworm, and production loss from gut parasites. Where they are regularly treated for worms, the build-up of larvae on the pasture in autumn reduces. Fawns that remain on mum are often not

drenched, and there may be more potential in these systems for the autumn rise in pasture larvae to be higher and more prolonged, with the potential to create higher challenge through winter. If you haven't had a chat with your vet about drench choice recently, do so - our advice on combination use changes as different products become available.

Feet: 'Necrobacillosis' is a longwinded term for a condition that is caused by physical damage to the feet. Some lines of weaners can be severely affected.

Leptospirosis: The devastation of an outbreak of deaths caused by leptospirosis has prompted some producers to vaccinate for it. This type of leptospirosis is caused by one particular strain, but there is another that deer carry without such dramatic consequences. Work by researchers at Massey is showing that where this second strain is present, it may be having negative effects on weaner growth, and the reproductive performance of young hinds.

Come to our deer seminar on Wednesday 3rd March 2010, to hear the latest on necrobacillosis and leptospirosis (details of the seminar are on the back page).

Totally Vets prints **Vet Notes** on paper using FSC certified mixed source pulp from Well Managed forests and other controlled sources. The paper is produced under an environmental management system ISO 14001.





Dairy heifer replacements are a huge investment worthwhile looking after. Read Craig's article on page 7.

With a bit of settled weather, now is a grand opportunity to reduce future lameness and carry out track maintenance.

Sheep

Summer lamb feeding is a balance of maintaining pasture quality and crop management.

Barber's pole worm season is approaching and one option for long-acting control of this worm is to use a drench containing closantel.

Order your requirements for fecundity vaccines, Ovastim™ or Androvax™, Toxovax™ and campylobacter vaccine.

Deer

Weaner lepto vaccination may be beneficial. Discuss this with Totally Vets.

Facial Eczema precautions should be in place for all species.

Other diseases commonly encountered at this time of year are polioencephalomalacia in calves, ryegrass staggers, heat stress and water deprivation, pink eye and the ubiquitous fly.

Reports of toxicity in dogs eating a snail and slug bait containing iron chelate are filtering through. Signs of abdominal pain and haemorrhagic gastroenteritis appear 6-24 hours after ingestion. Dogs survive if treated early. The bait is marketed in NZ as Quash®.



From Calgary to Kimbolton - part one

Greta Baynes

On a beautiful day in November, the second Totally Vets Sheep and Beef Seminar for the year was held at the Oroua clubrooms. The following is a brief summary of the presentations of the day. A more detailed version is available on www.totallyvets.co.nz.

Trevor entertained us with stories of Calgary where he participated in an international parasitology conference. He also spoke about increasing earnings from a ewe flock.

Ewe body condition score (BCS) in late pregnancy and early lactation is important. Feed multiple-bearing ewes well, minimise light ewes at lambing (focus on improving the tail end) and minimise condition loss after lambing to optimise lactation.

Lambs grow better on short-growing grass - creep-grazing may be a feasible option.

Have a flexible weaning date based on feed quantity and quality, lamb and ewe condition, the weather forecast and the market.

A brief discussion on post-weaning issues ensued. The main point was feed quality and quantity. Management tools suggested by Trevor include: "order[ing] sunny days", avoiding grass dominant swards, allowing clover to flourish and providing fibre supplements.

Ginny followed up by sharing photos of Norway where she attended the International Sheep Conference, her trip generously sponsored by Intervet Schering-Plough. The Norwegians focus on maintaining traditional farming practices and preserving the environment. They receive substantial government subsidies (funded by large and profitable oil reserves) that allow them to farm this way.

Ginny then gave a quick run-down on Vitamin B12 in lambs in our patch. B12 is formed largely from cobalt (Co). A deficiency will present with anorexia, ill-thrift and anaemia.

The Manawatu does not typically have cobalt-deficient soils as ewe's milk contains plenty of B12. Weaned lambs are more susceptible, so the best time to test is around weaning.

Stockguard (one of our suppliers) is generously subsidising some B12 testing this year. Speak to your vet if you are interested in this.

Hamish discussed drench toxicity by presenting a series of case studies. Hopefully these are lessons you can learn from others rather than experiencing the misfortune yourself. The lessons from these cases are summarised:

- Do not drench young, unweaned animals (usually drenches are unnecessary pre-weaning)
- Abamectin toxicity can occur in cattle and sheep (signs of toxicity you may see include shaking, stumbling, coma, death)
- Use the correct drench for the species
- Administer as advised e.g. do not give drench in milk (will bypass the rumen and go directly to the abomasum where absorption is different)
- Use an on-label product if possible
- Closantel toxicity causes irreversible blindness in goats
- Dose to weight - most important in young animals - when older, can dose to heaviest animal in mob (within reason) to minimise resistance developing
- Use correct dose rate

Facial eczema - a bit of history and a cautionary tale

Craig Dickson

Facial eczema (FE) was first reported in 1887 and had a major impact on many areas in New Zealand. It wasn't until the early 1970s that a dental nurse from Te Aroha, Gladys Reid, suggested that the addition of zinc to the drinking water of cattle reduced the symptoms of FE.

Gladys' idea was not embraced by everybody at the time. The Animal Remedies Board went as far as saying that zinc was completely useless as a form of treatment or prevention of FE in livestock and threatened to prosecute anyone promoting zinc for FE control.

Time moves on! In 1983 Gladys received an OBE for her research and farm suppliers sell large amounts of zinc for FE control without fear of prosecution. We now know that zinc supplementation of animals will protect the liver from the toxic effects of sporidesmin. For good control this supplementation needs to be in place for long enough prior to exposure to toxic levels (three weeks for water trough treatment) and needs to be delivered consistently and at the appropriate rate.

For water treatment the factors that influence zinc intake are:

- Daily water intake which will be influenced by alternative drinking sources, pasture dry matter, daily milk yield and weather
- Zinc concentration in the trough

Daily water intake is difficult to control but the zinc concentration is something that is determined by how much of the stuff we tip into the water supply - so it is critical that we get this bit right.

Let's take a herd of 400 Friesians that weigh on average 500 kg. There is no other stock on the milking platform (if there are, they need to be allowed for). We are trough-treating via an in-line water dispenser with zinc sulphate monohydrate.

Each cow needs 28 grams zinc sulphate MH per day (build up to this level over two weeks). 400 cows x 28 grams per day = 11200 grams. Which is a very big number and you're sure you just added one bucket each day last year and it seemed to be fine. It's now four weeks on and you've just noticed five cows with FE. You wander back to the shed to ring the vet and let him know that you think that maybe the Animal Remedies Board had it right when you notice three empty zinc bags sitting in the corner. Three bags used over the last two weeks. Three 25 kg bags over the fortnight means that the cows have been getting 5.4 kg per day - about half of what they needed. Whoops!

The story may seem contrived but the message is clear. Animals will only be protected from FE if supplementation levels are correct.

What's the goss?

Annabel and **Nick Gorman** have a healthy baby boy, George, born on Monday 14 December at 7.06am, 8lb11oz. Annabel and George are now busily bonding during Annabel's maternity leave.

Kellie Doyle joins the small animal hospital team from sunny Queensland. Kellie is covering while Annabel is on maternity leave.

Sue Ransom has departed the hospital to accompany her military man to Christchurch and **Suzanne Lane** takes up Sue's hours.

Emma Scott, who previously worked from the Feilding clinic as Emma Whitmore, returns from her OE and family building to rejoin the hospital team.

From mid-January you may have noticed the dulcet tones of a new after-hours receptionist, **Allie Smith**. Allie is filling the spot left by **Anne Tunicliffe**, who has left us to meet the demands of her busy family life.

Sadly, **Jenny Rutherford**, our accounts manager at Palmerston has decided to pull the pin after 10 years of sterling service. Jenny's tenacious and durable accuracy will be a hard act to follow. We all wish Jenny many enjoyable rounds - of golf that is.



Above Guy Haynes, the happy golfer and his improvised trophy!!!

While on the subject of golf, our congratulations go to **Guy Haynes** for his success as the dubiously titled 2009 Far-Q Golf Champion.

Selena Skilton started in reception at Palmerston in January. Selena joins us after a three-year extended OE spent mostly in Edinburgh. **Tara Baker** has moved her chair over to Jenny's desk in the accounts department.

Joao's son, Miguel, has been selected for the New Zealand under 17 cycling development squad. No mean feat given the current strength and successes of our national cyclists.

Totally Vets thank all of you who called in at either of our two branches to share some seasonal festivities with us on December 11th. We do hope you enjoyed visiting as much as we enjoyed your company.

Once again Totally Vets participated in the Feilding Christmas Parade. This is a really fun event for us and the frivolity starts well before the parade! This Christmas our theme was Snow White - the dwarves had a ball!



Above Back: Aimee, Greta, Diane and Catherine. Centre: Rebekah and Dwarves.



Lameness in dairy cattle

Anita Renes

An outbreak of lameness in a dairy herd is usually blamed on rain and muddy tracks. Often more lame cows do show up when it is wet but most of these cows already had damaged feet and the wetness is just what tipped them over the edge. Cows that are not under pressure, with strong, healthy feet, are unlikely to become lame when it rains.

Not all lamenesses are the same. A limping cow usually has a painful foot but there are a number of different problems or injuries that may have led to that pain. Knowing the main type of lameness that occurs on a farm can give valuable clues as to why there is a lameness problem.

White line disease is the main type of lameness seen on New Zealand dairy farms. This occurs when weakening of the white line (the seam

joining the wall and sole) leads to mud and stones driving up and causing an infection. White line disease is caused by pressure and poor cow flow leading to twisting and turning of the feet on concrete. The pressure may come from cows being pushed too hard on the tracks, incorrect use of the backing gate, narrow tracks, and not enough space in the yards. Additional pressure is often applied to overcome poor cow flow but usually this makes the problem worse rather than better.

Sole punctures and bruising are often caused by similar factors on a farm. If cattle have plenty of room and are allowed to move at their own pace, bruising and sole punctures should be minimal. Cattle look to see where to place their front feet to avoid stones, holes and other hazards and then their back feet follow through to where the front foot was. If the cows are squashed up tight (you will see their heads coming up) then they cannot see where to place their feet and are more likely to stand on sharp stones. Bruising and sole punctures also occur where hard stones are tracked onto concrete. Cattle with soles worn thin from walking long distances are also more at risk of bruising/penetration.

Footrot is caused by a bacterial infection of the soft tissues between the claws. Damage to the skin between the claws or softening from

wet conditions allows bacteria present in the environment to enter and cause swelling above the hoof, cracking of the interdigital skin and pus formation. This is generally the only type of foot lameness that needs to be treated with antibiotics. If the cows have to walk through muddy, poorly drained areas or if there are a lot of loose, sharp stones causing damage between the claws, then a footrot problem may arise. It is uncommon for a dairy farm to have a major footrot problem. Make sure you are treating the right condition. Antibiotics given to cows with white line disease, bruising, sole penetration or interdigital lesions generally do less than appropriate trimming.

The above conditions are the main causes of lameness in dairy cattle. Other problems do occur but they are usually isolated cases.

The weather and poor tracks are the most common things blamed for causing lame cows. However, there are often many more things going on that are contributing to the lameness problem. Totally Vets Healthy Hoof programme providers are trained to undertake a comprehensive analysis of the lameness risk factors on your farm.

If you would like to work with a Healthy Hoof provider to reduce lameness in your herd, please contact Totally Vets.

Facial Eczema monitoring

Gaye Stein

Totally Vets is running our facial eczema (FE) bulletin again this season. The bulletin provides weekly updates on the

FE risk across the district and the weather conditions that contribute to this risk.

While rising FE spore counts allow us to identify a current risk period, rainfall and grass minimum temperatures allow us to predict an upcoming FE risk period. These climatic parameters are closely monitored by Totally Vets. Pasture samples are submitted on a weekly basis by our very loyal sentinel farms and from these,

Totally Vets is able to provide local and current information.

The FE bulletin is first updated on www.totallyvets.co.nz/facial-eczema-risk.html

An e-mail version of the bulletin is also available by contacting gayes@totallyvets.co.nz

It is also displayed in both the Feilding and Palmerston North practices.

Don't wait to see your stock decimated by FE. Prepare for FE with Totally Vets.



Beef finishing seminar

Greta Baynes

The Meat and Wool NZ Manawatu Monitor Farm Finishing programme kicked off with a Beef Finishing seminar last November.

Jim Gibbs from Lincoln University spoke about normal rumen function where plant carbohydrates are converted to acids which are buffered and absorbed or flushed through the body. High-quality pasture can have high levels of water-soluble carbohydrates. In excess, these overwhelm the rumen with acid, so they cannot be buffered or excreted. This creates a low rumen pH, which results in lameness, liver abscesses and metabolic deaths.

Gibbs' research shows that NZ pasture-fed animals have a normal daily fluctuation of rumen pH from 5.6-6.5. Acidosis has previously been defined as a rumen pH <5.5-6.0. Acidosis found on improved pasture

differs from that seen on grain-fed diets and does not appear to affect our cattle. However, half of NZ's manufacturing beef comes from pasture-fed bulls of which 10% have liver abscesses.

It's proposed that damage to the rumen lining allows bacteria to spill into the bloodstream and seed into the liver, causing abscesses. This may reduce liveweight (LW) gain and even cause death. The incidence of liver abscesses in NZ beef bulls seems to be increasing and is similar to that of grain-fed cattle.

Steve Morris, from Massey University said fast-growing animals are the most efficient. To improve efficiency, the output of beef for a given unit of feed needs to be maximised. In general, animals with a higher mature LW grow faster but have greater maintenance requirements. If these animals are fed well, a greater proportion of feed is partitioned towards LW gain.

Angus Mabin, a bull farmer from Waipukarau, demonstrated how technosystems had been implemented on his farm and their gradual adaptation to his farming system. This fencing system is flexible enough to change between seasons or within different blocks on the farm.

Angus provided practical concepts for improving the efficiency of technosystems, some of the downfalls and many of the benefits.

Lindsay Rowe, Totally Vets' Intelact consultant, advised on managing pasture. The ryegrass tiller produces only three leaves before the oldest leaf dies and a new leaf emerges. The time between new leaf appearance is determined by soil temperature and moisture. It is best to graze at 2.5 leaves/tiller to optimise plant quality, re-growth, and survival. Grazing management should focus on rotation length, grazing intensity (residual pasture covers) and duration.

Trevor Cook outlined some major animal health issues in cattle finishing systems and highlighted the importance of purchasing stock with a good health status - i.e. know your rearer.

Quarantine drenching is important. Create a customised parasite control and trace element monitoring programme with Totally Vets. Planning includes targets and monitoring with fixed timelines. Optimising animal health will allow maximum LW gains to be achieved.

Totally Vets has copies of the Finishing Seminar presentations and is more than willing to speak with you about any of these issues.

Turnip photosensitivity in cows

Greg Smith

Turnips can cause photosensitivity which often coincides with periods of Facial Eczema (FE) risk. This may lead to a misdiagnosis and doubts about the FE prevention strategy in use at the time. In NZ more cases of so-called 'rape scald' are due to summer turnips than any other brassica crop.

The risks are greatest when

- The crop is fed before maturity
- Excess sulphur or nitrogen fertiliser has been applied
- The crop has been stressed by disease or water restrictions

As for other crop-related health issues, grazing management can be used to

Economic benefits of well-grown heifers

Craig Tanner

In simple terms ... well reared and grown heifers that reach critical targets as youngsters are healthy, highly fertile, conceive quickly, calve just as quickly, compete and produce well in their first lactation and generally stick around long enough to repay the investment you've made in them several times over.

So what are some of these critical targets?

Heifers should attain:

- 85-90% of mature liveweight (LW) by first calving (preferably at 22 months)
- Body condition score (BCS) 5.5 at calving
- 60% of mature LW by 15 months
- 30% of mature LW by 6 months

What are some key indicators of heifer rearing success?

- < 5% empty as yearlings from limited (<8 weeks) mating period
- > 75% calved by week 3; > 92% calved by week 6
- > 90% submitted in first 21 days of mating season after first calving
- Produce > 85% of herd average milk solids (MS) in first lactation

minimise the risk. Allow cows to adapt to the crop. For the first 10-14 days, cattle should be 'filled up' with pasture or supplements before accessing the crop. All cows should go onto the crop together to prevent gorging by a few and time on the crop should be 1-2 hours or less.

After this transition period, standard practice is to allow access after the

- > 70% survive into 4th lactation

Other measures such as mortality rate to weaning, percentage 2yo's CIDR'd, 2yo six week in-calf rate and 2yo empty rate reinforce the story, for better or worse. All are measurable; all feed down strongly to the business' bottom line.

What are some of the economic drivers for growing great heifers?

- Improved 6 week in-calf rate of first calvers
- Improved first calver empty rate
- Increased first lactation MS yield - with carry-over effects to subsequent lactations
- Decreased replacement rate

The benefits of closing a 10% heifer LW gap at calving (e.g. 80% vs 90% mature LW) using long-term average payout price and replacement costs is of the order \$85 per heifer. There are also ongoing annual benefits to herd performance of consistently closing this gap from year to year.

The need for fewer replacements follows greater longevity of heifers in the herd. Potential cost savings are:

Total rearing cost (birth to 2yo) x number not now reared.

You make a serious financial commitment to rearing replacements - **How do you maximize return on capital invested?**

The cornerstones of successful heifer-rearing are not new:

1. Animal husbandry, especially in the neonatal and pre-weaning phases
2. Provide adequate amounts of high-quality feed, consistently
3. Manage animal health and control/prevent disease
4. Monitor where you are at relative to targets and respond as required

morning milking. In this way milk taint, caused by feeding the crop close to the afternoon milking, is avoided. This means cows go on hungry and that the early arrivals get a bigger slice of the pie and are at increased risk. If possible, provide alternative feed prior to access and feed only 35% of the diet as turnips for milking cows.

Whether it be for economic reasons or merely for a sense of pride and purpose in knowing that your heifers are given an opportunity to express their genetic potential, successful heifer-rearing should be seen as part of the process of continuous improvement in farm productivity.

To get started on this journey:

- Work out where you are/ where you've been - MEASURE
- If not up to the mark, decide and commit to doing it differently
- Develop a plan of attack - PREPARE
- DO - what needs doing, when it needs to be done
- Monitor and REVIEW progress

How can we help?

Totally Vets has developed a total heifer-rearing action and support package that includes:

- Estimation of mature LW of your heifers - either from LW breeding values or by weighing 6-8 year old cows
- Comprehensive weigh service - both heifers and cows
- Management, feeding and husbandry advice
- Specific disease control advice
- Diagnostics
- Tailored mating strategies
- Reporting

We are keen to be involved at any or all of the 'measure, plan, do, review' stages.

Talk to your Totally Vets veterinarian today about growing great heifers.



Dairy farmer seminar

Totally Vets is hosting a seminar
"Growing great heifers"

Where Rongotea Tavern

When Thursday 25th March 2010
11.00am - 1.00pm
Followed by lunch

Topics include

The costs of successful heifer-rearing
Measuring successful heifer-rearing
Feeding for success
Controlling animal health issues
Mating
Totally Vets' offer to you

RSVP to Hayley at **06 323 6161** or
Julie at **06 356 5011** by Friday 19th March.

Totally Vets Deer farmer seminar

Where Dave Blenkiron's property
28 Hanlon Rd, Ashhurst

When Wednesday 3rd March 2010
2.30pm - 4.30pm

Topics include Necrobacillosis
Worms
Johnes
Ticks/fawn health
Vaccinations for deer farmers - leptos

Followed by BBQ and refreshments

RSVP to Hayley at **06 323 6161** or
Julie at **06 356 5011** by Monday 1st March.

All closantels are not created equal!

Barber's pole worm season is approaching and one option for long-acting control of this worm is to use a drench containing closantel.

There are a number of combinations in the marketplace that have closantel added.

However, not all of them contain closantel in a soluble form - solubility is necessary for good uptake into the sheep's bloodstream, which is necessary if the product is to have any persistency.

Make sure you read the label - if there is no statement regarding how long the product protects against Barber's pole worm, then the product will not give long-term protection, even if it does contain closantel.

Client interest is such that **Totally Vets** is eager to provide a day of fun and laughter on a course.

Totally Vets Golf Tournament

When When: Tuesday 16th March 2010

Where Feilding Golf Club

Registration 10.30am

Tee Off Shotgun start 11.30am

Format Ambrose with "stacked" teams

Entries restricted to Totally Vets clients and their employees and suppliers.

RSVP to Hayley at **06 323 6161** or
Julie at **06 356 5011** by Friday 12th March

A date for the Totally Vets Annual Fishing Competition has been set

Our sage augurs inform us the tides and moon will be in alignment on **Saturday 17th April**.

For those who can't take the frivolity on a golf course, or are enthusiasts for both golf and fishing, keep this date free.

Further details will follow in March.

Genesis Ultra Oral - Hi Mineral

For the control and treatment of roundworms and liver fluke in sheep.

This product has persistent activity for up to 42 days against *Haemonchus contortus* (barber's pole)

20L \$738.80 inc GST

