



Over the Fence

Greetings from Wanganui Vet Services

July 2013 • Issue 16

monthly news and views



Inside this Issue:

- >> Animal health Issues when feeding
- >> Lamb vaccine out of stock
- >> How effective is Eclipse E inj in cattle
- >> Rumevite magnesium capsules
- >> Hypocalcaemia (Milk Fever)
- >> Heifers die from Yew poisoning

Animal Health Reminders

- Sheep scanning
- Copper supplementation of either sheep or cattle
- Pre lamb drenching & Vaccinate ewes
- Dog vaccination and ram runs
- Lice treatment for sheep and cattle
- Liver fluke treatment

The drought is now a distant memory as we enjoy the regular rain and excellent grass growth. Grass has been growing at an exceptional rate for the autumn which may help in some small way to get us through the winter.

It will be an expensive winter for many - lightly conditioned stock and very little in the way of good feed to carry into the winter so no option but to buy in feed or graze stock off in other areas. Sheep should be OK but many cows could struggle with what I see out there.

As long as we have options it is not so bad, and as the glass half full people would say, these of conditions usually result in a good early spring!

Sheep scanning is now under way properly, and so far the results have been surprisingly good. Certainly the front country has not suffered too badly as a result of the drought, but the later mated sheep on our hill country may be a different story, depending on their condition.

On reflection, even with the drought, our dairy farmers have had a good season. Cow condition is still satisfactory and it is good to see everyone looking forward to a great year next year. Dairying is certainly on a roll worldwide these days, so we should ensure that we 'make hay while the sun shines' and really enjoy it.

Remember that at Wanganui Vet Services we don't just fix sick animals we also know alot about ensuring they stay well and can assist in making sure they produce well too. There is currently a nation- wide drive to improve production through a government initiative the Primary Growth Partnership. We can help if anyone wants to get involved.

ANIMAL HEALTH ISSUES WHEN FEEDING CROPS

Introduce to Crops slowly

- Sudden access can cause rumen imbalance
- Rumen microbes need time to adjust to a change in type of feed
- Can result in rumen acidosis and scouring, poorer performance and occasionally deaths
- Start by grazing crop for 1-2 hours per day building up to maximum allowance by 7-10 days
- Forage crops are highly digestible and don't contain sufficient 'effective fibre' Effective fibre necessary
 - To make animals chew

- Chewing results in an increase in saliva
- Saliva rich in bicarbonate that buffers rumen pH
- More fibre, less rumen acid, less digestive upsets, stop scouring
- Fibre also necessary to slow rumen contractions with more effective rumen fermentation and absorption of nutrients = Better growth rates
- Allow access to pasture, hay, straw or silage when putting stock on crops
- Balances diet
- Stops gorging – also reduces bloat, nitrate poisoning and other health issues
- Helps rumen microbes to adjust to feed.
- Milking cows, no more than 1/3 diet as crop
- Dry stock no more than 70-80% diet as crop

Nitrate Poisoning

When protein manufacture cannot keep up with nitrogen uptake in plants, the excess accumulates as nitrates, which are then converted to nitrites in the rumen and when consumed can cause toxicity problems to grazing animals. When animals ingest high levels of nitrates, nitrites build up in the bloodstream. Here they bind with the oxygen-carrying compound, haemoglobin, to form methaemoglobin a compound that no longer is able to carry oxygen. Simply, the animal suffers oxygen deprivation and can rapidly die.

Sudden death without signs of a struggle is the most common finding. The effects of eating toxic crops or pasture may not be evident until up to six hours after grazing. If signs are noticed they include abdominal pain, in coordination, muscle trembling, weakness, laboured breathing, blue/brown gums and collapse. Abortions often follow in surviving pregnant animals. When signs are noticed, move stock which are mobile off the affected pasture onto stubble and feed them hay. If you intend to feed crops when weather conditions favour nitrate accumulation then nitrate levels should be checked before feeding. Nitrate levels can change quite quickly so repeated monitoring of levels may be necessary.

Nitrates can build up in any situation where environmental conditions promote rapid plant growth but limit photosynthetic activity. These include sudden

temperature changes, dry periods followed by rain especially after a drought, frosts, overcast days and excessive nitrogen fertiliser use. Usually occurs in the autumn or early winter. Nitrate toxicity can occur on a range of new grasses, brassicas and some weeds including red root. Particular crops are known to accumulate nitrate more than others. These include green feed maize, oats, regrowth brassicas, barley and annual ryegrasses. Plant stems accumulate more nitrate than leaves.

Management

- Recognise environmental conditions that cause nitrate build up.
- Get suspect crops analysed before grazing.
- Introduce stock gradually to allow rumen adjustment.
- Do not put hungry animals onto suspect crops. Gorging is the biggest risk factor
- Dilute high nitrate feed with a low nitrate feed source, e.g. hay, pasture, silage before introducing the high risk feed
- Make high nitrate forages into silage. Fermentation generally reduces nitrate levels.
- Manage nitrogen applications carefully to match plant requirements, and therefore avoid excess uptake and nitrate build-up.
- Do not allow animal's access to nitrogen fertilisers, fertiliser storage areas, fertiliser spills, or grazing on recently fertilised paddocks.
- Overall nitrate poisoning is not so much due to the actual quantity eaten as to the rate at which it is consumed. It's possible that a hungry animal can ingest a lethal dose in 1 hour. Fill stock up on "safe" feed before allowing short periods of grazing the high risk feed if you have no other option but to feed it.
- Nitrate levels highest in the morning so shift stock later in the day Treatment of Nitrate Toxicity
- Seek emergency veterinary assistance. An injection of methylene blue intravenously can save affected stock if we can get to them in time.

Bloat

Can occasionally occur on crops because its highly digestible, fermentable feed.

Management

- Need period of adjustment i.e. introduce to crops slowly to allow rumen bugs to adjust
- Crops should not be 100% diet
- Prevent gorging by feeding hay, silage, straw etc before new break



Goitre

In some situations iodine (I) deficiency can occur when livestock are fed on brassica crops. This is because brassicas are naturally low in iodine and contain plant chemicals (glucosinolates) which are goitrogenic and inhibit iodine uptake. Iodine is important for growth and cell differentiation of tissues through its inclusion in thyroid hormones. Consequently, iodine deficiency has its greatest effect on the developing foetus and therefore may play an important role where pregnant livestock graze brassicas for extended periods in the final stages of pregnancy. The most marked sign of iodine

deficiency is enlarged thyroid glands (goitre), weak new-born lambs, pink hairless lambs, low birth weights and a high rate of dead lambs at birth, may be subclinical signs along with poor wool growth and lower fertility in older stock. Be aware of the iodine status of pregnant livestock grazing a brassica crop and its best advised to give iodine supplement to pregnant ewes when being grazed brassicas. Can diagnose by measuring the mean thyroid: body weight ratio on 10 lambs. >0.4gms/kg is diagnostic Can treat ewes with 1.5mls long acting iodised oil (flexidine) pre or post tup or 280mg of potassium iodide 8 and 4 weeks prior to lambing.

- Cold frosty, wet feed worse. Shift in pm.
- Control with bloat material in trough or rumensin bloat capsules.

Photosensitivity

Photosensitivity is a condition whereby non pigmented skin (white patches) becomes hypersensitive to sunlight (UV light) resulting in a severe sunburn like reaction. This hypersensitivity is caused by unknown chemicals in certain brassicas crops. It can also occur occasionally on rapidly growing spring grasses and clover hence its other name (spring eczema) Other plants such as musky storksbill, st johns wort etc can also cause it.

Rape scald

Symptoms include reddening and swelling of the skin, commonly on the ears and face and possibly udders of sheep and cattle. Affected livestock generally attempt to seek shade, rub affected areas, and may appear generally distressed. This condition is most commonly seen in lambs grazing immature or second growth rape or hybrid brassicas. The risk of rape scald can be minimised by delaying first grazing until crops have ripened (purplish/blue tinge on leaf margin), avoiding excessive nitrogen and sulphur fertilisers, and being vigilant to early signs. Some cultivars have minimal ripening requirements and are suited to situations when feed is required quickly and/or where ripening may be delayed by climatic conditions. However, under certain environmental conditions photosensitivity has been known to occur beyond the normal period of ripening. Only a few animals will be genetically predisposed to it and become affected and the best advice is to get them off the crop and on to pasture and provide shade. Occasionally other brassicas crops can cause photosensitivity

Photosensitivity from Turnips

Photosensitivity is also possible with stock grazing summer turnips and and regrowth turnips e.g. dairy cows. The cause of this condition is not well understood; for dairy cows the risk factors include: consuming large volumes of turnips (greater than 30%

of diet) and feeding on crops under environmental stress.

In lambs grazing summer turnips (including **Hunter**) this condition is rare and unpredictable but may be associated with adverse and overcast weather conditions.

This may be of particular concern to stud stock owners, where photosensitivity may cause cosmetic issues to sale animals. Again get affected stock off the crop.

Red Water (Kale Anaemia)

As the name suggests this disorder is most commonly found when animals graze kale. However, it can occur in all brassicas. It is most likely to occur in brassicas that have bolted or are flowering in spring. It may also become a problem if crops are grown in soils high in sulphur, or after sulphur fertilisers have been used.

Brassicas contain a non-protein amino acid called S-methyl cysteine sulfoxide (SMCO). During rumination SMCO is converted into a compound that can potentially damage the red blood cell membrane, allowing leakage of haemoglobin from the cell and ending up in the urine (hence the term red water).

Moderate levels of SMCO may cause loss of appetite, ill thrift, mild anaemia and digestive upsets. High levels can cause severe anaemia and red-coloured urine (red water). After an attack of poisoning, death can occur suddenly.

Follow best practice guidelines for feeding brassica crops, e.g. slow introduction, access to an alternative feed source etc. Do not graze crops that have started flowering, be vigilant if you suspect there may be a problem. Soil testing prior to sowing will indicate the levels of key nutrients, including sulphur, and assist in applying the right fertiliser for good crop growth: Ideally, limit the applications of sulphur and nitrogen.

If kale anaemia is suspected, remove animals from the crop and keep under close watch until health is regained.

Blood Poisoning

- Greater risk of blood poisoning caused by Clostridial bacteria on crops e.g. black leg.
- Clostridial bacteria live in the soil.
- More soil or plants contaminated with soil ingested when feeding crops
- Higher risk with change in diet
- Higher risk with highly digestible fermentable feed
- Highly recommend vaccinating with 5 or 10 in1. Two shots 3-4 weeks apart before introducing to crop.

HEIFERS DIE FROM YEW POISONING

Recently we experienced the worst crisis we've ever had on the Vetcare heifer grazing scheme when 19 heifers died from Yew poisoning in a 24hr period. The total line of 55 weaners were delivered from one of our new Hawkes Bay grazing blocks to their new May to May heifer grazing block at 10.00pm in the evening. Being so late the grazer concerned put the weaners in a paddock next to the house for the night, not knowing that some Yew tree trimmings from the ornamental Yew trees growing in the garden had been added to a pile of pine branches ready for burning in the paddock concerned. About 5.00pm the next day, 5/55 was found dead. John Pickering was contacted who manages Vetcare Grazing and immediately went to the farm where he discovered that Yew was the cause of death. It is very

toxic to cattle. The weaners were immediately shifted from the paddock and over the next 24hrs 14 more died. There is no anecdote so there was nothing that could be done but wait and see how many more died. The toxic principle in Yew is an alkaloid called taxine and is toxic to the heart and simply stops the heart from beating. Affected heifers started dribbling a bit, went wobbly on their legs, went down, rolled on their side and then died all within 2 minutes. There was no excitement or stress. The rest that survived are 100% healthy as there is no lasting effects when stock eat a sub lethal dose. It takes as little as 1 gram of yew per kg of heifer to kill a heifer. It goes without saying that the grazer concerned was very upset and remorseful about what happened and more or less went in to a state of shock when he discovered what was killing the heifers. The owner was also shocked but very understanding and in his words 'It could happen to anyone'. Compensation has been paid out.

LAMB VACCINE OUT OF STOCK

The Company that supplies lamb vaccine i.e. PK Antitet has notified us that they won't be able to supply vaccine this spring. This means farmers that have been protecting their lambs against tetanus and pulpy kidney by vaccinating with PK antitet at docking won't have this option this year.

The alternative is to vaccinate the pregnant ewes before lambing with a 5 in 1 vaccine that protects against pulpy kidney and tetanus as well as the added advantage of protecting against blackleg, black disease and malignant oedema, all blood poisoning diseases caused by Clostridial bacteria as well.



If the ewes are not previously vaccinated they will need two 5 in 1 vaccinations 4-6 weeks apart completed 2-4 weeks before lambing.

If the ewes have been previously vaccinated twice they will require a booster vaccination 2-4 weeks before lambing.

- Colostral immunity from ewes vaccinated in late pregnancy receive immunity via the colostrum.
- Lambs absorb this immunity in the first day of life therefore it is important they suckle as soon as possible
- Colostral immunity from vaccinated ewes usually provides protection to the lamb for up to 3 months of age. After that to provide continued protection the lambs themselves need vaccinating with a 5 in 1 vaccine.

DAIRY INDUSTRY SNIPPETS

- Fonterra's forecast milk price for 2013/14 season of \$7 with \$5 advance may be as much about using its new balance sheet strength to keep the pressure on competitors as helping farmers recover from a drought season.
- The meat sitting in port in China for 3 weeks because of an unrecognized change in paper work for yet another name change for (MAF) could easily have been milk products. At least our powders don't need to be frozen or refrigerated!
- Paper work and (re)labelling debacles have reared their heads with the lucrative infant milk formula market in China as Fonterra and other companies look to profit from this high value area. How long before we have another melamine type scare in China to destroy

confidence in our products when labelling errors (or worse) cast doubt on our integrity?

- Meanwhile the Fonterra/Sanitarium government-backed "breakfast for schools programme" has had plenty of free publicity after a couple of edgy cartoons got the public ire. Hopefully Fonterra and Sanitarium's great "investment" in our disadvantaged children will not be lost in the fracas!
- This was more popular than even Fonterra thought, being about 20% over-subscribed, after very little uptake when TAF started. It shows that farmers have started to get to grips with the various options that the new business environment presents to them.
- Dividends are expected to be lower, which has dropped the share price in recent days from the \$7.92 3-week average that became the price that around 20% of farmers will receive for selling shares into the Fonterra shareholders fund.

Let this be a reminder to all our farmer and life style clients to take all steps to prevent plant poisoning. There are many garden plants, shrubs and trees that are toxic to stock. The list is too long to add here. The golden rule is. Never throw plant or tree clippings over the garden fence or put them in a pile for burning where stock have access, even if you think you are sure that the particular plant material is not toxic, don't risk it. Over the years we have seen many many plant poisonings. It is not uncommon. To mention just two others. 10/10 bullocks that were put in the house paddock overnight ready to go to the works the next day also had access to Yew clippings that had been thrown over the garden fence and were all dead by morning. 5 in calf heifers died from Oleander poisoning, after clippings were thrown over the garden fence.



HOW EFFECTIVE IS ECLIPSE E INJECTABLE IN CATTLE?

Eclipse E is a relatively new combination drench on the market. It is often being used as a quarantine drench. It has 2 actives; eprinomectin and levamisole. Eprinomectin has excellent efficacy against Oestertagia the most important pathogenic worm in cattle and Levamisole, excellent efficacy against Cooperia the 2nd most important pathogenic worm in cattle.

A study was done in late autumn involving R1 Friesian bulls on a north Waikato intensive bull rearing and finishing farm to evaluate how effective Eclipse E is in controlling Oestertagia and Cooperia and how long effective activity lasted.

A faecal egg count evaluation was done at 11, 32 and 46 days post treatment relative to a day 0 (pre-treatment) negative control group.

The results as follows: (All bulls treated with Eclipse E at the right dose on Day 0 after faecal egg counts taken).



These results show 100% reduction in faecal eggs at day 11 and 32 after treatment with some bulls resuming low faecal egg counts by day 46 or about 6 weeks after treatment.

Further to this a larval culture was performed on the combined faecal eggs collected on day 46 and 100% of the larvae recovered were Cooperia. There was no Oestertagia present. Keeping in mind that Oestertagia the most pathogenic worm is usually the most common worm present in late autumn, winter and early spring, this study gives one a lot of confidence that Eclipse E will give at least 4 weeks protection against parasitism and probably up to 6 weeks unless the parasite challenge is quite severe.

It is interesting to note in the same study another drench that was tested with a single action active; doramectin had relatively high faecal egg counts after day 11, 32 and 46. Larval culture found that most of the larvae were resistant Cooperia.

It is not uncommon for ivomectin related ML drenches such as ivomec, doramectin and moxidectin to have resistance to Cooperia. These drenches however are usually very effective against Oestertagia. Likewise levamisole is very effective against Cooperia (resistance has never been recorded as yet) but is often not as effective against Oestertagia; therefore Eclipse E injectable is an excellent option for effective control of both of these parasites as it contains both of these actives; particularly if there is a known resistance to either Cooperia or Oestertagia or both.

26/4/12	7/05/12	28/05/12	11/06/12
DAY 0	DAY 11	DAY 32	DAY 46
Faecal eggs/ gram	Faecal eggs/ gram	Faecal eggs/ gram	Faecal eggs/ gram
200	0	0	0
450	0	0	0
300	0	0	50
300	0	0	100
200	0	0	0
250	0	0	50
200	0	0	0
150	0	0	0
150	0	0	100
300	0	0	50





GRASS STAGGERS (hypomagnesaemia)

Grass Staggers is a metabolic disease that can strike both adult lactating beef and dairy cows. Grass Staggers is caused by a deficiency in magnesium (its technical name is hypomagnesaemia).

Unlike calcium, body stores of magnesium cannot be mobilised in times of high demand or in response to low blood levels. This means that cattle are essentially dependent on the daily intake of magnesium being sufficient to meet metabolic requirements.

Grass Staggers can be rapidly fatal. Initial signs are restlessness, increased alertness, and suddenly running for no apparent reason. When disturbed, cows may bellow and walk with an unusual gait. These signs can rapidly lead to uncoordinated staggers and convulsions, often leading to death unless immediate treatment is provided.

Many factors can contribute to Grass Staggers. During lactation the magnesium demands of the cow are sharply increased, as magnesium is an integral component in each litre of milk. Cows over 4 years are most at risk as their milk production is higher than younger cows. Grass Staggers most often occurs when lactating cows are grazing lush rapidly growing pasture with low clover content. The risk is further increased if nitrogen or potash fertilisers have been used on the pasture. Cases are frequently preceded by a period of reduced feed intake; perhaps caused by inclement weather, yarding or transport.

Preventing Grass Staggers requires a combination of management actions. Key items are summarised below;

Managing the Diet

Beware of Nitrogen and/or Potassium fertilised lush, fast growing shorter pasture with low clover and fibre content. If this is the primary feed for lactating cows, be very aware of the risk and always ensure a magnesium supplement is provided. Also consider adding an alternative feed source containing a higher proportion of magnesium to the diet during risk periods.

Managing the Cows

Avoid transporting and minimise yarding time of cows in late pregnancy and during early lactation. Feed cows adequately to minimise loss of body condition after calving. Ideally provide shelter if inclement weather is likely.

Magnesium supplementation

There are several ways to provide additional magnesium to cows. It is important that supplementation occurs at least two weeks prior to the start of the "risk period". Ideally 3-4 weeks before calving especially with high producing dairy cows which will help prevent milk fever as well.

Some supplementation methods will not be possible or practical for all farms.

Magnesium can be;

1. Top-dressed onto pasture (magnesium oxide)
2. Added to silage and other feeds (typically magnesium oxide, or other mag salts)
3. Added to water troughs (mag sulphate)
4. Drenched to cows individually (magnesium oxide)
5. Delivered into the rumen via a slow release intra-ruminal capsule (Rumevite Magnesium Capsules)

Supplementation is just that! Metabolic disease can still occur in herds receiving magnesium supplementation in those seasons where there is a high risk (due to the factors discussed above). Even in high challenge circumstances, however, supplementation will substantially reduce the severity of clinical disease and limit mortality as well as increase milk production.



HYPOCALCAEMIA (*milk fever*)

- Caused by low calcium concentration in the blood
- Clinical signs – muscle weakness, recumbency (“downer cow”), depression
- Occurs around time of calving – as milk a “drain” on calcium reserves
- 75% cases within 24 hours of calving; majority within 48 hours. Can occur several days before to 10 days after calving.
- Mostly seen in high producing dairy cows (only occasionally seen in beef cows)
- Mostly in cows > 4yrs
- Ca stored in bones, mobilisation of this store essential to maintain adequate Ca in blood
- Essential not to feed diets high in Ca prior to calving (as need cow to mobilise bone stores)
- Calcium level in blood is maintained by three hormones (parathyroid hormone, vitamin D and calcitonin)
- Reductions in blood Mg may result in greatly impaired capacity to mobilise Ca so maintaining Mg levels around the time of calving essential part of preventing milk fever.

Treat by giving calcium solution by intravenous and or sub cutaneous injection. Sometimes a combination of calcium and magnesium is best if milk fever is complicated by low magnesium levels as low blood Ca levels increases susceptibility to hypomagnesaemia.



**SEEK VET ADVICE
ON TREATMENT.**

RUMEVITE MAGNESIUM CAPSULES

For some farmers, the best option for magnesium supplementation will be Rumevite® Magnesium Capsules. These are new on the market.

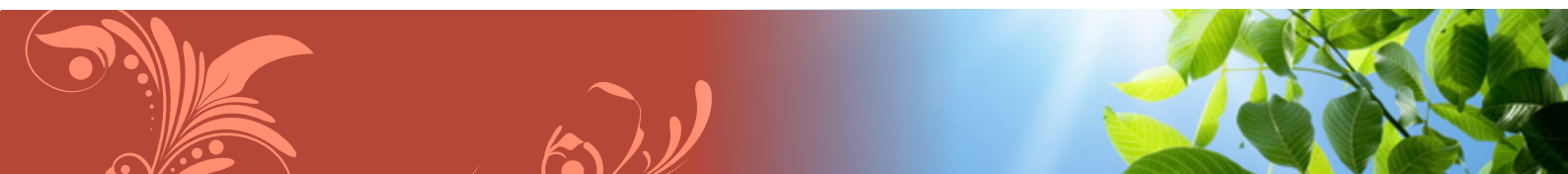
This is especially the case in situations where:

- dusting the pasture or hay with magnesium oxide is difficult or impossible
- water reticulation infrastructure does not allow water trough treatment,
- access to free water means cows will not drink water from treated troughs
- its ideal for beef cows when other supplementation is impossible

Rumevite Magnesium Capsules are made from a specific magnesium alloy. The specially designed hinge closes into a cylindrical bolus for administration into the rumen. Once in the rumen the capsules open to a flat shape with two semi-cylindrical magnesium portions adhered, minimising likelihood of regurgitation.

The rubber hinge of the Capsules also acts as a conductor. The interaction between this conducting rubber (cathode) and the magnesium alloy (anodes) drives the dissolution of magnesium from the Capsule. The magnesium released from the Capsule is fully available for absorption by the cow. Also important is that magnesium (in this Mg^{++} form) is only absorbed in the rumen of cows. In contrast, magnesium in feed and other supplements must first be extracted and solubilised, before it is available so only a relatively low proportion of magnesium from these sources is absorbed before passing from the rumen.

Rumevite Magnesium Capsules release magnesium at a constant rate over a 9 – 12 week period. They must be administered at least a week ahead of when they are required, to allow time for the electrolytic reaction to get underway. The capsules provide around 2 grams of available magnesium per day. This compares to the daily available magnesium requirement for a beef cow producing 7L of milk of 2.5g. These figures do not take into account antagonistic interference in the rumen by minerals such as potassium. Magnesium Capsules should be considered a supplement to augment dietary magnesium intake, and can be thought of as insurance to minimise the seasonal impact of Grass Staggers.



What's Up



God Bless the Irish

A coach load of paddies on a mystery tour decided to run a sweepstake to guess where they were going...

...the driver won £52!

Paddys in the bathroom and Murphy shouts to him, "Did you find the shampoo?"

Paddy says, "Oi did, but it's for dry hair and I've just wet mine!"



VETCARE TRAINING 2013

Term two is coming to an end with only a couple of weeks left before a well earned break. This term the students have been very busy with their studies with units being taught in Diagnostic Sampling, Care of Rabbits & Rodents, Animal First Aid as well as Admit & Discharge of the Animal Patient, to name a few. Work placements have been ticking over well with the students enjoying diverse experiences from small animal surgery cases through to Riding for Disabled. Term three sees the students starting their surgical rotations so even more busy times ahead.



ANOTHER
LUCKY MERIAL
ANCARE
Winner!



Congratulations to the Mabbot family who won the Frontline Plus gardening package.

WELL DONE!

Steve Barrow who was the lucky recipient to win the Kiwi Sizzler Smoker.



WANGANUI VETERINARY SERVICES
35 Somme Parade, Wanganui 4500
Telephone: 06 349 0155 A/H: 06 349 0486
www.wgvets.co.nz

