Animal Health

Sheep and Beef

Taking good care of your investment
Best practice for keeping your animals healthy

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“Ravensdown is committed to the sustainable use of drenches to avoid drench resistance.”
Getting the most from a parasite plan

No matter how well fed your stock are, worms can eat into an animal’s production - and your farm’s profitability.

The use of drenches has greatly reduced the impact of parasites, but with increasing levels of drench resistance, a multi-pronged plan of attack is necessary so you can maximise your investment in a good drench. A well planned parasite management programme is essential to minimise the impact of worms on animal performance and slow the development of drench-resistant worms.

Develop your own parasite management plan

1. Provide good nutrition – well-fed animals will better manage worm infections. Higher pasture cover reduces worm intakes allowing for higher growth rates to be achieved. Well-conditioned animals require less drenching, saving costs and reducing selection for drench-resistant parasites.

2. Reduce worm challenge – cross graze with sheep and cattle, use adult stock to clean up pastures grazed by young stock and sow crops and new grasses.

3. Use the correct product – use the correct drench active for the parasite you want to control e.g. moxidectin for barber’s pole, praziquantel for tapeworm, clorsulon for liver fluke in cattle, levamisole for Cooperia in cattle.

4. Use effective drenches – use correct dose rates, calibrate the drench gun, dose to the heaviest weight.

5. Slow the development of drench resistance – use combination drenches, drench at 28 day intervals, drench only when necessary, avoid using long-acting products, leave part of the mob untreated, quarantine drench new stock onto farm, avoid routine drenching of adult animals.

6. Monitor drench performance – complete regular post-drench faecal egg counts to check the drench is working. Use faecal egg count reduction tests to confirm the drench status of your farm.

If you want help to develop a sustainable worm management plan talk to your Ravensdown Animal Health Technical Manager.

How do triple drenches make a difference?

If you’re serious about slowing the development of drench resistant parasites, then your best bet is to use triple and double combinations such as Combo Low Dose and Trio Sheep in your parasite management programme. Combining the actions of 2-3 drench actives in one treatment lessens the chance for worms to survive, including those that are already resistant to 1 or 2 of the actives. Effective single actives will still have a place, but should only be used for one-off treatments or to target specific parasites e.g. moxidectin for barber’s pole control.

<table>
<thead>
<tr>
<th>TWO DRENCH ACTIVES</th>
<th>THREE DRENCH ACTIVES</th>
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<tbody>
<tr>
<td>1 in a million</td>
<td>1 in a billion</td>
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</table>

CHANCES OF A WORM SURVIVING?
We're committed to helping you get the most from your soils, pasture and animals. Our trained and trusted people use smart tools and provide sound advice on animal health products to help you get the most out of your investment.
Boosting trace elements

There are eighteen trace elements (also known as micro elements) needed by animals in tiny amounts that are essential for life. In New Zealand pasture-based systems, we need to watch out for deficiencies in cobalt, copper, iodine, and selenium.

How do we know when there is a problem?
Research specific to New Zealand has been carried out over many years so we know the signs of deficiency, the dietary requirements, the reference ranges and effective treatments for these trace elements.

How do we diagnose a deficiency? Animal testing is the most conclusive way to diagnose a deficiency. However, animal symptoms, farm history, soil type and farm location can also identify the probability that a mineral deficiency will be present. Additional testing of herbage and supplementary feeds can help provide valuable information in diagnosing a trace element deficiency.

Timing is important as trace element uptake by pasture will vary at different times of the year. Generally actively-growing grass in the spring gives the best indication of what is available to the animal.

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>ANIMAL HEALTH</th>
<th>SUPPLEMENTATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cobalt (Co)</td>
<td>Critically important for vitamin B12 production. Loss of appetite and poor growth.</td>
<td>Cobalt sulphate in spring fertiliser application, Stock Cobalt by drench, water, feed medication and Lift B12 injection.</td>
</tr>
<tr>
<td>Copper (Cu)</td>
<td>Ill-thrift, sway back, bone problems and poor reproduction.</td>
<td>Copper sulphate in autumn fertiliser application, Stock Copper by drench, water, feed medication and foliar (plant leaf) application.</td>
</tr>
<tr>
<td>Iodine (I)</td>
<td>Goitre (enlarged thyroid gland), still births, small weak offspring.</td>
<td>Stock iodine by drench, water, feed medication and foliar application. Injectable iodine is also used.</td>
</tr>
<tr>
<td>Selenium (Se)</td>
<td>Ill-thrift, white muscle disease, reduced production and fertility.</td>
<td>Selprill Double in fertiliser (lasts for 12 months), Stock Selenium by drench, water and feed medication and Lift B12 Selenised injection.</td>
</tr>
</tbody>
</table>

Vita-Mineral Drench will deliver iodine and selenium to prevent these deficiencies, while the vitamins will boost general health to further assist with improving performance especially at mating time.

For help with assessing testing and supplementation options for your farm, talk to your Animal Health Technical Manager.
Having good information is critical when determining where to invest on-farm. Sound, scientific interpretation of collected data can lead to increased productivity for your farm.

**Faecal Testing**

**Faecal Egg Count (FEC)** - determine animal worm burdens, the need to drench or check how well a drench has worked. Composite (Mob) or Individual (FEC) options available.

**Larval Culture** - identify which roundworm species are causing problems in stock.

**Liver Fluke** - fluke egg count to confirm and/or monitor liver fluke infections in stock.

**Lungworm** - larval extraction to monitor stock for lungworm, especially cattle and deer.

**Drench Resistance Testing**

**Faecal Egg Count Reduction Testing or FECRT** - a comprehensive test farmers can use to assess the effectiveness of drenches on their farm. It is recommended a FECRT is undertaken every 2-5 years, or when there is suspicion a drench treatment has been ineffective, or when there is a positive drench check. Testing is available for one specific drench or a range of drench products. FECRT includes all FEC, larval cultures, equipment and reporting.

**Facial Eczema Testing**

**Pasture Spore Counting** - determine the FE risk by measuring the number of spores on pastures.

**Faecal Spore Counting** - determine the FE risk by measuring the number of spores passing through animals. Faecal spore counting avoids the variability seen with pasture spore counting.

**Herbage Testing** - determine if the pasture can provide animals with the required amounts of dietary minerals, including important trace elements.

**Feed Quality Testing** - use the nutritional value of pasture and supplementary feeds to assist in determining nutritional requirements and feed budgeting.

FOR MORE INFORMATION TALK TO US ABOUT RAVENSDOWN TESTING SERVICES – REFER TO PAGE 25 CALL OUR CUSTOMER CENTRE ON 0800 100 123
Strike against fly & lice

Changing environmental conditions and more intensive farming has meant a real surge in fly strike. The best form of control is prevention – removing the food source and attractants through good management practices such as shearing, crutching and an effective worm drench program. Louse infestation continues to be a problem in the sheep industry leading to poor quality wool and pelt defects. Dipping is no longer compulsory, but it is still a regular feature of sheep farming and requires careful consideration.

**Best practice for prevention of flies & lice**

**Plunge, Shower and Jetting Applications**

1. **Plunge, Shower and Jetting Applications**
   - Always read the product label before using, the label contains vital information on the use, storage, disposal and safety of the product.
   - Understand how the chemical works. Fly only or fly and lice control? Will it have immediate knock down or take time to be effective? Will treatment be short acting or persistent?
   - Application is the key, getting the correct chemical at the correct concentration, correctly applied for optimum results.
   - Follow guidelines for wool length. If wool is too long then the treatment may fail.
   - Dip sheep 3-6 weeks after shearing to achieve optimum protection. This allows time for cuts to heal and wool to grow, resulting in effective chemical application.
   - Check animals immediately after treatment to confirm full saturation has been achieved. Saturate dipping is the gold-standard fly and lice protection. The more chemical that gets to the skin surface, the more effective the treatment.
   - Jetting devices are primarily used for the application of dip for fly control. The success and length of protection is relative to the amount of dipwash applied to skin level.
   - For maximum fly control, use Saturate Gold dip concentrate for up to 12 weeks prevention of flystrike. Saturate Gold is Ravensdown’s premier, unique, non-stripping fly and lice combination dip concentrate. Saturate Classic dip concentrate can also be used to control fly and lice. NOTE: Saturate Gold and Saturate Classic are Insect Growth Regulators, they will not control live strike.
   - Apply chemical at the best time, which is immediately off-shears. The outpour of grease and lanolin immediately after shearing is critical to ensuring the chemical is moved around the body of the animal.
   - Apply chemical correctly to achieve an effective treatment. Pour-on products should be applied from the top of the head to the tail.
   - Fleeceguard Pour On is our unique combination fly and lice product. Fleeceguard Pour On is water based, the actives Diflubenzuron and Deltamethrin combine to give rapid knockdown of lice and persistent control for 5 months. Fleeceguard Pour On will also prevent flystrike for up to 14 weeks. Whatever your preferred method is for lice and fly control, contact your Ravensdown Animal Health Technical Manager for further product information.
“The more effective you are at getting your dip chemical to penetrate to skin level, the better it works.”
Seasonal activity on a sheep and beef farm

**Spring**

**SHEEP**

- **Herbage testing**
- **Pre lamb drench:** Trio Sheep, Lift B, Vita-Mineral
- **Tailing/docking:** Flysafe Spray On, Fleeceguard, Trio Sheep, Lift B
- **Replacement animal parasite control:** Combo Low Dose, Trio Sheep, Abamectin

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**BEEF**

- **Precalving:** Abamectin Pour On, Abamectin Injection, Moximax Pour On, Magnesium, Lift B, Noromectin Plus Injection
- **Drench R1’s & R2’s:** Abamectin Pour On, Abamectin Injection, Combo Low Dose, Noromectin Plus Injection
### Summer

**SHEEP**
- **Fly and lice:** Saturate Gold/Classic, Fleeceguard, Flysafe
- **Barber’s Pole (NI):** Moximax Sheep
- **Lamb weaning:** Lift B₁₂, Combo Plus, Tape, Abamectin Plus Tape, Combo Sheep, Trio Sheep
- **Sheep facial eczema prevention:** Zinc Oxide Plus, Sporeguard
- **Treatment of footrot:** Zinc Sulphate Mono/Hepta

**BEEF**
- **Cattle facial eczema prevention:** Sporeguard, Zinc Oxide Plus

### Autumn

**SHEEP**
- **Herbage/feed quality testing**
- **Pre tup management:** Trio Sheep, Lift B₁₂, Stock Iodine, Vita Mineral, FEC testing
- **Fly and lice prevention:** Fleeceguard, Flysafe, Saturate Gold/Classic
- **Barber’s Pole (NI only):** Moximax Sheep
- **Replacement animal parasite control:** Combo Low Dose, Trio Sheep, Moximax Sheep
- **Sheep facial eczema prevention:** Zinc Oxide Plus, Sporeguard
- **Treatment of footrot:** Zinc Sulphate Mono/Hepta

**BEEF**
- **Drenching and lice control:** Abamectin Pour On, Moximax Pour On

### Winter

**SHEEP**
- **Ewe scanning (pregnancy test):** Stock Iodine, Lift B₁₂, Vita-Mineral, monitor/test supplementary feed
- **Sheep drench:** Trio Sheep
- **Pre lamb shear or crutch:** Saturate Classic, Fleeceguard
- **Pre lamb ewe drenching:** Trio Sheep, Vita Mineral

**BEEF**
- **Cattle facial eczema prevention:** Sporeguard, Zinc Oxide Plus
Here to help

You want what is best for your livestock yet sometimes nature seems to have other ideas. Keeping on top of it all can seem overwhelming, but assistance is at hand. Call your Animal Health Technical Manager or Agri Manager.

Julie Wagner  BVSc (Dist)
Animal Health Veterinarian
Product Manager
Phone: 021 900 339
Email: julie.wagner@ravensdown.co.nz
Julie has over 30 years’ experience in agriculture primarily as a rural veterinarian focusing on production animals and more recently in the commercial veterinary industry.

Ian Jenkins
Animal Health Technical Manager
Upper North Island
Phone: 021 900 752
Email: ian.jenkins@ravensdown.co.nz
Ian has 20 years experience in agriculture, including time as a dairy and beef farmer, crop and seed field technician, animal feeds advisor, and Ravensdown Agri Manager.
He enjoys working with farmers to maximise farm operational profit through tailored nutrition and animal health advice and products.

Dave McIntyre  BAgSc
Animal Health Technical Manager
Western North Island
Phone: 021 193 0278
Email: david.mcintyre@ravensdown.co.nz
Dave joined Ravensdown in 2013 as an Agri Manager. His experience in dairy and sheep and beef systems has given him a broad oversight of the agricultural industry and the differing needs of herd health.

Paul McKee  BSc (Tech)
Animal Health Technical Manager
Eastern North Island
Phone: 021 900 521
Email: paul.mckee@ravensdown.co.nz
Paul has over 25 years’ experience in animal health, including ruminant parasite research programs for drench resistance and animal immunity at AgResearch, implementation and management of disease surveillance and eradication programmes for bovine tuberculosis and other exotic diseases/pests with AgriQuality.

Brent Chamberlain
Animal Health Technical Manager
Central South Island
Phone: 021 900 354
Email: brent.chamberlain@ravensdown.co.nz
Brent has over 25 years’ experience in agriculture, including 22 years in a variety of roles in animal health in the South Island. Brent has considerable knowledge in external and internal parasite management, animal health planning and product development trials, as well as numerous farmer and industry contacts.

Graham Payne
Animal Health Technical Manager
Upper South Island
Phone: 021 900 520
Email: graham.payne@ravensdown.co.nz
Graham has over 25 years experience in the New Zealand agricultural sector. His early experience began in farm merchandise, from there progressing to training, service, brand management, R & D and product management for a major animal health organisation.

George Williams  Dip. Wool
Animal Health Technical Manager
Lower South Island
Phone: 021 900 645
Email: george.williams@ravensdown.co.nz
George has over 25 years’ experience in agriculture starting in the wool industry and of late working for a veterinary clinic. He comes from a sheep and beef farming background.
Ordering is easy

Order online at My Ravensdown or call our Customer Centre on 0800 100 123.

Then… Pick up from your local Ravensdown store
- Some products are stocked at our stores
- Next day delivery to store for other products for orders placed by 1pm

or… Get your order delivered
- On-farm delivery within 3-5 working days
- Customer blends may take up to 10-15 working days to be delivered.

Worm control
- Sheep drench
- Cattle drench

Fly & lice control
- Dip concentrate
- Pour-on
- Spray-on

Supplements
- Magnesium
- Trace elements
- Vitamins
Worm control – drenches

**Moximax® Pour On**

Long lasting parasite control for cattle and deer

- Endectocide (ML) pour on containing moxidectin
- Effective against all moxidectin-susceptible round worms (including inhibited Ostertagia larvae) and lungworm in cattle
- Effective against all moxidectin-susceptible round worms, including lungworm in deer
- In cattle prevents reinfection of Dictyocaulus viviparous (lungworm), Oesophagostomum radiatum, and Bunostomum phlebotomum for 42 days, Ostertagia ostertagi for 35 days, and Haemonchus spp and Trichostrongylus axei for 28 days
- In deer prevents reinfection of Dictyocaulus ekeri (viviparous), Ostertagia-like spp, Oesophagostomum venulosum and Chabertia ovina for 42 days

**ACTIVE INGREDIENT:** 5g/L moxidectin

**DOSE RATE:** 1ml/10kg live-weight

**WITHHOLDING PERIODS:**
- Meat: nil; Milk: nil

**PACK SIZES:** 5L backpack & 20L drum

Registered pursuant to the ACVM Act 1997, No A9445.

**RAINTAST:** The efficacy of MOXIDECTIN POUR-ON is not adversely affected if applied when the hide is wet, or if rain occurs shortly after the application. However treatment of animals under these circumstances is not recommended practice.

**Abamectin™ Pour On**

Low dose internal and external parasite control

- Endectocide (ML) pour on anthelmintic containing abamectin
- Low dose formulation at 1ml/20kg live-weight
- Effective against all abamectin-susceptible roundworms (including inhibited Ostertagia larvae) and lungworm
- Highly effective against external parasites (biting and sucking lice)

**ACTIVE INGREDIENT:** 10g/L abamectin

**DOSE RATE:** 1ml/200g live-weight.

**WITHHOLDING PERIODS:**
- Meat: 35 days; Milk: nil

**PACK SIZES:** 5L backpack & 20L drum

Registered pursuant to the ACVM Act 1997, No A110784.

**Combo™ Low Dose**

Registered combination for sheep and cattle

- Mineralised double combination (white and clear) oral drench
- Effective against all roundworms (including inhibited Ostertagia larvae and strains that are resistant to either the benzimidazole family or levamisole), lungworm, tapeworm and adult liver fluke
- Ideal for the treatment of Cooperia in young cattle

**ACTIVE INGREDIENTS:** 45.3g/L azabthiosemicarbazone; 80g/L levamisole; 0.9g/L selenium; 0.2g/L cobalt; 2g/L copper; 0.9g/L iodine; 0.6g/L/L zinc

**DOSE RATE:** 1ml/10kg live-weight.

**WITHHOLDING PERIODS:**
- Meat: 10 days; Milk: nil

**PACK SIZES:** 5L backpack & 20L drum

Registered pursuant to the ACVM Act 1997, No A9445.

**Abamectin™ Injection**

Registered for sheep and cattle

- Injectable endectocide (ML) anthelmintic with the potent active ingredient abamectin
- Effective against all abamectin-susceptible roundworms (including inhibited Ostertagia larvae) and lungworm
- Effective against sucking lice on cattle
- In cattle: up to 21 days persistent activity against Dictyocaulus viviparous; 14 days against Ostertagia spp, Cooperia spp (ML susceptible) and Trichostrongylus axei; and 7 days against Oesophagostomum radiatum
- In sheep: up to 21 days persistent activity against D. viviparous (lungworm), Cooperia spp, Ostertagia spp, Haemonchus spp, and Oesophagostomum radiatum; 14 days against Ostertagia spp (including inhibited immatures), and 7 days against ML-susceptible Cooperia spp

**ACTIVE INGREDIENT:** 10g/L abamectin

**DOSE RATE:** 1ml/500g live-weight

**WITHHOLDING PERIODS:**
- Cattle: Meat (49 days); Milk (49 days)
- Sheep: Meat (28 days); Milk (35 days)

**PACK SIZE:** 500ml injection pack

Registered pursuant to the ACVM Act 1997, No A9446.

**Noromectin® Plus Injection**

Controls liver fluke, roundworms and lice

- Injectable combination anthelmintic containing ivermectin and clorsulon
- Effective against all ivermectin-susceptible roundworms and lungworm, as well as sucking lice and mites
- Clorsulon is specifically effective against adult liver fluke
- Up to 21 days persistent activity against Dictyocaulus viviparous and Oesophagostomum radiatum; 14 days against Ostertagia spp (including inhibited immatures), and 7 days against ML-susceptible Cooperia spp

**ACTIVE INGREDIENTS:** 10g/L ivermectin (endectocide); 100g/L clorsulon (specific flukicide)

**DOSE RATE:** 1ml/100g live-weight

**WITHHOLDING PERIODS:**
- Meat: 28 days; Milk: 14 days

**PACK SIZE:** 500ml injection pack

Registered pursuant to the ACVM Act 1997, No A9938.
Barber’s Pole protection

- Mineralised moxidectin oral drench
- Effective against adult and immature roundworms (including strains resistant to benzimidazoles and levamisole) and lungworm
- 28 days persistent activity against *Haemonchus contortus* (Barber’s Pole)
- 21 days persistent activity against *Ostertagia*

Use combinations to slow resistance

- Mineralised double combination (white and clear) oral drench
- Effective against all adult and immature roundworms (including strains that are resistant to either the benzimidazole family or levamisole), lungworm, tapeworm and adult liver fluke

The preferred choice for lambs from docking to weaning

- Mineralised double combination (white and clear) oral drench
- Also contains praziquantel for specific tapeworm control
- Effective against all adult and immature roundworms (including strains that are resistant to either the benzimidazole family or levamisole), lungworm, tapeworm and adult liver fluke

Control roundworms and tapeworms in one dose

- Mineralised endectocide (ML) oral drench containing the highly potent abamectin
- Also contains praziquantel for specific tapeworm control
- Effective against all abamectin-susceptible adult and immature roundworms (including benzimidazole and levamisole resistant strains), lungworm and tapeworm

Abamectin™ Plus Tape

- 1g/L abamectin; 18.8g/L praziquantel; 0.5g/L selenium; 0.2g/L cobalt; 2.1g/L copper; 1g/L iodine; 0.6g/L zinc
- DOSE RATE: 1ml/5kg live-weight
- WITHHOLDING PERIODS: Meat: 14 days; Milk: 35 days
- PACK SIZE: 20L drum
- Registered pursuant to the ACVM Act 1997, No A9448.
Fly & lice control

Fleeceguard®
Combination Pour On lice and fly control
- Unique water-based combination SP/IGR pour on for use off shears and up to 6 weeks wool
- Rapid knockdown of lice and sustained control (including SP-resistant lice)
- Prevention of flystrike for up to 14 weeks
- Not a treatment for live flystrike

ACTIVE INGREDIENTS: 20 g/L diflubenzuron (IGR) and 10 g/L deltamethrin (SP)
DOSE RATE: Use a standard drench gun with a T-bar nozzle. For more information see the product label. Lice: 18 – 39ml depending on live-weight. Flystrike: 1ml for docking, 33–51ml for body and crutch strike
WITHHOLDING PERIODS:
Meat: 7 days; Milk: 35 days; Wool: 2 months
PACK SIZE: 5L backpack & 20L drum
Registered pursuant to the ACVM Act 1997, No 10577.

Saturate® Gold
The only combination IGR dip concentrate for fly and lice control
- Unique non-stripping combination IGR saturation dip concentrate
- Prevention of flystrike for up to 12 weeks via saturation dipping or jetting (including triflumuron and diflubenzuron resistant fly strains)
- Control of lice via saturation dipping (optimum time for treatment is 14–35 days post-shearing)
- Not a treatment for live flystrike

ACTIVE INGREDIENTS: 100g/L diflubenzuron and 250g/L cyromazine (both IGR)
DOSE RATE: Apply by jetting or saturation dipping (as above), ensuring the sheep are fully wet
Lice: Dilute 2L Saturate® Gold per 1,000 litres of dipwash
Flystrike: Dilute 4L Saturate® Gold per 1,000 litres of dipwash
WITHHOLDING PERIODS:
Meat: 10 days; Milk: 35 days; Wool: 2 months
PACK SIZE: 10L drum
Registered pursuant to the ACVM Act 1997, No A10950.

Saturate® Classic
IGR dip concentrate for lice and fly control
- Non-stripping IGR saturation dip concentrate
- Control of lice via saturation dipping (optimum time for treatment is 14–35 days post-shearing)
- Prevention of flystrike for up to 12 weeks via jetting or saturation dipping
- Not a treatment for live flystrike

ACTIVE INGREDIENT: 250g/L diflubenzuron
DOSE RATE: Apply by jetting or saturation dipping (as above), ensuring the sheep are fully wet
Lice: 14–35 days’ wool, dilute 600ml Saturate® Classic per 1,000 litres of dipwash. >35 days’ wool: dilute 1.5L Saturate® Classic per 1,000 litres of dipwash
Flystrike: Jetting (all sheep) and saturation (lambs long-term control), dilute 2.5L Saturate® Classic per 1,000 litres of dipwash. Saturation: (lambs medium-term control and all other classes), dilute 1.5L Saturate® Classic per 1,000 litres of dipwash
WITHHOLDING PERIODS:
Meat: 7 days; Milk: 35 days; Wool: 2 months
PACK SIZE: 10L drum
Registered pursuant to the ACVM Act 1997, No A10906. Saturate® is a registered trademark.

Flysafe® Liquid
Up to 12 weeks protection against flystrike
- Non-stripping saturation dip (for jetting, plunge or shower)
- For up to 12 week’s protection against blowfly strike caused by common strike flies such as the Australian blowfly (Lucilia cuprina), including organophosphate resistant strains

ACTIVE INGREDIENT: 500g/L cyromazine
DOSE RATE: 12 weeks protection: dilute 2ml Flysafe® Liquid per litre of water, i.e. 2L per 1000L of dipwash
6 weeks protection: dilute 1ml Flysafe® Liquid per litre of water, i.e. 1L per 1000L of dipwash
Apply by jetting or saturation dipping, ensuring the sheep is fully wet
WITHHOLDING PERIODS:
Meat: 7 days; Milk: 35 days; Wool: 2 months
PACK SIZE: 5L drum
Registered pursuant to the ACVM Act 1997, No A10486.

Flysafe® Spray-On
Flystrike prevention as a convenient spray-on
- Ready to use spray-on for the protection of commonly struck areas of sheep
- For up to six week’s protection against blowfly strike caused by common blowflies including the Australian blowfly (Lucilia cuprina), including organophosphate resistant strains

ACTIVE INGREDIENT: 60g/L cyromazine
DOSE RATE: Docking: 5–10ml over the crutch, ensuring sufficient product is applied to the area to be protected
For preventing poll strike: At least 5ml Flysafe® Spray-On around the poll or horns
For the protection of all commonly struck areas: 15–70ml depending on live weight. Use a standard drench gun with a spray-on nozzle. For more information see the product label
WITHHOLDING PERIODS:
Meat: 7 days; Milk: 35 days; Wool: 2 months
PACK SIZE: 10L drum with a draw-off tube for administration without decanting into a backpack
Registered pursuant to the ACVM Act 1997, No A10481. Flysafe® is a registered trademark.
### Applicator guns

Designed to work with Ravensdown products. Spare needles and backpacks are available on request by calling 0800 100 123.

<table>
<thead>
<tr>
<th>15ml multi-use gun</th>
<th>60ml multi-use gun</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Comes with four nozzles: oral drenching (100mm), pour on, spray on and T-bar</td>
<td>• Comes with oral drenching (150mm) and pour on nozzles</td>
</tr>
<tr>
<td>• 90mm drench nozzle available on request</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>18ml Fleeceguard® applicator</th>
<th>Injection gun</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Dedicated Fleeceguard gun and T-bar nozzle with an improved spring for easier use</td>
<td>• Comes with two needles</td>
</tr>
<tr>
<td></td>
<td>• 2ml, 5ml and 10ml options</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>30ml multi-use gun</th>
<th>Drench hook</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Comes with oral drenching (100mm) and pour on nozzles</td>
<td>• To connect to a standard drench gun for easy oral drenching of larger cattle</td>
</tr>
</tbody>
</table>
Magnesium and other minerals

**Magnesium Oxide Fine**

Minimum 90% MgO
- High-quality 200-mesh dusting-grade magnesium oxide (MgO)
- Suitable for pasture dusting, pasture spraying or addition to supplementary feed
- Can also be used for oral drenching

**ACTIVE INGREDIENT**: 54% elemental magnesium (90% magnesium oxide)

**DOSE RATE**:
- Cattle: 30-70g per cow per day;
- Sheep: 6-8g per ewe per day

**PACK SIZE**: 25kg lined polypropylene bag

**Magnesium Oxide Drenching**

Stable in suspension for easy drenching
- High-quality 325-mesh drenching-grade magnesium oxide (MgO) for daily oral drenching of dairy cows in the cow shed
- Uniform particle size means that it readily stays in suspension
- Can be used for pasture dusting or spraying, or addition to supplementary feed at higher rates

**ACTIVE INGREDIENT**: 54% elemental magnesium (90% magnesium oxide)

**DOSE RATE**:
- Cattle: 20-30g per cow per day depending on magnesium requirements and method of administration

**PACK SIZE**: 20kg lined polypropylene bag

**Magnesium Chloride Natural**

Water soluble magnesium supplement
- High-quality natural (unbleached) magnesium chloride (MgCl₂·6H₂O) that is highly soluble in water
- Suitable for addition to the drinking water or supplementary feed
- May contain a very small amount of harmless insoluble organic residue

**ACTIVE INGREDIENT**: 12% elemental magnesium

**DOSE RATE**:
- Cattle: 60-100g per cow per day; Sheep: 8-12g per ewe per day

**Actual rate depends on magnesium requirements and method of administration**

**PACK SIZE**: 25kg lined polypropylene bag

**Magnesium Sulphate**

Water soluble magnesium supplement
- High-quality magnesium sulphate (Epsom Salts or MgSO₄·7H₂O)
- Suitable for addition to the drinking water or supplementary feed, or for daily oral drenching

**ACTIVE INGREDIENT**: 10% elemental magnesium

**DOSE RATE**:
- Cattle: 60-120g per cow per day; Sheep: 10-15g per ewe per day

**Actual rate depends on magnesium requirements and method of administration**

**PACK SIZE**: 25kg lined polypropylene bag
**Magnesium and other minerals**

**Lime Flour**

**Calcium supplement**
- Ultra-fine high-quality calcium supplement (CaCO₃)
- Use for dairy cows after calving to aid in the prevention of milk fever
- Can be used by pasture dusting, daily oral drenching or addition to supplementary feed
- Suitable as a calcium supplement for adding to low calcium-feeds such as maize silage
- To avoid the risk of inducing milk fever, do not administer during the last 1-2 months of pregnancy unless on veterinary advice

**Active Ingredients:** 39% elemental calcium

**Dose Rate:**
- Cattle: 50-300g per cow per day depending on calcium requirements and method of administration
- Sheep: 1-3g per adult sheep per day

**Pack Size:** 25kg lined polypropylene bag (also available in 1 tonne bulk bag from selected stores)

**Salt (sodium chloride)**

**Sodium supplement**
- Coarse grade 22 salt (NaCl) suitable for oral drenching, licks, addition to drinking water or addition to supplementary feed
- Aids in the prevention and treatment of salt (sodium) deficiency
- Fine salt also available from some stores

**Active Ingredients:** 39% elemental sodium

**Dose Rate:**
- Cattle: 20-30g per cow per day
- Sheep: 1-3g per adult sheep per day

**Pack Size:** 
- 25kg polypropylene bag (also available in 1 tonne bulk bag from selected stores)

**Maize Triple Mix™**

**Maize silage balancer**
- Convenient ready-mixed calcium, magnesium and sodium supplement for addition to maize silage at the time of feeding out
- Aids in the prevention of hypocalcaemia (milk fever), hypomagnesaemia (grass staggers) and sodium deficiency
- Do not administer during the last 1-2 months of pregnancy unless on veterinary advice to avoid the risk of inducing milk fever

**Active Ingredients:**
- 21% elemental calcium (as lime flour)
- 14% elemental magnesium (as magnesium oxide)
- 8% elemental sodium (as salt)

**Dose Rate:** 150g per cow per day

**Pack Size:** 25kg lined polypropylene bag

**Starter Drench™**

**Free flow formulation for easier drenching**
- Convenient, ready-to-use, post-calving energy starter drench to provide energy and aid in the prevention of metabolic conditions (milk fever, grass staggers and ketosis)
- Flowable formulation means that it does not settle out or require stirring, making it easy to drench
- Do not administer pre-calving unless on veterinary advice, to avoid the risk of inducing milk fever

**Active Ingredients:**
- 200g/L monopropylene glycol (MPG)
- 150g/L molasses
- 12.5g/L soy oil
- 60g/L magnesium (as magnesium oxide)
- 60g/L calcium (as precipitated calcium carbonate)

**Dose Rate:** 1L per cow as soon as practical after calving; additional doses of ½ -1L for up to four days may be given

**Pack Sizes:** 20L and 200L drums
Dairy Cow Minerals

Proven trace elements – giving you the essentials
• Free-flow water-soluble multi-mineral trace element mix
• Contains all five trace elements that are essential for animal health
• Easily dissolved, so is suitable for the supplementation of dairy cows via addition to the drinking water, oral daily drenching, or addition to supplementary feed
• Contains aniseed flavouring for improved palatability
• Do not administer while dosing with zinc for facial eczema prevention

ACTIVE INGREDIENTS: 150mg copper (167mg as sulphate plus 83mg as EDTA chelate), 5mg cobalt (as sulphate), 3mg selenium (as sodium selenate), 10mg iodine (as EDDI) and 400mg zinc (as zinc sulphate monohydrate) per 5g dose
DOSE RATE: 5g per cow per day
PACK SIZE: 25kg lined polypropylene bag

DCM Gold

All chelated copper
• Free-flow water-soluble multi-mineral trace element mix containing copper, cobalt, selenium, iodine and zinc
• Contains aniseed flavouring for improved palatability
• Suitable where chelated copper is required or where it is desirable to avoid the use of copper sulphate
• Easily dissolved, so is suitable for the supplementation of dairy cows via addition to the drinking water, oral daily drenching, or addition to supplementary feed

ACTIVE INGREDIENTS: 250mg copper (167mg as sulphate plus 83mg as EDTA chelate), 10mg cobalt (as sulphate), 5mg selenium (as sodium selenate), 10mg iodine (as EDDI) and 400mg zinc (as zinc sulphate monohydrate) per 5g dose
DOSE RATE: 5g per cow per day
PACK SIZE: 25kg lined polypropylene bag

DCM Zero

No Copper
• Free-flow water-soluble multi-mineral trace element mix, with cobalt, selenium, iodine and zinc
• Contains aniseed flavouring for improved palatability
• Designed to be administered during the facial eczema season to ensure copper does not reduce the effectiveness of zinc treatments or where herd copper levels are already adequate (e.g. when feeding significant amounts of PKE)
• Easily dissolved, so is suitable for the supplementation of dairy cows via addition to the drinking water, oral daily drenching, or addition to supplementary feed

ACTIVE INGREDIENTS: 7.5mg cobalt (as sulphate), 5mg selenium (as sodium selenate), 15mg iodine (as EDDI) and 500mg zinc (as zinc sulphate monohydrate) per 5g dose
DOSE RATE: 5g per cow per day
PACK SIZE: 25kg lined polypropylene bag

Dairy Cow Minerals Hi Se + Co

Trace elements with extra Selenium and Cobalt
• Free-flow water-soluble multi-mineral trace element mix, with extra selenium and cobalt.
• Contains aniseed flavouring for improved palatability
• Easily dissolved, so is suitable for the supplementation of dairy cows via addition to the drinking water, oral daily drenching, or addition to supplementary feed
• Do not administer while dosing with zinc for facial eczema prevention

ACTIVE INGREDIENTS: 250mg copper (167mg as sulphate plus 83mg as EDTA chelate), 10mg cobalt (as sulphate), 5mg selenium (as sodium selenate), 10mg iodine (as EDDI) and 400mg zinc (as zinc sulphate monohydrate) per 5g dose
DOSE RATE: 5g per cow per day
PACK SIZE: 25kg lined polypropylene bag

Custom Mineral Blend

To give you exactly what you require
• A service that provides a customised mineral blend tailor-made
• Ingredients can include trace elements, minerals, vitamins and many other additives that may be required (subject to compatibility)
• Product is manufactured according to farmers’ individual requirements and is delivered direct to farm within 10-15 working days in 25kg lined polypropylene bags, in half or one tonne lots
• An optional extra is the inclusion of convenient ‘day packs’ inside each 25kg bag that provide the whole herd’s requirements for one day
**Stock Selenium™**

Convenient ready to use liquid selenium supplement

- Prevention and treatment of selenium deficiency
- Use by medication of the drinking water, oral drenching (daily or strategic) or addition to supplementary feed

**ACTIVE INGREDIENT:** 0.5% (5g/L) elemental selenium (as sodium selenate) as a colourless solution

**DOSE RATE:**
- Strategic oral drenching: 1ml/50kg live-weight no more frequently than every 3 weeks
- Daily dosing: 0.1ml/50kg live-weight per day; by drenching, water or feed medication

**PACK SIZES:** 20L & 200L drums

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**Selprill Double®**

Up to 12 months supplementation for the whole farm with our patented prill

- A slow-release 2% selenium prill for use as a fertiliser additive to raise soil and herbage selenium levels
- Treatment and prevention of selenium deficiency in grazing animals

**ACTIVE INGREDIENT:** 2% elemental selenium

**DOSE RATE:** ½ kg per hectare per year (10g elemental selenium per hectare per year)

**PACK SIZE:** 25kg polypropylene bag

Selprill Double® is a registered trademark. NZ Patent number 534753.

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**Stock Iodine™**

Convenient ready to use iodine supplement

- Prevention and treatment of iodine deficiency
- Use by addition to the drinking water, oral drenching (daily or strategic), addition to supplementary feed or foliar application (preferably with a suitable sticking agent)

**ACTIVE INGREDIENT:** 5% elemental iodine (as potassium iodide) as a colourless to light brown solution

**DOSE RATE:**
- Strategic oral drenching: ewes 4-5ml monthly as required.
- Daily dosing: 0.1-0.8ml per cow per day; 1-4ml per 100 adult sheep per day; by drenching, water or feed medication
- Foliar application: 1.25L/ha (pasture); 2.5L/ha (brassicas) up to 1-2 weeks pre-grazing

**PACK SIZES:** 20L & 200L drums

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**Stock Copper™**

Convenient ready to use copper supplement

- Prevention and treatment of copper deficiency
- Use by addition to the drinking water, oral daily drenching, addition to supplementary feed or foliar application (preferably with a suitable sticking agent)
- Do not administer to animals while dosing with zinc for facial eczema prevention

**ACTIVE INGREDIENT:** 5% elemental copper (as copper sulphate) as a clear blue solution

**DOSE RATE:**
- Daily dosing: 1-5ml per cow per day; 1-2ml per adult deer per day; 0.1-0.3ml per adult sheep per day; by drenching, water or feed medication
- Foliar application: 10L/ha up to 1-2 weeks pre-grazing

**PACK SIZES:** 20L & 200L drums

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**Copper Sulphate**

For fertiliser or animal health use

- Copper supplement (CuSO₄·5H₂O) for the prevention and treatment of copper deficiency
- Suitable for oral daily drenching, addition to the drinking water, addition to supplementary feed, foliar application (preferably with a suitable sticking agent) or application with fertiliser

**ACTIVE INGREDIENT:** 25% elemental copper

**USAGE RATES:**
- Daily dosing: typically 1-2g/cow/day by drenching, water or addition to feed Fertiliser: 5-6kg/ha (sheep and cattle); 12kg/ha (deer); ideally in the autumn
- Foliar application: 2kg/ha 1-2 weeks pre-grazing will give up to 6 weeks supplementation to grazing stock

**PACK SIZES:** 25kg polypropylene bag (non-branded)
Trace elements

Stock Cobalt™
Convenient ready to use cobalt supplement
• Prevention and treatment of cobalt deficiency
• Use by addition to the drinking water, oral daily drenching, addition to supplementary feed or foliar application (preferably with a suitable sticking agent)

Cobalt Sulphate
For fertiliser or animal health use
• Cobalt supplement (CoSO₄·7H₂O) for the prevention and treatment of cobalt deficiency
• Suitable for oral daily drenching, addition to the drinking water, addition to supplementary feed, foliar application (preferably with a suitable sticking agent) or application with fertiliser

Zinc Sulphate Hepta
Water soluble multi-purpose zinc
• Prevention of facial eczema
• Treatment and prevention of foot-rot and scald
• Treatment and prevention of dermatophilosis (mycotic dermatitis or lumpy wool)
• Use as a dietary zinc supplement

Zinc Sulphate Mono
Water soluble multi-purpose zinc
• Prevention of facial eczema
• Treatment and prevention of foot-rot and scald
• Treatment and prevention of dermatophilosis (mycotic dermatitis or lumpy wool)
• Use as a dietary zinc supplement

Zinc Oxide Plus™
Pre-stabilised to make oral drenching easier
• Pre-stabilised zinc oxide powder (ZnO) for the prevention of facial eczema in cattle and sheep by oral drenching or addition to supplementary feed
• Drenching can either be at long-term rates (ranging from daily to weekly) or crisis rates (daily depending on spore count)
• Can also be used as a dietary zinc supplement

ACTIVE INGREDIENT: 1% elemental cobalt (as cobalt sulphate) as a clear red solution
DOSE RATE: Daily dosing: 1-2ml per cow per day; 1-2ml per 100 adult sheep per day; by drenching, water or feed medication
Foliar application: 1.25-2.5 L/ha up to 1-2 weeks pre-grazing
PACK SIZES: 20L & 200L drums

ACTIVE INGREDIENT: 21% elemental cobalt
USAGE RATES: Fertiliser: Capital: 350g/ha; Maintenance: 175g/ha; ideally in the spring
Foliar application: 60-240g/ha 1-2 weeks pre-grazing will give up to 6 weeks supplementation to grazing stock
PACK SIZES: 20kg or 25kg bag or cardboard box (non-branded)

ACTIVE INGREDIENT: 22% elemental zinc (as zinc sulphate heptahydrate, ZnSO₄·7H₂O)
DOSE RATE: Facial eczema: 8g/100kg live-weight/day by addition to the drinking water only (do not orally drench at the facial eczema prevention dose rate)
Foot-bath or hoof-mat: 10% solution (1kg into 10L water)
Dermatophilosis: prevention 0.75% solution; treatment 1.5% solution; by spray or dip
Dietary supplement: 1.5g per cow per day; by oral drenching in feed or water
PACK SIZE: 25kg lined polypropylene bag
Registered pursuant to the ACVM Act 1997, No A9256.

ACTIVE INGREDIENT: 35% elemental zinc (as zinc sulphate monohydrate ZnSO₄·H₂O)
DOSE RATE: Facial eczema: 5.5g/100kg live-weight/day by addition to the drinking water only (do not orally drench at the facial eczema prevention dose rate)
Foot-bath or hoof-mat: 6.5% solution (650g into 10L water)
Dermatophilosis: prevention 0.5% solution; treatment 1% solution; by spray or dip
Dietary supplement: 0.5-2.0g per cow per day; by oral drenching in feed or water
PACK SIZE: 25kg lined polypropylene bag
Registered pursuant to the ACVM Act 1997, No A9257.

ACTIVE INGREDIENT: 80% elemental zinc
DOSE RATE: Facial eczema: Long-term rates: from 2.5g/100kg live-weight per day; to 11g/100kg live-weight twice weekly; to 27g/100kg live-weight per week (see label or website for more details)
Dietary supplement: 0.2-1.0g per cow per day; by oral drenching or addition to feed
PACK SIZE: 25kg lined polypropylene bag
Registered pursuant to the ACVM Act 1997, No A9412.
Flavouring agent

**Sweetwater®**

*Makes the water taste better*
- Caramel flavouring used to mask the taste and smell of zinc, magnesium, trace elements, bloat remedies and other additives, particularly in stock drinking water but also in drench mixtures or solid feeds
- Encourages water consumption and aids in the effective administration of these additives

**ACTIVE INGREDIENTS:** Caramel flavours and sugars  
**DOSE RATE:** Drinking water: 0.5-2ml per litre water or 25-50ml per kg of dissolved additive  
**Solid feeds:** 1-2L per tonne of feed  
**PACK SIZE:** 20L drum

Facial eczema

**Sporeguard®**

*Prevent facial eczema without zinc*
- Systemic fungicide used to control the facial eczema fungus *Pithomyces chartarum*
- Should always be used with the surfactant Sporewet®
- Sporeguard® and Sporewet® are effective in keeping facial eczema spore counts on pasture below dangerous levels for up to 40 days, hence animals do not ingest harmful numbers of spores and should not require the administration of zinc

**ACTIVE INGREDIENT:** 500g/L carbendazim  
**APPLICATION RATE:** 300ml/ha (with 100ml/ha Sporewet®) in 100-200L water per ha  
**WITHHOLDING PERIOD:** Nil  
**PACK SIZE:** 10L drum  
Registered pursuant to the ACVM Act 1997, No P8308.

**Sporewet®**

*Get the best from Sporeguard®*
- Surfactant for use with Sporeguard® in the control of facial eczema
- Allows the water rate to be lowered to as low as 100L/ha, ensuring better coverage and quicker rain fastness

**ACTIVE INGREDIENT:** Alcohol ethoxylate surfactant  
**APPLICATION RATE:** 100ml/ha (with 300ml/ha Sporeguard®) in 100-200L water per ha  
**WITHHOLDING PERIOD:** Nil  
**PACK SIZE:** 5L container
**Lift B₁₂ Plain**

**Injectable B₁₂ in a pillowpack**
- Double strength, injectable vitamin B₁₂ for the treatment and prevention of cobalt deficiency and vitamin B₁₂-responsive conditions
- Each treatment lasts 4-6 weeks

**ACTIVE INGREDIENTS**: 2g/L vitamin B₁₂ (hydroxocobalamin)
**DOSE RATE**: Sheep 0.5-1ml; Cattle 2-6ml (See label for more detail)
**WITHHOLDING PERIODS**: Meat: Nil; Milk: Nil
**PACK SIZE**: 500ml injection pack
Registered pursuant to the ACVM Act 1997, No A9783.

**Lift B₁₂ Selenised**

**Injectable B₁₂ and selenium in a pillowpack**
- Double strength, injectable vitamin B₁₂ with selenium, for the treatment and prevention of cobalt deficiency, vitamin B₁₂-responsive and selenium-responsive conditions
- Each treatment lasts 4-6 weeks

**ACTIVE INGREDIENTS**: 2g/L vitamin B₁₂ (hydroxocobalamin) plus 4mg/ml selenium (as sodium selenate)
**DOSE RATE**: Sheep 0.5-1ml; Cattle 2-6ml (See label for more detail)
**WITHHOLDING PERIODS**: Meat: Nil; Milk: Nil
**PACK SIZE**: 500ml injection pack
Registered pursuant to the ACVM Act 1997, No A9783.

**Vita-Mineral**

**An extra boost with iodine, selenium and vitamins**
- Stable, water-soluble multi-mineral and vitamin powder for supplementation of sheep and cattle by oral drenching at strategic times (e.g. prior to mating, late pregnancy or during periods of stress)
- The drench solution is made by dissolving 1kg powder (1 sachet) in water to make up to 5 litres solution

**ACTIVE INGREDIENTS**: Each 10ml dose contains 280mg iodine, 2mg selenium, 2.5mg cobalt, 6mg zinc, 20,000 IU vitamin A, 10,000 IU vitamin D and 200 IU vitamin E.
**DOSE RATE**: Sheep: 10ml drench solution (2 grams powder) per adult sheep
Cattle: 50ml drench solution (10 grams powder) per adult cattle
**WITHHOLDING PERIODS**: Meat: Nil; Milk: Nil
**PACK SIZE**: 4kg polyethylene bucket (containing 4 x 1kg sachets)
# Sheep and beef health planner

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