

Animal Health









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 Area Manager.

How do triple drenches make a difference?

If you're serious about slowing the development of drench resistant parasites, then your best option is to use triple and double combinations such as **Duo and Trio Low Dose** in your parasite management programme. Combining the actions of two - three drench actives in one

treatment lessens the chance for worms to survive, including those that are already resistant to one or two 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.





CHANCES OF A WORM SURVIVING?

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.

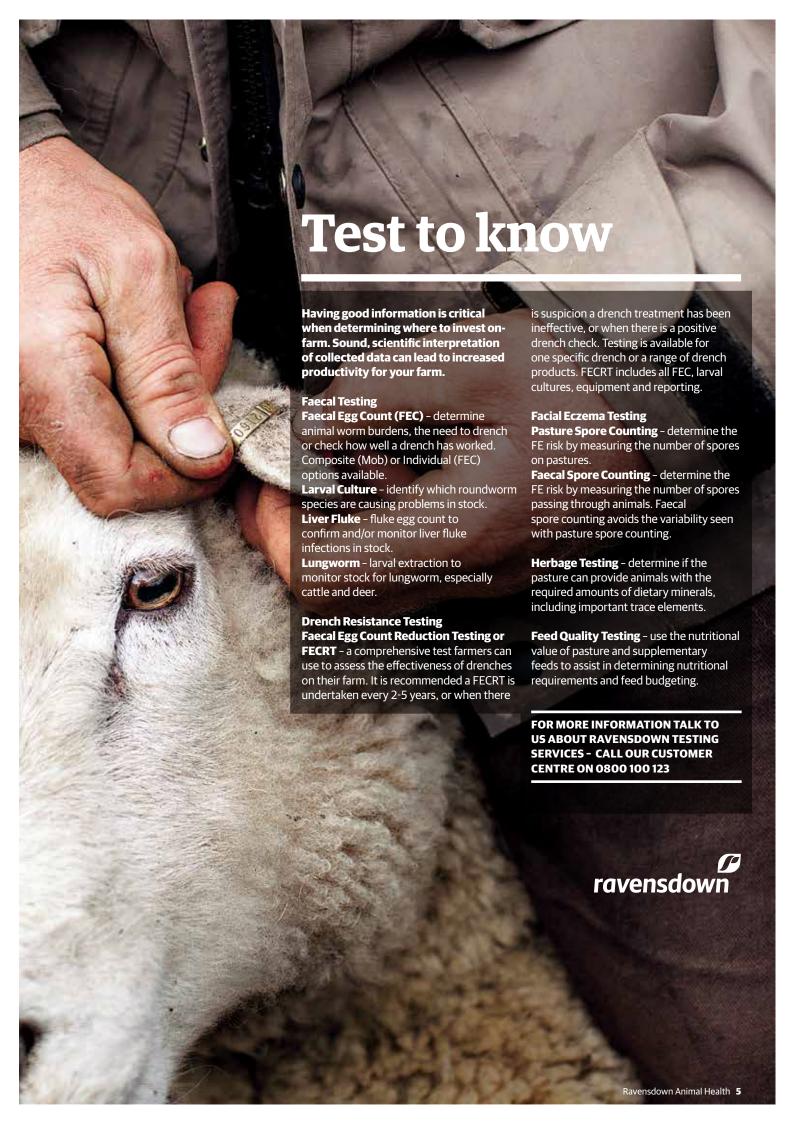
Timing is important as trace element uptake by pasture will vary at different times of the year. Generally actively-growing grass in the spring gives the best indication of what is available to the animal.

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

Vita-Mineral Drench will

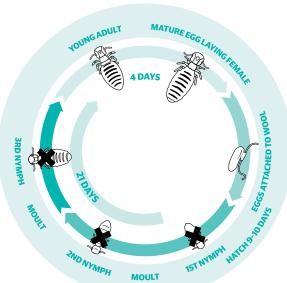
deliver iodine and selenium to prevent these deficiencies, while the vitamins will boost general health to further assist with improving performance especially at mating time. For help with assessing testing and supplementation options for your farm, talk to your Ravensdown Animal Health Area Manager.





LIFE CYCLE OF **SHEEP BODY LICE**

IGRs interfere at the 1st to 3rd nymph stage causing death



Strike against fly and 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. Always read the product label before using, the label contains vital information on the use, storage, disposal and safety of the product.
- 2. 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?
- 3. Application is the key, getting the correct chemical at the correct concentration, correctly applied for optimum results.

- 4. Follow guidelines for wool length. If wool is too long then the treatment may fail.
- 5. 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.
- **6. 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.
- 7. 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.

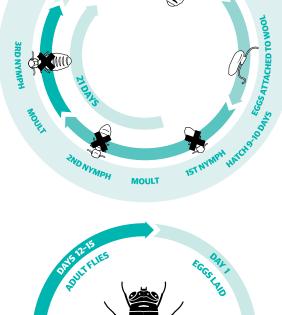
For maximum fly control, use Saturate Gold dip concentrate for up to 12 weeks prevention of flystrike. Saturate Gold is Ravensdown's premier, unique, non-stripping fly and lice combination dip concentrate. NOTE: Saturate Gold is an Insect Growth Regulator, it will not control live strike.

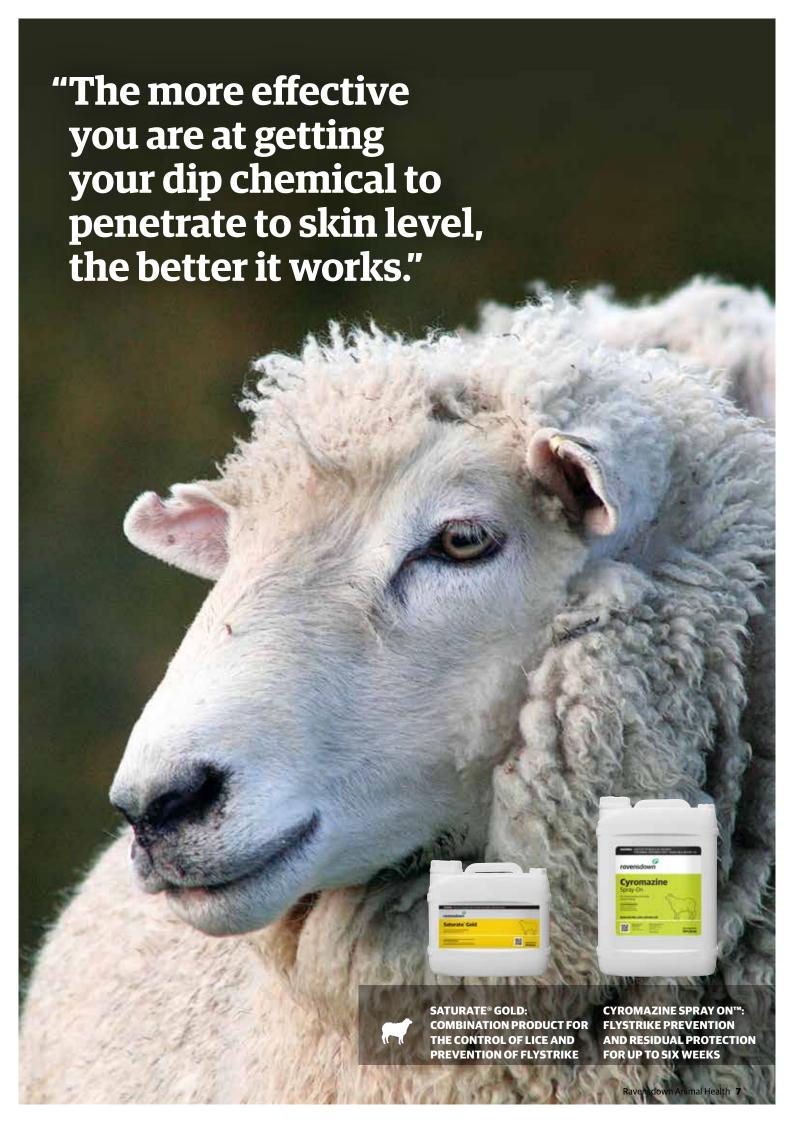
Pour-on Applications

- 1. Ensure the product label is thoroughly read as it has vital instructions on application.
- 2. 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?

- 3. Apply chemical at the best time, which is immediately offshears. The outpour of grease and lanolin immediately after shearing is critical to ensuring the chemical is moved around the body of the animal.
- 4. 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 Area Manager for further product information.









Calf weaning: Combo Low Dose; Lift B₁₂; Abamectin Pour On; Abamectin Injection; Moximax Pour On; Trio Low Dose; Duo Low Dose; Abamectin Sheep

Liver fluke: Animec Super Injection

Anna Carlotta

Cattle facial eczema prevention: Sporeguard; Zinc Oxide Plus



Product catalogue



Parasite control

- Cattle drench
- Sheep drench

Fly, Lice and Tick **Control**

- Dip concentrate
- Pour-on
- Spray-on

Supplements

- Magnesium
- Trace elements
- Vitamins

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

• 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.

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Ravensdown Animal Health 11

Parasite control



Moximax® Pour On

Long-lasting parasite control

- Endectocide (ML) pour-on containing moxidectin
- Effective against all moxidectin-susceptible round worms (including inhibited Ostertagia larvae) and lice in cattle
- Effective against all moxidectin-susceptible round worms, including lung worm in deer
- In cattle prevents reinfection of Dictyocaulus viviparous, 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 *Dictylocaulus ekerti (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:
Machael Mills aid

Meat: nil; Milk: nil
PACK SIZES: 5L backpack & 15L drum

Registered pursuant to the ACVM Act 1997, No A11326

RAINFAST: Can be applied when hide is wet, or if rain occurs shortly after application



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/20kg live-weight WITHHOLDING PERIODS:

Meat: 35 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 viviparus*; 14 days persistent activity against *Ostertagia* spp, *Cooperia* spp (ML susceptible) and *Trichostrongylus axei*; and 7 days persistent activity against *Oesophagostomum radiatum*
- Suitable for cattle over 100kg live-weight (and 16 weeks of age) and sheep over 20kg live-weight



ACTIVE INGREDIENT: 10g/L abamectin DOSE RATE: 1ml/50kg live-weight WITHHOLDING PERIODS: Cattle: Meat (49 days); Milk (49 days)

PACK SIZE: 500ml injection pack

Registered pursuant to the ACVM Act 1997, No A9446.



Animec Super Injection

Controls liver fluke, roundworms and lice

- Injectable combination anthelmintic containing ivermectin and
- 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 viviparus 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/50kg live-weight WITHHOLDING PERIODS: Meat: 28 days; Milk: 14 days PACK SIZE: 500ml injection pack

Registered pursuant to the ACVM Act 1997, No A9938.



Parasite control



Trio® Low Dose

Registered triple combination drench

- Mineralised triple combination oral drench white/ML/clear
- Effective against roundworm and lungworm
- Ideal for treatment of Cooperia in young cattle
- Slows development of drench resistance



ACTIVE INGREDIENTS: 2g/L abamectin; 45.3g/L oxfendazole; 80g/L levamisole hydrochloride; 5g/L cobalt; 1g/L selenium DOSE RATE: 1ml/10kg live-weight WITHHOLDING PERIODS:

Meat: 14 days; Milk: 35 days PACK SIZES: 5L backpack & 20L drum

Registered pursuant to the ACVM Act 1997. No A11505.



Duo® Low Dose

Registered combination drench

- Mineralised double combination (ML/clear) oral drench
- Effective against roundworm and lungworm
- Ideal for treatment of Cooperia in young cattle
- Slows development of drench resistance



ACTIVE INGREDIENTS: 2g/L abamectin; 80g/L levamisole hydrochloride; 5g/L cobalt; 1g/L selenium

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

Meat: 14 days; Milk: 35 days PACK SIZES: 5L backpack & 20L drum

Registered pursuant to the ACVM Act 1997. No A11503.



Combo[™] Low Dose

Registered combination drench

- 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 oxfendazole; 80g/L levamisole; 0.9g/L selenium; 0.2g/L cobalt; 2g/L copper; 0.9g/L iodine; 0.6g/L zinc

DOSE RATE: 1ml/10kg live-weight WITHHOLDING PERIODS:
Meat: 10 days; Milk: 35 days (cattle)

PACK SIZES: 5L backpack & 20L drum

Registered pursuant to the ACVM Act 1997. No A10784.



Trio® Sheep

Use triple combinations to slow resistance

- Mineralised triple combination (white, clear and endectocide/ML) oral drench
- Ideal as part of a routine parasite control programme and for use as a quarantine drench
- Effective against all adult and immature roundworms (including strains with single or dual resistance to macrocyclic lactones, benzimidazoles, levamisole or closantel), lungworm, tapeworm, adult liver fluke, nasal bot and itch mite



ACTIVE INGREDIENTS: 1g/L abamectin; 25g/L albendazole; 40g/L levamisole; 0.5g/L selenium; 0.2g/L cobalt; 2.1g/L copper; 1g/L iodine; 0.6g/L zinc

WITHHOLDING PERIODS: Meat: 14 days; Milk: 35 days DOSE RATE: 1ml/5kg live-weight

PACK SIZE: 20L drum

Registered pursuant to the ACVM Act 1997, No A10662.



Trio[®] Tape

Use triple combinations to slow resistance

- Also contains praziquantel for specific tapeworm control
- Effective against all adult and immature roundworms (including strains with single or dual resistance to macrocyclic lactones, benzimidazoles, levamisole or closantel), lungworm and tapeworm



ACTIVE INGREDIENTS: 1g/L ivermectin; 22.7 g/L oxfendazole; 40g/L levamisole; 18.8 g/L praziquantel; 0.5g/L selenium; 0.2g/L cobalt; 2.1g/L copper; 1g/L iodine; 0.6g/L zinc WITHHOLDING PERIODS:

WITHHOLDING PERIODS: Meat: 14 days; Milk: 35 days DOSE RATE: 1ml/5kg live-weight PACK SIZE: 20L drum

Registered pursuant to the ACVM Act 1997. No A115O4.



Parasite control



Combo[™] Sheep

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



ACTIVE INGREDIENTS: 24g/L albendazole; 37.5g/L levamisole; 0.5g/L selenium; 0.25g/L cobalt; 2.1g/L copper; 0.55g/L zinc WITHHOLDING PERIODS:

Meat: 10 days; Milk: 10 days

DOSE RATE: 1ml/5kg live-weight

PACK SIZE: 20L drum

Registered pursuant to the ACVM Act 1997, No A9444.



Combo[™] Plus Tape

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



ACTIVE INGREDIENTS: 25g/L albendazole; 37.5g/L levamisole; 18.8g/L praziquantel; 0.5g/L selenium; 0.2g/L cobalt; 2g/L copper; 1g/L iodine; 0.6g/L zinc DOSE RATE: 1ml/5kg live-weight

WITHHOLDING PERIODS: Meat: 10 days; Milk: 35 days PACK SIZE: 15L drum

Registered pursuant to the ACVM Act 1997, No A9789.



Closantel Plus™

A mineralised liquid combination drench specifically effective against barbers pole and liver fluke

- Up to 42 days persistent activity against barber's pole, and control of liver fluke e.g. pre-mating ewe drench
- Less selective for drench resistance than long acting moxidectin



ACTIVE INGREDIENTS: 1g/L abamectin; 50g/L closantel (as sodium salt) with 0.5g/L selenium & 2.2g/L cobalt

WITHHOLDING PERIODS: Meat: 56 days; Milk: 56 days DOSE RATE: 1ml/5kg live-weight PACK SIZE: 20L drum

Registered pursuant to the ACVM Act 1997, No A11501.



Moximax® Sheep

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



ACTIVE INGREDIENTS: 1g/L moxidectin; 0.5g/L selenium; 0.2g/L cobalt; 2g/L copper; 1g/L iodino; 0.6g/L zinc

1g/L iodine; 0.6g/L zinc WITHHOLDING PERIODS: Meat: 7 days; Milk: 35 days DOSE RATE: 1ml/5kg live-weight

PACK SIZE: 20L drum

Registered pursuant to the ACVM Act 1997, No A10724.



Abamectin™ Sheep

Contains potent, short-acting abamectin

- Mineralised endectocide (ML) oral drench
- Effective against all abamectin-susceptible adult and immature roundworms (including benzimidazole and levamisole resistant strains) and lungworm



ACTIVE INGREDIENTS: 1g/L abamectin; 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 A9447.



Fly, lice and tick 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**: 11ml for docking; 33-51ml for body and crutch strike WITHHOLDING PERIODS:

Meat: 7 days; Milk: 35 days; Wool: 2 months PACK SIZES: 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 Og/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.



Cyromazine Liquid™

Up to 12 weeks protection against flystrike

- · Non-stripping IGR 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 Cyromazine Liquid per litre of water 6 weeks protection: Dilute 1ml Cyromazine Liquid

per litre of water. Apply by jetting or saturate dipping, ensuring the sheep is fully wet WITHHOLDING PERIODS:

Meat: 7 days; Milk: 35 days; Wool: 2 months PACK SIZÉ: 5L drum

Registered pursuant to the ACVM Act 1997, No A11467.



Fly, lice and tick control



Cyromazine 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 blow flies including the Australian blowfly (Lucilia cuprina), including organophosphate resistant strains



ACTIVE INGREDIENT: 60g/L cyromazine

Docking: 5-10ml over the crutch, ensuring sufficient product is applied to the area to be protected **For preventing poll strike:** At least 5ml Cyromazine Spray On

around the poll and horns

For the protection of all commonly struck areas: 15-70ml depending on live weight. Use a standard drench gun with spray-on nozzle. Fore more information see the product label WITHHOLDING PERIODS:

Meat: 7 days; Milk: 35 days; Wool: 2 months PACK SIZE: 10L & 20L drum

Registered pursuant to the ACVM Act 1997, No A11468.



Deltamethrin Pour On

Pour-on fly and lice treatment

- Yellow, water-based synthetic pyrethroid insecticide
- · Controls biting and sucking lice on cattle of any age
- Controls nuisance fly for a period of up to four weeks
- Maximum lice kills achieved up to six weeks after application but rapid relief of symptoms



ACTIVE INGREDIENTS: 15/L Deltamethrin DOSE RATE: 1mL/20kg live-weight WITHHOLDING PERIODS: Meat: 28 days; Milk: nil **PACK SIZES: 5L**

Registered pursuant to the ACVM Act 1997, No.A11646.



Flumethrin Pour On

Pour-on tick treatment

- Treats and controls all stages of tick lifecycle
- To aid in the control of tick-borne Theileria infection in cattle



ACTIVE INGREDIENTS: 10g/L flumethrin DOSE RATE: 20ml up to 200kg live-weight; 30ml for 200-

300kg live-weight; 40ml for 300-400kg live-weight; 50ml for over 400kg live-weight

WITHHOLDING PERIODS: Meat: nil; Milk: nil PACK SIZES: 5L backpack

Registered pursuant to the ACVM Act 1997. No. A11502



Applicator guns

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

8ml low-dose gun

- Designed especially for low dose drenching of young stock
- Comes with oral drenching (90mm) nozzle

15ml multi-use gun

• Comes with five nozzles: oral drenching (90mm and 100mm), pour-on, spray on and T-bar



18ml Fleeceguard® applicator

• Dedicated Fleeceguard gun and T-bar nozzle with an improved spring for easier



30ml multi-use gun

• Comes with four nozzles: oral drenching (100mm), pour-on, spray on and T-bar



60ml multi-use gun

• Comes with oral drenching (150mm) and pour-on nozzles



Injection gun

- Comes with two needles
- 2ml, 5ml and 10ml options



Drench hook

• To connect to a standard drench gun for easy oral drenching of larger cattle



Magnesium and other minerals



Magnesium Oxide Fine

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: 30-70g per cow per day Actual rate depends on magnesium requirements and method of administration PACK SIZE: 25kg lined paper 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: 20-30g per cow per day depending on magnesium status

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, or for daily oral drenching
- May contain a very small amount of harmless insoluble organic residue



ACTIVE INGREDIENT: 12% elemental magnesium

DOSE RATE: 60-100g per cow 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; 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 INGREDIENT:

39% elemental calcium

DOSE RATE: 50-300g per cow per day depending on calcium requirements and method of administration Alternatively add to maize silage at a rate of 60-120g/kg wet feed or 20-40g/kg dry feed PACK SIZE: 25kg lined polypropylene bag



Salt

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 INGREDIENT:

39% elemental sodium

DOSE RATE: 20-30g per cow per day Actual rate depends on sodium requirements and method of administration 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 or nutritional 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



Dicalcium Phosphate Powder

Feed grade source of phosphorus, in a powder from, suitable for animal use

- Can be mixed into feed in a silage/mixer wagon, orally drenched, and dusted onto pasture. If adding to the hay/silage in the paddock, add it to water (+/- molasses) to make a slurry ensuring better distribution through the feed, and help to reduce wastage.
- · Aids in the prevention of phosphorous deficiency when feeding forages or supplements low in phosphorous



ACTIVE INGREDIENTS: 20% elemental calcium, 18% elemental phosphorous from dicalcium phosphate dihydrate

DOSE RATE: 30-50g/cow/day as treatment in the instance of phosphorus deficiency

PACK SIZES: 25kg 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; 100g/L soya oil; 12.5g/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 1/2 -1L for up to four days may be given PACK SIZES: 20L and 200L drums



Trace elements



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: 250mg elemental copper (as copper sulphate), 5mg elemental cobalt (as cobalt sulphate), 3mg elemental selenium (as sodium selenate), 10mg elemental iodine (as calcium iodate) and 400mg elemental zinc (as zinc sulphate monohydrate) per 5g dose

DOSE RATE: 5g per cow per day **PACK SIZE:** 25kg lined polypropylene bag



DCM[™] Gold

All organic 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 organic 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: 150mg elemental copper (as copper EDTA), 10mg elemental cobalt (as cobalt sulphate), 5mg elemental selenium (as sodium selenate), 10mg elemental iodine (as EDDI) and 600mg elemental 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 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: 10mg elemental cobalt (as cobalt sulphate), 3mg elemental selenium (as sodium selenate), 10mg elemental iodine (as EDDI) and 400mg elemental zinc (as zinc sulphate monohydrate) per 5g dose

DOSE RATE: 5g per cow per day **PACK SIZE:** 25kg lined polypropylene bag



Custom Mineral Blend

Tailored to suit

- A service that provides a customised mineral blend tailor-made for an individual farm
- 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 (Ravensdown can assist in determining this if required) 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



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.



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 drums



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

PACK SIZES: 20L drums



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)



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 drums



Cobalt Sulphate

For fertiliser or animal health use

- Cobalt supplement (CoSO₄.7H₂O) for the prevention and treatment of cobalt deficiency
- Suitable for foliar application (preferably with a suitable sticking agent) or application with fertiliser





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



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





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: 1-3g 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.



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





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

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.



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: 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

(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

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
- 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



Vitamins



Lift® B₁₂ Plain

Injectable B₁₂ in a pillowpack

- \bullet Double strength, injectable vitamin B_{12} for the treatment and prevention of cobalt deficiency and vitamin B₁₂-responsive conditions
- Each treatment lasts 4-6 weeks



ACTIVE INGREDIENT: 2g/L vitamin B₁₂ DOSE RATE: 2-6ml (See label for more

WITHHOLDING PERIODS:

Meat: Nil; Milk: Nil
PACK SIZE: 500ml injection pack

Registered pursuant to the ACVM Act 1997, No A9783.



Lift® B₁₂ Selenised

Injectable B₁₇ 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





(as sodium selenate) DOSE RATE: 2-6ml (See label for more

Registered pursuant to the ACVM Act 1997, No A9784.

detail)

WITHHOLDING PERIODS:

Meat: Nil; Milk: Nil

PACK SIZE: 500ml injection pack



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: 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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