When animals are healthy, humans are healthier too. We commit to making the industry even better at improving both human and animal health.

Boehringer Ingelheim Animal Health has grown to now include all the legacy Merial animal health portfolio. We have united the strengths of two leading players in animal health into ONE business unit within Boehringer Ingelheim.

As one business, we now have the privilege and the responsibility of being the second largest animal health business in the world. We will use that scale and our combined resources to help make the industry even better at improving animal health.

We are passionate about animal health, and we recognise the critical importance of serving animal health needs, with a special focus on prevention. We know that when animals are healthy, humans are healthier, too.

Farmers can count on Boehringer Ingelheim to support them in raising and caring for animals in a healthy, sustainable and financially viable way, because we want to build confidence with consumers about the food they eat.

Pet owners have lifelong emotional connections with their pets and consider them a family member; that’s why we are focused on helping pets live longer and healthier lives.

With pioneering and market leading brands such as BIONIC, EPRINEX, ECLIPSE, MATRIX, BROADLINE, NEXGARD SPECTRA, METACAM, PREVICOX and PRASCEND we will work to meet and anticipate the needs of pet owners, veterinarians, producers, the communities we work in, and the industry at large.
<table>
<thead>
<tr>
<th>CONTENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>SHEEP</td>
</tr>
<tr>
<td><strong>ANTHELMINTICS</strong></td>
</tr>
<tr>
<td>Triple Combinations</td>
</tr>
<tr>
<td>Double Combinations</td>
</tr>
<tr>
<td>Single Actives</td>
</tr>
<tr>
<td><strong>ANTHELMINTICS LONG-ACTING</strong></td>
</tr>
<tr>
<td>Capsules</td>
</tr>
<tr>
<td>Injections</td>
</tr>
<tr>
<td><strong>ECTOPARASITICIDES</strong></td>
</tr>
<tr>
<td>Fly &amp; Lice Control</td>
</tr>
<tr>
<td><strong>MINERALS &amp; THERAPEUTICS</strong></td>
</tr>
<tr>
<td><strong>PARASITES</strong></td>
</tr>
<tr>
<td>Internal &amp; External Parasite Life Cycles</td>
</tr>
<tr>
<td>Faecal Egg Count Reduction Test</td>
</tr>
<tr>
<td><strong>DOSING</strong></td>
</tr>
<tr>
<td><strong>APPLICATORS</strong></td>
</tr>
<tr>
<td><strong>CATTLE</strong></td>
</tr>
<tr>
<td><strong>ANTHELMINTICS</strong></td>
</tr>
<tr>
<td>Triple Combinations</td>
</tr>
<tr>
<td>Double Combinations</td>
</tr>
<tr>
<td>Single Actives</td>
</tr>
<tr>
<td><strong>MINERALS</strong></td>
</tr>
<tr>
<td><strong>THERAPEUTICS</strong></td>
</tr>
<tr>
<td>Antibiotics</td>
</tr>
<tr>
<td>Mastitis</td>
</tr>
<tr>
<td>Anaesthesia and Analgesia</td>
</tr>
<tr>
<td><strong>PARASITES</strong></td>
</tr>
<tr>
<td>Internal &amp; External Parasite Life Cycles</td>
</tr>
<tr>
<td><strong>DOSING</strong></td>
</tr>
<tr>
<td><strong>APPLICATORS</strong></td>
</tr>
<tr>
<td><strong>EQUINE</strong></td>
</tr>
<tr>
<td><strong>ANTHELMINTICS</strong></td>
</tr>
<tr>
<td>3 in 1</td>
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<tr>
<td>2 in 1</td>
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<tr>
<td><strong>THERAPEUTICS</strong></td>
</tr>
<tr>
<td><strong>SEDATIVES &amp; ANAESTHETICS</strong></td>
</tr>
<tr>
<td><strong>COMpanion</strong></td>
</tr>
<tr>
<td><strong>PARASITICIDES</strong></td>
</tr>
<tr>
<td>Orals</td>
</tr>
<tr>
<td>Topicals &amp; Sprays</td>
</tr>
<tr>
<td><strong>THERAPEUTICS</strong></td>
</tr>
<tr>
<td>Inflammation &amp; Pain</td>
</tr>
<tr>
<td>Therapeutics</td>
</tr>
<tr>
<td><strong>ANTIBIOTICS</strong></td>
</tr>
<tr>
<td><strong>ANAESTHETICS</strong></td>
</tr>
<tr>
<td><strong>ORAL HEALTH</strong></td>
</tr>
<tr>
<td>Dental Chew</td>
</tr>
</tbody>
</table>
ANTHELMINTICS
Triple Combinations
Double Combinations
Single Actives
ANTHELMINTICS LONG-ACTING
Capsules
Injections
ECTOPARASITICIDES
Fly & Lice Control
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PARASITES
Internal & External Parasite Life Cycles
Faecal Egg Count Reduction Test
DOSING
APPLICATORS

SHEEP PRODUCTS
Triple combination drenches contain three drugs that act in different ways to kill internal roundworms. Triple combination products have been shown to significantly slow the development of drench resistance. The sooner combination drenches are used the more effective they will be at preventing resistance development, particularly when used with management strategies that help to preserve sensitive parasites. Veterinarians are best placed to advise on resistance prevention.

### Triple Combinations

**M** **A** **R** **I** **X**°

<table>
<thead>
<tr>
<th>Active</th>
<th>Dose rate (kg)</th>
<th>WHP</th>
<th>Controls</th>
<th>Admin</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>5</td>
<td>MEAT</td>
<td>14</td>
<td>35</td>
</tr>
</tbody>
</table>

**Pack size**: 20L

**Non-mineralised.**

**MATRIX® Hi-Mineral**

<table>
<thead>
<tr>
<th>Active</th>
<th>Minerals</th>
<th>Dose rate (kg)</th>
<th>WHP</th>
<th>Controls</th>
<th>Admin</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>2</td>
<td>1</td>
<td>MEAT</td>
<td>14</td>
<td>35</td>
</tr>
</tbody>
</table>

**Pack size**: 1L, 5L, 10L & 20L

**Mineralised.**

**MATRIX® Mini-Dose Hi-Mineral**

<table>
<thead>
<tr>
<th>Active</th>
<th>Minerals</th>
<th>Dose rate (kg)</th>
<th>WHP</th>
<th>Controls</th>
<th>Admin</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td></td>
<td>10</td>
<td>MEAT</td>
<td>14</td>
<td>35</td>
</tr>
</tbody>
</table>

**Pack size**: 1L, 5L, 10L & 20L

**Twice as concentrated so half the dose of MATRIX Hi-Mineral.**

**MATRIX® Tape Hi-Mineral**

<table>
<thead>
<tr>
<th>Active</th>
<th>Minerals</th>
<th>Dose rate (kg)</th>
<th>WHP</th>
<th>Controls</th>
<th>Admin</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>2</td>
<td>1</td>
<td>MEAT</td>
<td>14</td>
<td>35</td>
</tr>
</tbody>
</table>

**Pack size**: 5L, 10L & 20L

**Added tapeworm control.**

**Iver MATRIX® Tape Hi-Mineral**

<table>
<thead>
<tr>
<th>Active</th>
<th>Minerals</th>
<th>Dose rate (kg)</th>
<th>WHP</th>
<th>Controls</th>
<th>Safety</th>
<th>Admin</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>2</td>
<td>1</td>
<td>MEAT</td>
<td>14</td>
<td>35</td>
<td></td>
</tr>
</tbody>
</table>

**Pack size**: 5L, 10L & 20L

**Ivermectin substituted for abamectin for added safety in young lambs.**

**TRIMOX® Hi-Mineral**

<table>
<thead>
<tr>
<th>Active</th>
<th>Minerals</th>
<th>Dose rate (kg)</th>
<th>WHP</th>
<th>Controls</th>
<th>Admin</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>2</td>
<td>20</td>
<td>MEAT</td>
<td>14</td>
<td>35</td>
</tr>
</tbody>
</table>

**Pack size**: 5L, 10L & 20L

**Moxidectin provides persistent activity against *Haemonchus* and *Teladorsagia* (Ostertagia). It’s an ideal quarantine drench for stock brought onto a property during a *Haemonchus* challenge.**
### Anthelmintics

Double combination drenches contain two drugs that act in different ways to kill internal roundworms. Other drugs may be added to control other parasites such as liver fluke or tapeworm. Double combination drenches are a more economical choice for properties that do not require a triple drench. To ensure that these drenches are effective for years to come, it is important to use them appropriately and with particular regard to ensuring that sensitive parasites to these drugs remain on the property. Veterinarians are best placed to advise on sustainable use of drenches.

### Double Combinations

<table>
<thead>
<tr>
<th>ACTIVE</th>
<th>DOSE RATE</th>
<th>WHP</th>
<th>CONTROLS</th>
<th>ADMIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>14</td>
<td>MEAT</td>
<td>35</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>14</td>
<td>MILK</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### SWITCH Oral
- **Actives:** Abamectin, Levamisole
- **Pack size:** 20L
- Non-mineralised.

#### SWITCH Hi-Mineral
- **Actives:** Abamectin, Levamisole
- **Pack size:** 5L, 20L & 50L
- Mineralised.

#### Iver SWITCH Tape Hi-Mineral
- **Actives:** Ivermectin, Levamisole, Praziquantel
- **Pack size:** 5L, 10L & 20L
- Ivermectin replaces abamectin to improve safety in young lambs. Ideal young lamb drench.

#### ARREST®
- **Actives:** Levamisole, Albendazole
- **Pack size:** 20L
- Provides some added control of adult liver fluke and tapeworm. Non-mineralised formulation.

#### ARREST® Hi-Mineral
- **Actives:** Levamisole, Albendazole
- **Pack size:** 5L & 20L
- Provides some added control of adult liver fluke and tapeworm. Mineralised formulation.

#### FIRST™ Hi-Mineral
- **Actives:** Levamisole, Albendazole, Praziquantel
- **Pack size:** 1L, 5L, 10L & 20L
- Added praziquantel for effective tapeworm control.
Single active products are best used when targeting specific parasites and under guidance from a veterinarian.

**GENESIS® Ultra Hi-Mineral**
- **Actives:** Abamectin, Closantel
- **Pack size:** 1L, 5L & 20L
- **Specialist:** Haemonchus contortus (Barber’s Pole)
- **Persistent activity:** 42 days

**EXODUS® Se**
- **Actives:** Moxidectin
- **Pack size:** 10L & 20L
- **Specialist:** Haemonchus contortus (Barber’s Pole)
- **Persistent activity:** 35 days

**GENESIS® Hi-Mineral**
- **Actives:** Abamectin
- **Pack size:** 20L
- **Quick knockdown:** of known susceptible parasites.
Capsules provide long periods of parasite control compared to oral drenches. When used appropriately, capsules are extremely effective at controlling the impact of parasites on stock. Veterinarians should be involved in capsule treatment decision making as advice on management techniques, such as refugia and drench check testing, to reduce the threat of parasite resistance developing is paramount. Capsules should be administered carefully by an experienced person with the appropriately sized applicator gun.

### Capsules

**BIONIC® Hi-Mineral**
- **Actives:** Abamectin, Albendazole
- **Dose rate:** 40-80kg - 1 capsule. +80kgs - 2 capsules
- **Pack size:** 5 x 100 capsules
- 100 day double combination continuous payout.
- The ultimate pre-lamb treatment. Cobalt and selenium pass through the ewe’s milk into her growing lambs.
- Adult sheep only.

**EXTENDER® SeCo**
- **Actives:** Albendazole
- **Dose rate:** 40-80kg - 1 capsule. +80kgs - 2 capsules
- **Pack size:** 500 capsules
- Single active capsule.
- Parasites sensitive to albendazole are controlled for 100 days.
- Veterinary advice regarding sustainable drenching, refugia and priming and exit drenching is recommended.
- Adult sheep only.

**EXTENDER® Jnr SeCo**
- **Actives:** Albendazole
- **Dose rate:** 20-40kg - 1 capsule
- **Pack size:** 500 capsules
- Single active capsule.
- Parasites sensitive to albendazole are controlled for 100 days.
- Veterinary advice regarding sustainable drenching, refugia and priming and exit drenching is recommended.
- Do not use if *Haemonchus* resistance is suspected.

**IVOMEC® MAXIMIZER for Adult Sheep**
- **Actives:** Ivermectin
- **Dose rate:** 40-80kg - 1 capsule. +80kgs - 2 capsules
- **Pack size:** 500 capsules
- Single active capsule.
- Parasites sensitive to ivermectin are controlled for 100 days.
- Veterinary advice regarding sustainable drenching, refugia and priming and exit drenching is recommended.
- Aids in the prevention of dags and in the control of blowfly strike in the breech area. Adult sheep only.
Long-acting single active moxidectin injections should be used in specific circumstances. Moxidectin provides excellent control of *Haemonchus contortus* (Barber’s Pole). Veterinarians should be involved in long-acting injection treatment decision making as advice on management techniques, such as refugia and drench check testing, to reduce the threat of parasite resistance developing is paramount.

### Injections

**EXODUS® LAI**

<table>
<thead>
<tr>
<th>Active</th>
<th>Dose rate</th>
<th>WHP</th>
<th>Admin</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>20KG</td>
<td>MEAT 91</td>
<td>MILK 180</td>
</tr>
</tbody>
</table>

Protection against sensitive *Teladorsagia* (*Ostertagia*) for 112 days, *Haemonchus* for 91 days and *Trichostrongylus* for 42 days.

**EXODUS® 1%**

<table>
<thead>
<tr>
<th>Active</th>
<th>Dose rate</th>
<th>WHP</th>
<th>Admin</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>50KG</td>
<td>MEAT 28</td>
<td>MILK 35</td>
<td>S/C</td>
</tr>
</tbody>
</table>

Protection against sensitive *Teladorsagia* (*Ostertagia*) and *Haemonchus* for at least 35 days.
Ectoparasiticides

Like anthelmintics, ectoparasiticides act in different ways to kill the louse or fly. Veterinary advice should be sought for the most appropriate product and application method to use on a property.

*IGR - Insect growth regulator.

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**Fly & Lice Control**

<table>
<thead>
<tr>
<th>Active WHP Controls</th>
<th>Controls</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEAT 49</td>
<td>MILK 35</td>
</tr>
<tr>
<td>MEAT 14</td>
<td>MILK 35</td>
</tr>
<tr>
<td>MEAT 7</td>
<td>MILK 35</td>
</tr>
<tr>
<td>MEAT 21</td>
<td>MILK 35</td>
</tr>
<tr>
<td>MEAT NIL</td>
<td>MILK NIL</td>
</tr>
<tr>
<td>MEAT 14</td>
<td>MILK 35</td>
</tr>
<tr>
<td>MEAT 14</td>
<td>MILK 35</td>
</tr>
<tr>
<td>MEAT 14</td>
<td>MILK 35</td>
</tr>
<tr>
<td>MEAT 14</td>
<td>MILK 35</td>
</tr>
</tbody>
</table>

**EXIT® Pour-On**

- Actives: Triflumuron
- Dose rate: refer to label.
- Pack size: 20L

IGR pour-on that controls both fly and lice. Must be used with the EXIT applicator gun.

**CYRAZIN® Spray-On**

- Actives: Cyromazine
- Dose rate: refer to label.
- Pack size: 10L & 20L


**CYRAZIN® Liquid**

- Actives: Cyromazine
- Dose rate: refer to label.
- Pack size: 2L & 5L

IGR dip. Short meat withhold.

**CYRAZIN® K.O.**

- Actives: Cyromazine, Ivermectin
- Dose rate: refer to label.
- Pack size: 1L & 5L

Unique double combination IGR and ivermectin (macrocyclic lactone) providing excellent long-term fly control and maggot knockdown. Use through a spray race or with a jetting wand.

**FLEECEMASTER®**

- Actives: Diflubenzuron
- Dose rate: refer to label.
- Pack size: 5L

IGR dip for lice control and long-term protection against blowfly strike. Aids in the control of cockle.

**CYPERCARE™**

- Actives: Cypermethrin
- Dose rate: refer to label.
- Pack size: 1L & 20L

Synthetic pyrethroid pour-on for the control of lice and keds. Ideal off shears treatment.
COPACAPS 5g

Dose rate: Ewe 50kg – 1 x 5g capsule
Pack size: 5g (100 capsules)

For the treatment and prevention of copper deficiency.

BIVATOP® 200

Dose rate: WHP, Admin

Oxytetracycline is a broad spectrum antibiotic with bacteriostatic activity. Treats a wide range of common respiratory and local infections associated with oxytetracycline sensitive organisms.

MAMYZIN®

Dose rate: WHP, Admin

Antibiotic for the treatment of infections caused by gram positive bacteria that cause mastitis, footrot, respiratory and uterine infections.

METACAM® 20

Dose rate: WHP, Admin

Non-steroidal anti-inflammatory for single-dose use in sheep and lambs over 2 weeks of age for the alleviation of pain and inflammation. Administer high on the neck behind the ear under the skin.

*Where milk may be processed for human consumption.
<table>
<thead>
<tr>
<th>Parasite</th>
<th>Tips</th>
<th>Treatment</th>
<th>Resistance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liver Fluke (Fasciola hepatica)</td>
<td>This parasite can live in sheep, cattle and deer.</td>
<td>Sheep are particularly sensitive to immature fluke migrating through their livers and so they need to be treated with a product that kills immature flukes.</td>
<td></td>
</tr>
<tr>
<td>Barber’s Pole Worm (Haemonchus contortus)</td>
<td>The Blood Sucking Parasite.</td>
<td>Usually seen seasonally as it needs warm ambient temperatures for its larvae on the pasture to survive. One adult parasite can produce up to a whopping 15,000 eggs per day.</td>
<td>Low levels of resistance to the BZs only.</td>
</tr>
<tr>
<td>Brown Stomach Worm (Teladorsagia/ Oster tagia circumcincta)</td>
<td>Perfect Conditions: Larvae survive freezing on pasture, and can ‘hibernate’ in stomach wall. A major worm of ewes around lambing, and of lambs during the spring and early summer.</td>
<td>Reduces appetite hampering growth in lambs and milk production in ewes.</td>
<td>Moderate to high levels of resistance seen to all single active drenches. Low levels of resistance to combination drenches.</td>
</tr>
<tr>
<td>Black Scour Worm (Trichostrongylus spp.)</td>
<td>Perfect Conditions: Larvae survive well in cooler conditions and so disease is often seen in autumn.</td>
<td>Reduces growth in lambs and milk production in ewes.</td>
<td>Moderate levels of resistance seen to Lev and BZ. Low levels of resistance to abamectin, moxidectin and combination drenches.</td>
</tr>
<tr>
<td>Thin-Necked Worm (Nematodirus spp.)</td>
<td>Distribution: Two different species (N. filicollis and N. spathiger) are usually present on most farms.</td>
<td>There are high levels of resistance to the BZs, particularly in N. spathiger. There are moderate levels of resistance to levamisole and BZ/Lev combinations. MLs, ML/Lev and triple combinations remain highly effective.</td>
<td></td>
</tr>
<tr>
<td>Tape worm (Moniezia spp.)</td>
<td>TIPS: By itself it rarely causes reduction in growth and productivity. Gastrointestinal parasites causing diarrhoea can predispose lambs to flystrike.</td>
<td>Albendazole (BZ) is known to have moderate efficacy against tapeworm but praziquantel is the drug that specifically targets tapeworms.</td>
<td>Tapeworm is the only gut worm that you can actually see in the faeces of animals.</td>
</tr>
</tbody>
</table>
**FLY LIFE CYCLE**

Completed in as few as 18 days

**ECTOPARASITICIDE CONTROL AT A GLANCE**

<table>
<thead>
<tr>
<th>SPRING (Docking/Tailing, Dagging)</th>
<th>SUMMER (Weaning, Shearing)</th>
<th>AUTUMN (Topping)</th>
<th>WINTER (Pre-lamb)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CYRAZIN Spray-On Cyromazine</td>
<td>CYRAZIN Liquid Cyromazine</td>
<td>CYRAZIN K.O. Cyromazine + Ivermectin</td>
<td>EXIT Pour-On BPU</td>
</tr>
<tr>
<td>Apply between 4-12 weeks wool growth</td>
<td>Apply after 6-8 weeks wool growth</td>
<td>Apply after 6-8 weeks wool growth</td>
<td>Apply off shears up to 6 months wool growth</td>
</tr>
<tr>
<td>Fly 6 weeks*</td>
<td>Application 1 Application 2</td>
<td>Application 1 Application 2</td>
<td>14 weeks*</td>
</tr>
</tbody>
</table>

**TOP TIPS FOR FLY CONTROL**

- Keep an eye on temperatures and recognise when the blowfly season is likely to start. It can be quite different year to year.
- Reduce the likelihood of active strike by timely dagging and tailing.
- Control gastrointestinal worms to reduce fleece soiling.
- Shear at times of high fly activity.
- Recognise high risk times (e.g. where heavy rain has soaked the fleece, warm temperatures and low wind) and check stock regularly.
- Use different chemicals to prevent flystrike and treat lice.

**FLY LIFE CYCLE**

Completed in as few as 18 days

**ECTOPARASITICIDE CONTROL AT A GLANCE**

- **CYROMAZINE**: Very low levels of resistance in blowfly population. Low volume spray on good choice to protect lambs at tailing. Good alternative to dicyclanil, particularly if resistance to dicyclanil in local fly population.
- **IVERMECTIN**: No resistance reported in blowfly population. Excellent activity against 3rd instar larvae – treatment of choice in active strike.
- **BPU (Benzoyl Phenyl Urea)**: Resistant flies found North Island. Check with local veterinarian for likely local efficacy.
- **SYNTHETIC PYRETHROIDS**: Resistance in lice population. Consider treatment trials with veterinarian to see if effective on farm. Use if effective to protect other modern chemicals.

**PRODUCT DILUTION RATES**

For maximum fly control

<table>
<thead>
<tr>
<th>Subclinical</th>
<th>Clinical</th>
</tr>
</thead>
<tbody>
<tr>
<td>CYRAZIN K.O.</td>
<td>2L : 1000L</td>
</tr>
<tr>
<td>CYRAZIN Liquid</td>
<td>2L : 1000L</td>
</tr>
<tr>
<td>FLEECEMASTER</td>
<td>2.5L : 1000L</td>
</tr>
</tbody>
</table>

*Maximum period of protection/application. Protection period can be reduced if: Rain has caused fleeces to be thoroughly wet through more than once. Heavy rain occurred after application. No wind following a period of rain, not drying the fleece. Soiled fleeces and/or fleece rot present. Incorrect application for fly challenge and/or breed. *Minimum period of protection.
FAECAL EGG COUNT REDUCTION TEST (FECRT) AND LARVAL COUNTS

FECRTs and larval counts look to give a snapshot in time of the levels of resistance of different parasite species to the different drench classes and combinations of these on a property. Each drench class and combination is tested in a minimum of 10 lambs. Depending on the number of drench classes and combinations that require testing, you will usually need between 60 and 100 lambs that have not been drenched within 4-6 weeks before you start the test. The test involves taking baseline faecal samples on the day of the drench and taking faecal samples 10-14 days later.

**DAY 0 - GETTING BASELINE RESULTS AND DRENCHING**

**20 x Individual Faecal Samples**
Take individual faecal samples from 20 randomly selected lambs from the whole mob of lambs. This can be 3 or 4 lambs from each drench group depending on the number of groups you have. Don’t forget to use disinfectant free lube.

- Identify the samples with the lamb’s number if possible
- Lab Tests to Request:
  - 10-12 x Individual Faecal Samples for faecal egg count (FEC)
  - 1 x Pooled Quantitative Larval Culture (using all 20 samples)

**Drenching**
- Randomly allocate lambs into a drench group, a minimum of 10 lambs per group
- Weigh each lamb and dose using a syringe according to the instructions
- Identify each lamb by ear tag or marker so that they can be identified in 10-14 days’ time

**DAY 10-14 – FAECAL SAMPLE COLLECTION DAY**

**60-100 x Individual Faecal Samples**
Collect individual faecal samples from each lamb and identify each one with the lamb’s number - and/or the marker colour i.e. must identify to drench group.

- Lab Tests to Request:
  - 60-100 x individual faecal samples
  - 1 x Quantitative Larval Culture per group

**HELPFUL HINTS & TIPS**
- Weaning time is a good time to do a FECRT as lambs have usually not been previously drenched. As it is early in the season, it is a good idea to do a couple of FECs before weaning to check that there are enough eggs in the lambs’ faeces to start the FECRT. Ideally you’d have an average of 500-700epg with all lambs positive, but at least 300epg is necessary (otherwise it’s unlikely to get good numbers of all worm species).
- If the FECRT is done when the worm challenge is high and a control group is an animal welfare concern then this group should be removed from the test. The control group is a good source of information for the laboratory parasitologist when interpreting the results but it is not absolutely necessary. You can use the Day 0 results instead of the control at Day 10 in the calculations.
- Make a call about courier reliability when planning the test. Doing day 14 is easier so that samples can be sent in the week. Going a few days over day 14 is fine, you just may find some eggs in the levamisole group due to this drug not commonly killing immature worms.
- The pasture that these lambs have previously grazed on is what is assessed. Don’t make assumptions about different parts of the property that lambs do not regularly graze and were not grazing on before Day 0. In other words manage the group to sample the area of the farm you are interested in – lambing paddocks are a good representation usually. Keep them away from the quarantine paddock by the yards!
- Day 0 can be made more efficient (and therefore the test more cost-effective) by the farmer pre-weighing and organizing the groups before the vet arrives. The same applies to Day 10-14. BUT they can’t yard the animals too early or it becomes harder to get faecal samples.

---

**RECOMMENDED DRENCH CHECK GROUPS**

1. Control Group – no treatment
2. Abamectin
3. Oxfendazole
4. Levamisole
5. Benzimidazole/Levamisole
6. Abamectin/Oxfendazole/Levamisole

**OTHER GROUPS THAT CAN BE ADDED TO TEST**

7. Moxidectin
8. Abamectin/Levamisole
9. Derquantel/Abamectin
10. Monepantel/Abamectin

**WHAT YOU WILL NEED**

- 10mL Syringes (for dosing)
- Identification method; ear tags or marker
- Plastic bags/pottles for collecting faeces; Day 0 x 10 Day 10-14 x 60-100
- Marker pen
- Weigh scales
CALCULATING THE RESULTS

Faecal Egg Counts

FECs do not differentiate between different parasite species apart from *Nematodirus*. Eggs are allowed to hatch in the laboratory into larvae and identified to parasite species under a microscope. The FECRT may show that some parasites survived the drench but the larval culture is necessary to show which parasite species these are.

- Sum the individual FECs from each group at Day 10-14 and divide by the number of lambs in the group to get a mean FEC for each group.
- Use the formula below to calculate the % FEC reduction for each group.

\[
\% \text{ FEC Reduction} = \frac{\text{Drench Group Mean FEC Day 10-14}}{\text{Control Group Mean FEC Day 10-14}} \times 100
\]

Parasite Species Larval Counts

A total larval count for each group is given with the % contribution of each parasite species to this total number.

- To get a parasite species larval count at day 10-14 for each group follow the calculation below.

\[
\frac{\% \text{ Parasite Species Larval Count Reduction}}{100} = \frac{\text{Drench Group Larval Count Day 10-14}}{\text{Control Group Larval Count Day 10-14}} \times 100
\]

DRENCH CHECK

A drench check is a quick way of looking at whether a certain drench is killing adequate numbers of parasites on a property. Follow all the instructions as per the FECRT but with only one group. A control group can be added for a more robust test. Check all drenching equipment is working well if not using a syringe to drench i.e. calibrate drench guns at the beginning and end of drenching at the least. If no control group is included substitute the Day 0 results for the Day 10-14 control into the calculations. Ensure drenches used for drench checks are relatively fresh, and well shaken. The quality of information out of a drench check depends on how well it is done!

Dosing Guide

<table>
<thead>
<tr>
<th>PACK SIZE</th>
<th>DOSE RATE</th>
<th>25kg</th>
<th>30kg</th>
<th>35kg</th>
<th>40kg</th>
<th>50kg</th>
<th>60kg</th>
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<tr>
<td>500mL</td>
<td>1mL/20kg</td>
<td>400</td>
<td>333</td>
<td>285</td>
<td>250</td>
<td>200</td>
<td>166</td>
<td>142</td>
<td>125</td>
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<tr>
<td>500mL</td>
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<td>333</td>
<td>285</td>
<td>250</td>
<td>200</td>
<td>166</td>
<td>142</td>
<td>125</td>
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<tr>
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<td>1mL/5kg</td>
<td>200</td>
<td>166</td>
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Number of sheep treated on pack size and dose rate.
<table>
<thead>
<tr>
<th>Applicators</th>
<th>Gun size</th>
<th>Code</th>
<th>Product Details</th>
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</thead>
<tbody>
<tr>
<td>SHEEP ORAL GUN</td>
<td>15mL</td>
<td>10011180</td>
<td>All sheep oral products.</td>
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<tr>
<td>TOPICAL SPRAY-ON GUN</td>
<td>10mL</td>
<td>10011246</td>
<td>For CYRAZIN Spray-On.</td>
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<tr>
<td>5ML INJECTOR GUN</td>
<td>5mL</td>
<td>10011248</td>
<td>For EXODUS LAI Injection.</td>
</tr>
<tr>
<td>ORAL/SPRAY-ON GUN</td>
<td>20mL</td>
<td>10011207</td>
<td>All oral products. For CYPERCARE product replace with a spray nozzle.</td>
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<tr>
<td>TOPICAL POUR-ON GUN</td>
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<td>10011213</td>
<td>For EXIT Pour-on &amp; EXIT Extreme product.</td>
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<tr>
<td>2ML INJECTOR GUN</td>
<td>2mL</td>
<td>10011331</td>
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<tr>
<td>SIZE (S) CAPSULE GUN</td>
<td>20-80kg</td>
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<td>For small size controlled release capsules. *Handle colour may vary.</td>
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<tr>
<td>SIZE (L) CAPSULE GUN</td>
<td>40-80kg</td>
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<tr>
<td>5g COPPER GUN</td>
<td>5g</td>
<td>10011300</td>
<td>For COPACAPS 5g Capsules.</td>
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</tbody>
</table>
CATTLE PRODUCTS

ANTHELMINTICS
Triple Combinations
Double Combinations
Single Actives
MINERALS
THERAPEUTICS
Antibiotics
Mastitis
Anaesthesia & Analgesia
PARASITES
Internal & External Parasite Life Cycles
DOISING
APPLICATORS
Anthelmintics

Triple combination drenches contain three drugs that act in different ways to kill internal roundworms and lungworm. Triple combination products have been shown to significantly slow the development of drench resistance. The sooner combination drenches are used the more effective they will be at preventing resistance development, particularly when used with management strategies that help to preserve sensitive parasites. Veterinarians are best placed to advise on resistance prevention.

Triple Combinations

**MATRIX® C Hi-Mineral**
- **Active**: Abamectin, Levamisole, Oxfendazole
- **Pack size**: 1L, 5L, 10L & 20L
- Mineralised.
- Ideal quarantine drench.

**MATRIX® Mini-Dose**
- **Active**: Abamectin, Levamisole, Oxfendazole
- **Pack size**: 1L, 5L, 10L & 20L
- Allows for more accurate dosing of calves.

**Iver MATRIX® Calf Hi-Mineral Mini-Dose**
- **Active**: Ivermectin, Levamisole, Oxfendazole
- **Pack size**: 5L
- Ivermectin substituted for abamectin for added safety in young calves.

Double combination drenches contain two drugs that act in different ways to kill roundworms and lungworm. Other drugs may be added to control other parasites such as liver fluke or tapeworm. Double combination drenches are available in pour-on, injectable or oral formulations. It doesn’t matter which method of delivery is chosen, as all have been shown to be effective, as long as the right product is chosen for the right situation and instructions for application on the label are followed. To ensure that these drenches are effective for years to come, it is important to use them appropriately and with particular regard to ensuring that sensitive parasites to these drugs remain on the property. Veterinarians are best placed to advise on sustainable use of drenches.

Double Combinations

**ECLIPSE® Pour-On**
- **Active**: Abamectin, Levamisole
- **Pack size**: 1L, 2.5L, 5L, 5.5L & 10L
- World’s first double combination pour-on.
- Ideal for use in R1 and R2 stock where Cooperia and Ostertagia control is necessary.
CATTLE

**ECLIPSE® E Injection**

**Actives:** Eprinomectin, Levamisole

**Pack size:** 500mL

World’s first double combination injection. Ideal for use in R1 and R2 stock where *Cooperia* and *Ostertagia* control is necessary. Prior to use store in the fridge to maintain excellent efficacy and quality, right up to the expiry date. Once broached the product can be stored at room temperature but must be used within 35 days.

**ECLIPSE® E Injection with B12 & Se**

**Actives:** Eprinomectin, Levamisole

**Pack size:** 500mL & 3L (6x 500mL)

Vitamin B12 and Se added to ECLIPSE E injection to support growth, immunity and reproduction. Treats and prevents selenium and cobalt (B12) deficiency. Prior to use store in the fridge to maintain excellent efficacy and quality, right up to the expiry date. Once broached the product can be stored at room temperature but must be used within 3 months.

**SWITCH C Hi-Mineral**

**Actives:** Abamectin, Levamisole

**Pack size:** 5L, 10L, & 20L

Use in calves over 120kg where oral dosing is safe for both stock and stockperson.

**SWITCH Fluke 10**

**Actives:** Abamectin, Levamisole, Triclabendazole

**Pack size:** 5L & 10L

The added flukicide makes this the ideal quarantine drench. Low dose rate to allow for more accurate dosing.

**ARREST® C**

**Actives:** Levamisole, Albendazole

**Pack size:** 1L, 5L & 20L

Albendazole provides added control of adult liver fluke and tapeworm. Low dose rate to allow for more accurate dosing in young calves.

**OXFEN™ C PLUS**

**Actives:** Levamisole, Oxendazole

**Pack size:** 5L & 20L

Oxendazole provides added control of tapeworm. Also registered to control adult liver fluke in sheep.

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**Anthelmintics**
In adult cattle Ostertagia is the only roundworm that reduces productivity. This means that single active products can be used that target Ostertagia. These drugs also control lungworm and lice. Liver fluke affects adult cattle and drugs may be added to single active products that also target liver fluke. Veterinarians may advise the use of single active products in youngstock in some situations to target specific parasites.

**Single Actives**

**EPRINEX® Pour-On**
- **Actives:** Eprinomectin
- **Pack size:** 250mL, 1L, 2.5L, 5L & 25L
- **WHP:** Deer meat: 7 days, Bobby calf meat: Nil

Treatment of lactating dairy cattle at calving and/or mid-lactation increases milk solids and can reduce calving to conception time. Eprinomectin is produced by modifying abamectin five-fold to make it more potent and a much better safety profile. Persistent activity against Ostertagia and lungworm.

**EXODUS® Pour-On**
- **Actives:** Moxidectin
- **Pack size:** 5L
- **WHP:** Deer meat: 28 days, Bobby calf meat: 16 days

Persistent activity against Ostertagia and lungworm.

**GENESIS® Pour-On**
- **Actives:** Abamectin
- **Pack size:** 1L, 2.5L, 5L, 5.5L, 10L & 20L
- **WHP:** Deer meat: 28 days, Bobby calf meat: 16 days

**GENESIS® Ultra Pour-On**
- **Actives:** Abamectin, Triclabendazole
- **Pack size:** 1L, 2.5L & 5L
- **WHP:** Deer meat: 28 days, Bobby calf meat: 16 days

Added flukicide to control immature and mature liver fluke when withholding period is not a concern.

**GENESIS® Injection**
- **Actives:** Abamectin
- **Pack size:** 500mL & 4x 500mL herd pack
- **WHP:** Sheep meat: 28 days, milk: 35 days

Control of sucking lice.

**GENESIS® Injection B12 & Se**
- **Actives:** Abamectin
- **Pack size:** 500mL & 4x 500mL herd pack
- **WHP:** Sheep meat: 28 days, milk: 35 days

Treats and prevents selenium and cobalt (B12) deficiency, to support growth, immunity and reproduction.
CATTLE

Anthelmintics

**COPACAPS**

**Dose rate:** refer to label.

**Pack size:** 5g (100 capsules), 10g (50 capsules), 20g (50 capsules), 30g (32 capsules) & 36g (32 capsules)

COPACAPS contain cupric oxide rods inside a gelatine capsule. They can be used for both treatment and prevention of copper deficiency. Capsules are more consistently effective than other supplementation methods at raising liver copper stores for up to 9 months following administration. Administer capsules carefully and with the recommended applicator.

**SELPOR™**

**Dose rate:** Deer: 3mL/50kg

**Pack size:** 2.5L

Easy pour-on application for the prevention and treatment of selenium deficiency.

---

**IVOMEC® Plus Injection**

**Actives:** Ivermectin, Clorsulon

**Pack size:** 500mL

Ideal dry-off treatment when a flukicide is necessary. Effective against sucking lice.

**OXFEN™ C Hi-Mineral**

**Actives:** Oxfendazole

**Pack size:** 5L & 20L

Use under veterinary advice when targeting specific parasites.

**Minerals**

**Minerals WHP Admin Others**

<table>
<thead>
<tr>
<th>Active</th>
<th>Minerals</th>
<th>Dose rate</th>
<th>WHP</th>
<th>Controls</th>
<th>Admin</th>
<th>Other</th>
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<tbody>
<tr>
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<td>MEAT</td>
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<tr>
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</tr>
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<td>20KG</td>
<td>50KG</td>
<td>MEAT</td>
<td>10</td>
<td>5</td>
<td>MEAT</td>
</tr>
</tbody>
</table>

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**SELPOR™ Actives:** Sodium Selenate

**Dose rate:** Deer: 3mL/50kg

**Pack size:** 2.5L

Easy pour-on application for the prevention and treatment of selenium deficiency.
**BIVATOP® 200**

- **Actives:** Oxytetracycline (200mg/mL)
- **Dose rate:** For intravenous use in cattle only 3.3mL/100kg
- **Pack size:** 100mL, 250mL

Oxytetracycline is a broad spectrum antibiotic with bacteriostatic activity. Treats a wide range of common respiratory and local infections associated with oxytetracycline sensitive organisms.

---

**MAMYZIN®**

- **Actives:** Penethamate hydriodide
- **Dose rate:** 5g daily for 1-5 days.
- **Pack size:** 5g & 10g
- **WHP:** milk: 60 hours.
  - 48 hours if using 10g day 1 and 5g day 2.

Antibiotic for the treatment of mastitis, footrot, respiratory infections and uterine infections caused by penicillin sensitive organisms.

---

**CEFAMASTER®**

- **Actives:** Cephalonium (250mg)
- **Dose rate:** 1 x syringe/quarter
- **Pack size:** 200 syringes

Use in dairy cows to treat subclinical mastitis present at drying off, new infections during the dry period. Reduces somatic cell counts (SCCs) and mastitis in the subsequent lactation.

---

**BIOBLOC®**

- **Actives:** Bismuth Subnitrate, (Also contains 3% Thyme oil)
- **Dose rate:** 1 x syringe/quarter
- **Pack size:** 200 syringes

Use in dairy cows for the prevention of mastitis during the dry period in heifers and cows and for the prevention of peri-calving mastitis in maiden heifers.
**METACAM® 20 mg/mL**

**Solution for Injection**

- **Actives:** Meloxicam
- **Dose rate:** Calves <50kg: 0.5mL/20kg
- **Pack size:** 50mL, 100mL & 250mL
- **WHP:** Milk: 84 hours

Non-steroidal anti-inflammatory for the alleviation of pain, toxaemia, pyrexia and inflammation due to infection such as in mastitis or a surgical procedure such as dehorning. Better cure rates and improved conception rates are seen when METACAM is used as well as antibiotics to treat mastitis.

<table>
<thead>
<tr>
<th>Dose rate</th>
<th>WHP</th>
<th>Admin</th>
</tr>
</thead>
<tbody>
<tr>
<td>100KG</td>
<td>MEAT</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>MILK</td>
<td>3.5</td>
</tr>
</tbody>
</table>

**PLANIPART®**

- **Actives:** Clenbuterol hydrochloride
- **Dose rate:** WHP</br>**Admin Others**

- **Pack size:** 50mL
- **WHP:** Milk: 60 hours

For the relaxation of uterine musculature and abolition of contractions to enable obstetric intervention before during and after delivery.

<table>
<thead>
<tr>
<th>Dose rate</th>
<th>WHP</th>
<th>Admin</th>
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</thead>
<tbody>
<tr>
<td>120KG</td>
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</tr>
</tbody>
</table>

---
SUCKING AND BITING LICE
Linognathus vituli, Haematopinus spp., Solenoptes spp.
Bovicola bovis.

**DISTRIBUTION:** All over NZ.

**PERFECT CONDITIONS:** Winter coats. Animals always have a mixed infection of both biting and sucking lice.

**SIGNS:** Can be seen by the naked eye as little black/brown dots around the eyes and neck. Biting lice are very itchy and cattle will rub on fences and other cattle.

**TREATMENT:** Only a pour-on product has good efficacy against both biting and sucking lice.

**TIPS:** The whole life cycle takes place on the cow. Sucking lice suck blood and so oral and injectable products are often able to kill sucking lice as the drugs are sucked in the blood by the louse. The MLs often have persistent activity. No drug kills the eggs (nits). Adult lice lay low numbers of eggs and so will take a long time to build up a large population meaning that one treatment a season is usually enough to control lice.

**RESISTANCE:** None currently reported in cattle in NZ.

LUNGWORM
Dictyocaulus viviparus

**DISTRIBUTION:** All over NZ.

**PERFECT CONDITIONS:** Warm and wet. Irrigated blocks.

**SIGNS:** Group coughing, faster breathing 3-4 weeks after challenge. Immunity develops quickly but needs regular challenge to maintain. Can be seen the year after a particularly dry summer (low challenge year) or if naïve animals are introduced to infected pasture.

**TREATMENT:** All classes of drench have good efficacy. The MLs have varying levels of persistent activity.

**TIPS:** Larvae hatch from eggs in the cow and so will not show up in faecal egg counts. Disease can be seen before larvae are present in the faeces. Larvae can encyst in the calf over winter.

**RESISTANCE:** No resistance has been reported in NZ.
**LIVER FLUKE**  
*Fasciola hepatica*

**DISTRIBUTION:** Predominates on the west coast of the South Island, although present all over NZ.

**PERFECT CONDITIONS:** Areas with stagnant water. Requires the mud snail to complete its life cycle. The mud snail is found around stagnant water all over NZ.

**SIGNS:** Low growth rates, reduced milk production and fertility. Reported on kill sheets.

**TREATMENT:** Generally, only flukicides will kill liver fluke. These are different from the BZ, Lev and MLs that are used to kill gutworms and lungworm. Some flukicides kill liver fluke from 2 weeks of age and some only kill adult fluke.

**TIPS:** Use knowledge of the lifecycle to determine the likely age of the liver fluke population in infected cattle, bearing in mind withholding periods and administration method, to determine which product to use. Adult liver fluke can live for 2 years in the livers of cattle.

**RESISTANCE:** None currently reported in cattle in NZ.

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**GUTWORMS**  
*Ostertagia ostertagi, Cooperia oncophora, Trichostrongylus spp.*

**PERFECT CONDITIONS:** Warm and wet. Irrigated blocks.

**SIGNS:** Poor growth rates, reduced milk production. Diarrhoea if heavy challenge.

**TREATMENT:** Cattle under 18 months of age require treatment with a combination drench (more than one drench family). Gold standard is a triple combination, although these are only available for oral drenching. Single active MLs that do not partition in milk are best for adult cattle.

**TIPS:** All the gutworms encyst over winter inside the calf allowing reinfection in spring. Adult dairy cattle will increase their milk solids on average by 0.03kgMS/day after treatment with EPRINEX.

**RESISTANCE:** Significant resistance seen in Cooperia against ML and BZ. Resistance in Ostertagia against Lev and low levels to BZs and MLs.
## Dosing Guide

<table>
<thead>
<tr>
<th>PACK SIZE</th>
<th>DOSE RATE</th>
<th>100kg</th>
<th>200kg</th>
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Number of cattle treated on pack size and dose rate.
**CATTLE ORAL GUN**
Gun size: 15mL
Code: 10011180
For Iver MATRIX Calf.

**30mL POUR-ON GUN**
Gun size: 30mL
Code: 10011256
For ECLIPSE Pour-On.

**INJECTOR GUN**
Gun size: 12mL
Code: 1001121
For all IVOMEC & GENESIS Injections.

**CATTLE ORAL GUN**
Gun size: 30mL
Code: 10011138
All oral cattle products.

**65mL POUR-ON GUN**
Gun size: 65mL
Code: 10011133
For EPRINEX, EXODUS, GENESIS & SELPOR Pour-On products.

**ECLIPSE INJECTOR GUN**
Gun size: 12mL
Code: 10011220
For ECLIPSE E Injections.

**5g COPPER GUN**
Gun size: 5g
Code: 10011300
For COPACAPS 5g Capsules.

**10/20g COPPER GUN**
Gun size: 10g & 20g
Code: 10011279
For COPACAPS 10g & 20g Capsules.

**30/36g COPPER GUN**
Gun size: 30g & 36g
Code: 10011282
For COPACAPS 30 & 36g Capsules.

**FLOATING HOOK**
Gun size: 15g & 30g
Code: 10011139
For cattle oral applicator guns.
ANTHELMINTICS
3 in 1
2 in 1
THERAPEUTICS
SEDATIVES & ANAESTHETICS
The goal of a parasite management programme in horses is to reduce infestations and disease consequences rather than total elimination of internal parasites. Reducing the environmental parasite burden that horses are exposed to is accomplished through effective anthelmintic use and pasture management practice. Boehringer Ingelheim has a wide range of products for the treatment and control of internal roundworms (including arterial larval stages of *Strongylus vulgaris* and benzimidazole resistant small strongyles), lungworms, tapeworms, bots and skin lesions (summer sores) in horses. It is recommended that horse owners obtain professional advice from a veterinarian for an appropriate drench choice and worming programme.

### TRIUMPH™ Liquid

**Actives:** Ivermectin, Oxibendazole, Praziquantel  
**Pack size:** 300mL & 1L  
**Aniseed flavoured, creamy liquid.**  
Unique syringe applicator design.  
1L comes in a refill pack or gun pack option.  
Ideal for multiple treatments.  
For use in any age, including foals, pregnant mares and breeding stallions.

### TRIUMPH™ Paste

**Actives:** Ivermectin, Oxibendazole, Praziquantel  
**Dose rate:** 1 x syringe/600kg  
**Pack size:** 30mL  
**Aniseed flavoured paste.**  
Lockable separator for 50kg increments.  
For use in any age, including foals, pregnant mares and breeding stallions.

### PARADE® Equine Gel

**Actives:** Ivermectin, Praziquantel  
**Pack size:** 15mL  
**Aniseed flavoured gel.**  
Unique ergonomic shaped syringe.  
For use in any age, including foals, pregnant mares and breeding stallions.

### GENESIS® Horse Wormer

**Actives:** Abamectin, Praziquantel  
**Pack size:** 30mL  
**Palatable oatmeal flavoured paste.**  
For use in any age, including foals, pregnant mares and breeding stallions.
### PRASCEND® 1 mg/mL
**Tablets for Horses**

**Actives:** Pergolide (as pergolide mesylate)

**Dose rate:** refer to label

**Pack size:** 60 tablets & 160 tablets

For the control of clinical signs associated with pituitary pars intermedia dysfunction (PPID) (equine Cushing’s disease) in horses and ponies.

### METACAM® 15mg/mL
**Oral Suspension for Horses**

**Actives:** Meloxicam

**Dose rate:** 0.6mg/kg, once daily for up to 14 days

**Pack size:** 100mL

Alleviation of inflammation and relief of pain in both acute and chronic musculoskeletal disorders in horses.

### METACAM®
**20mg/mL for Injection**

**Actives:** Meloxicam

**Dose rate:** Single i/v injection 3mL/100kg followed, 24 hrs later, by METACAM® 15mg/mL Oral Suspension for Horses.

**Pack size:** 50mL, 100mL & 250mL

For single dose, rapid onset, treatment of musculoskeletal disorders and pain relief associated with colic.

### BUSCOPAN® Compositum

**Actives:** Hyoscine-n-butylbromide, dipyrone

**Dose rate:** 20-30mL

**Pack size:** 100mL

Treatment of horses for spasmodic colic, gastroenteritis, diarrhoea and oesophageal obstruction.

### HYONATE®

**Actives:** Sodium hyaluronate

**Dose rate:** i/v: 4mL (2 vials~40mg).

i/a: 2mL (1 vial~20mg).

**Pack size:** 2 x 2mL

For the treatment of non-infectious acute synovitis in horses.

### VENTIPULMIN®
**Oral Bronchodilator for Horses**

**Actives:** Clenbuterol hydrochloride

**Dose rate:** 2.5g/50kg twice daily, for 10 days.

**Pack size:** 500g WHP: refer to label.

Relief of bronchospasm and airway obstruction associated with: bacterial infection – during and after the infective phase; bronchitis; bronchopneumonia; respiratory allergies; exercise induced bronchospasm; and all conditions where narrowing of the small airways is a contributing factor to the problem.
VENTIPULMIN®
Bronchodilator for Horses

**Actives:** Clenbuterol hydrochloride
**Dose rate:** 1.25mL/50kg, twice (on first day)*
**Pack size:** 50mL. WHP: refer to label.

For the treatment of all conditions where constriction of the airways occurs. *Follow treatment with VENTIPULMIN Oral Bronchodilator for Horses for a minimum period of 5 days.

MAMYZIN®

**Actives:** Penethamate hydriodide
**Dose rate:** 5g daily. , for 1-5 days
**Pack size:** 5g & 10g (10 vials per carton)

For the treatment of bacterial infections caused by sensitive organisms to penethamate hydriodide.

SEDIVET*

**Actives:** Romifidine hydrochloride
**Dose rate:** refer to label
**Pack size:** 20mL

For sedation of horses to facilitate handling, examination and treatment, and as a pre-medication agent prior to general anaesthesia. Do not use in pregnant mares.

HALOTHANE-VET

**Actives:** Halothane BP with 0.01% thymol
**Dose rate:** refer to label
**Pack size:** 250mL

Induction & maintenance of anaesthesia for all types of surgery. Can be used in conjunction with premedication, sedation or anaesthetic inducing agents.

ISOFLURANE-VET

**Actives:** Isoflurane 100%
**Dose rate:** refer to label
**Pack size:** 250mL

Gaseous anaesthetic for the induction & maintenance of anaesthesia for all types of veterinary surgery in a wide range of animal species.
COMPANION ANIMAL PRODUCTS

PARASITICIDES
Orals
Topicals & Sprays

THERAPEUTICS
Inflammation & Pain
Therapeutics

ANTIBIOTICS

ANAESTHETICS

ORAL HEALTH
Dental Chew
The flea life cycle is comprised of four developmental stages: egg, larva, pupa and adult flea. The time it takes for a new flea to develop can vary from as little as 12 days to as long as 325 days. As flea pupae can remain dormant in the environment for up to 6 months, it may take some time for flea eggs to emerge as adult fleas. Adult fleas, the life cycle stage you see on the pet, make up just 5% of the total flea population. Ninety-five percent of the population is made up of eggs, larvae and pupae, which can be found in the pet’s environment. Flea treatment of all household pets is a year round commitment because fleas can be active in all seasons. When a pet goes outside of the home environment, it can come into contact with fleas from eggs that have been deposited by untreated pets or wildlife.

**NEXGARD SPECTRA®**

Activites: Afoxolaner, milbemycin oxime  
**Monthly treatment:** five dosage strengths:  
Very Small (2-3.5kg), Small (3.6-7.5kg), Medium (7.6-15kg), Large (15.1-30kg), Extra Large (30.1-60kg). For over 60kg, administer the appropriate combination of whole chewables.  
**Pack size:** Single & triple packs.

Kills adult fleas and is indicated for the treatment and prevention of flea infestations and for the control of ticks for at least one month. Can be used as part of a treatment strategy for the control of flea allergy dermatitis. Treatment of infestations with gastrointestinal roundworms, hookworms and whipworms. A highly palatable easy to administer beef-flavoured chew. Made with soy protein, so safe for beef allergic dogs. Can be given with or without food for added convenience for the pet owner. Oral chew means dogs can be handled immediately and there are no restrictions with swimming or bathing. Safe for all breeds and for puppies 8 weeks of age and 2kg or more. Treat at monthly intervals.

**NEXGARD®**  
(Afoxolaner) Chewables

Activites: Afoxolaner  
**Monthly treatment:** four dosage strengths:  
Very Small (2-4kg), Small (4.1-10kg), Medium (10.1-25kg), Large (25.1-50kg). For over 50kg, administer the appropriate combination of whole chewables.  
**Pack size:** Single & triple packs.

Kills adult fleas and is indicated for the treatment and prevention of flea infestations and for the control of ticks for at least one month. Can be used as part of a treatment strategy for the control of flea allergy dermatitis. A highly palatable easy to administer beef-flavoured chew. Made with soy protein, so safe for beef allergic dogs. Can be given with or without food for added convenience for the pet owner. Oral chew means dogs can be handled immediately and there are no restrictions with swimming or bathing. Safe for all breeds and for puppies 8 weeks of age and 2kg or more. Treat at monthly intervals.
**COMPANION ANIMAL**

**Parasiticides**

### Topicals & Sprays

**BROADLINE® Spot-on Solution for Cats**

- **Actives:** Fipronil, (S)-methoprene, eprinomectin, praziquantel
- **Dose rate:**
  - 0.3mL (0.8–2.4kg) & 0.9mL (2.5–7.4kg).
  - For cats over 7.4kg see pack for details
- **Pack size:** Single packs

For the treatment, prevention and control of flea, tick and biting lice infestations and flea allergy dermatitis and the treatment and control of roundworms, hookworms and tape worms. An all-in-one topical parasiticide that provides broad spectrum protection against both external & internal parasites. Unique applicator ensures complete, accurate and easy dosing. Safe for kittens from 8 weeks of age. Regular 4–6 weekly treatments are recommended for the prevention and control of parasite infestations.

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**FRONTLINE® Plus for Cats**

- **Actives:** Fipronil, (S)-methoprene
- **Dose rate:** One pipette per cat up to 10kg.
- **Pack size:** Triple & six pack

For the treatment, control and prevention of flea and tick infestations, flea allergy dermatitis and biting lice on cats. Safe for kittens from 8 weeks of age and use on pregnant and lactating queens. Treat monthly for tick control and to maximise flea control, especially on cats with flea allergy or experiencing high environmental flea challenge. For routine flea control six-weekly treatment may be all that is required.

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<th>Active</th>
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</table>

**FRONTLINE® Plus for Dogs**

- **Actives:** Fipronil, (S)-methoprene
- **Dose rate:**
  - One pipette according to weight: Small (up to 10kg), Medium (10kg-20kg), Large (20-40kg) & Extra Large (40-60kg).
  - For dogs over 60kg administer the appropriate combination of pipettes.
- **Pack size:** Triple packs

For the treatment, control and prevention of flea and tick infestation, flea allergy dermatitis and biting lice on dogs. Safe for puppies from 8 weeks of age and use on pregnant and lactating bitches. Treat monthly for tick control and to maximise flea control, especially on dogs with flea allergy or experiencing high environmental flea challenge. For routine flea control two-monthly treatment may be all that is required.

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<th>Active</th>
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**FRONTLINE® Spray**

- **Actives:** Fipronil
- **Dose rate:** Apply 3-6mL/kg, depending on the length of hair.
  - See pack for details.
- **Pack size:** 100mL & 250mL

For the treatment, prevention and control of flea and tick infestations, flea allergy dermatitis and biting lice on dogs and cats. Can be used on puppies and kittens from 2 days of age. Safe to use on pregnant and lactating bitches. Treat monthly for tick control and to maximize flea control, especially on dogs and cats with flea allergy or experiencing high environmental flea challenge.

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**Inflammation & Pain**

**METACAM®**
**Anti-Inflammatory Injectable for Dogs and Cats**

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<tr>
<td>s/c</td>
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**Actives:** Meloxicam 5mg/mL  
**Dose rate:**  
- Dogs: 0.4mL/10kg (single i/v or s/c)  
- Cats: 0.3mL/5kg (single s/c)  
**Pack size:** 10mL & 20mL

Dogs: alleviation of inflammation and pain in both acute and chronic musculoskeletal disorders. Reduction of postoperative pain and inflammation following orthopaedic and soft tissue surgery. Cats: reduction of pain after surgery. Management of febrile conditions in combination with appropriate antibiotics. Low viscosity solution and low volume so small gauge needle can be used – easy to administer and less painful for the animal. No need to refrigerate.

**METACAM®**
**Oral Suspension for Cats**

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**Actives:** Meloxicam 0.5mg/mL  
**Dose rate:** See pack for details  
**Pack size:** 3mL, 15mL & 30mL

Alleviation of inflammation and pain in both acute and chronic musculoskeletal disorders such as discospondylosis, arthropathy and soft tissue injuries. Palatable honey flavoured oral suspension for cats.

**METACAM®**
**Chewable Tablets for Dogs**

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**Actives:** Meloxicam  
**Dose rate:** See pack for details  
**Pack size:** 1mg & 2.5mg (84 tablets, blister pack)

For the alleviation of inflammation and pain in both acute and chronic musculoskeletal disorders in dogs. Palatable beef flavoured chewable tablets. Can be given following METACAM Injectable.

**METACAM®**
**Anti-Inflammatory Oral Suspension for Dogs**

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**Actives:** Meloxicam 1.5mg/mL  
**Dose rate:** See pack for details  
**Pack size:** 10mL, 32mL, 100mL & 180mL

Alleviation of inflammation and pain in both acute and chronic musculoskeletal disorders such as discospondylosis, arthropathy and soft tissue injuries. Palatable honey flavoured oral suspension for dogs. Can be given following METACAM Injectable.

**PREVICOX®**

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**Actives:** Firocoxib  
**Dose rate:** 5mg/kg, once daily.  
**Pack size:** 57mg & 227mg (60 tablets)

A highly selective COX-2 inhibitor for the relief of pain and for the control of inflammation associated with osteoarthritis and other musculoskeletal disorders. PREVICOX is also indicated for the control of post-operative pain associated with surgery; including soft tissue, orthopaedic and dental procedures. Hickory smoke flavoured, chewable tablet for dogs.
VETMEDIN® Capsules/Chewable Tablets for Dogs

Actives: Pimobendan
Dose rate: 0.2-0.6mg/kg b.w, daily.
Pack size: 1.25mg, 2.5mg & 5mg (50 chewable tablets & 100 capsules)

For the treatment of canine congestive heart failure (CHF) originating from dilated cardiomyopathy (DCM) or valvular insufficiency (mitral and/or tricuspid regurgitation). The treatment of preclinical DCM in large breed dogs. The treatment of dogs with evidence of increased heart size secondary to the asymptomatic (preclinical) myxomatous mitral valve disease to delay the onset of clinical symptoms of heart failure. To reduce heart size and increase survival times. The ideal dose is 0.25mg /kg b.w twice daily administered 12 hours apart. Each dose should be given on an empty stomach, and at least one hour before feeding.

PEXION® Tablets for Dogs

Actives: Imepitoin
Dose rate: 10mg-30mg/kg, twice daily - approximately 12 hours apart.*
Pack size: 100mg & 400mg (100 tablets)

Imepitoin is an antiepileptic agent for use as an aid in the treatment of idiopathic epilepsy in dogs. Imepitoin has a targeted and unique mode of action with a wide safety margin. Plasma drug levels do not need to be monitored and there is no physical dependency or development of tolerance. It can be used in combination with other anti-epileptic drugs. *The dose can be increased by 50-100% increments up to a maximum dosage of 30mg/kg administered twice daily if required. Each tablet can be halved for appropriate dosing according to the individual bodyweight of the dog.

SEMINTRA® Oral Solution for Cats

Actives: Telmisartan
Dose rate: 1mg/kg (0.25mL/kg), once daily.
Pack size: 4mg/mL (30mL)

For the reduction of proteinuria in cats with chronic kidney disease. Tasteless solution well accepted by cats. Dose can be administered directly into the mouth or with a small amount of food.

STOMORGYL™

Actives: Spiramycin, metronidazole
Dose rate: Stomorgyl (2): 1 tablet per 2kg. Stomorgyl (10): 1 tablet per 10kg. Stomorgyl (20): 1 tablet per 20kg
Pack size: 50 tablet (blister pack)

Treatment of infections caused by susceptible aerobic and anaerobic bacteria in dogs and cats. Due to its spectrum of activity and propensity for concentration in oral tissues, the product is particularly active against infections causing oral or dental disease in dogs and cats. These include stomatitis, gingivitis, halitosis, periodontitis, tooth root abscesses and chelitis. Treat daily for 5-10 days. Daily dose may be divided into 2-3 treatments, or doubled in conditions such as chronic otitis and necrotic cutaneous conditions.
HALOTHANE-VET

Actives: Halothane BP with 0.01% thymol
Dose rate: refer to label.
Pack size: 250mL

Induction & maintenance of anaesthesia for all types of surgery. Can be used in conjunction with premedication, sedation or anaesthetic inducing agents.

ISOFLURANE-VET

Actives: Isoflurane 100%
Dose rate: refer to label.
Pack size: 250mL

Gaseous anaesthetic for the induction & maintenance of anaesthesia for all types of veterinary surgery in a wide range of animal species.

Oral Health

Veterinary dental care is an essential component of a preventative healthcare plan. In conjunction with regular professional dental cleaning, a home oral hygiene plan is a vital part of disease control. When owners are unable to brush their dogs’ teeth, daily dental hygiene chews can support at-home maintenance of oral health.

ORAVET®

Dental Hygiene Chews

Includes: Delmopinol hydrochloride
Dose rate: One chew per day.
Pack size: Packs of 7 chews: Small (4.5-11kg), Medium (11-23kg) & Large (dogs over 23kg)

Each chew releases delmopinol, an ingredient that coats the teeth, tongue and gingiva to create a protective barrier against the bacteria that cause bad breath and are the basis for plaque formation. ORAVET chews also break down existing plaque and calculus through a mechanical scrubbing action. For use in dogs from 6 months of age. Do not give to cats. Do not cut or break the chew. ORAVET has received the Veterinary Oral Health Council (VOHC) seal of approval for the control of tartar.
NOTES

<table>
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<th>1</th>
<th>Actives</th>
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<tr>
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<td>Copper (Cu)</td>
<td>Zinc (Zn)</td>
<td>Selenium (Se)</td>
<td>Iodine (I)</td>
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Dose rate (mL/kg b.w) of Rain Fast.

Safe to use in calves <120kg

Co = Cobalt (B12)  Cu = Copper  Zn = Zinc  Se = Selenium  I = Iodine

Flea  Tick  Fly  Lice  Maggot  Mites  Bot  Fluke  Tapeworm  Roundworm  Hookworm  Whipworm  Lungworm  Barber’s Pole

Capsule  Oral  Spot-on  Pour-on  Granules  Intramammary  Bolus  Inhalant  Tablets  Chew  Injection

s/c = subcutaneous  i/v = intravenous  i/a = intra-articular  i/m = intramuscular

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