

# TECHNICAL BRIEF

## REFLEX<sup>®</sup> POUR-ON

**Active Ingredient:** Abamectin (10mg/ml)

### The Market Need

As a low cost treatment option abamectin-based pour-on products have become extremely popular with New Zealand farmers.

The fact that many of these have a zero-milk withholding period has also meant they have a well established role in treatment of lactating dairy cows.

Despite this, the exclusive long-term use of single active macrocyclic lactone products (those based on abamectin, ivermectin, moxidectin, doramectin and eprinomectin) should be viewed with some caution. If used inappropriately there is significant potential for productivity to be compromised and for resistance to be accelerated.

### The REFLEX<sup>®</sup> Option

In developing REFLEX<sup>®</sup> Pour-on Alleva has considered the fact that resistance to single active macrocyclic lactone based products is now very widespread. This has implications not only for how and when such products should be used, but also for how they should be formulated to achieve the most satisfactory clinical outcome.

Alleva's goal was to formulate a product that had rapid absorption and delivered high peak levels of abamectin in the blood. This has been achieved by use of glycol-based solvents instead of more traditional high viscosity oleaginous materials.

In making this choice it was noted that many of the older oily based products were created at a time when macrocyclic lactone resistance was less prevalent and it was possible to achieve some degree of persistency by delivering lower but moderately more sustained levels of drug into the blood of the animal.

Now due to escalating resistance levels it is highly probable that at least some of these products would no longer deliver performance relative to the claims described on their labels.

As a consequence Alleva placed greatest emphasis on the quest to maximise rapid absorption and initial product efficacy. We have recognised that in future meaningful persistence via topical formulations will increasingly be difficult to achieve, or even worse; may actually speed up the development of resistance.

REFLEX<sup>®</sup> Pour-on is the result of a development programme to produce a rapidly absorbed formulation that exposes parasites to a pronounced plasma peak of abamectin.

## The Claims

REFLEX® Pour-on is effective in the treatment and control of the following parasite species:

- Gastro-intestinal roundworms:
- Adult and immature Small Brown Stomach Worm\* (*Ostertagia* spp.),
- Barber's Pole Worm (*Haemonchus* spp.),
- Stomach Hair Worm and Black Scour Worm (*Trichostrongylus* spp.),
- Small Intestinal Worm (*Cooperia* spp.)
- Hookworm (*Bunostomum* spp.),
- Large Bowel Worm (*Oesophagostomum* spp.), and adults of Large-Mouthed Bowel Worm (*Chabertia* spp.),
- Thin-Necked Intestinal Worm (*Nematodirus* spp.),
- Whipworm (*Trichuris* spp.)
- Intestinal Threadworm (*Strongyloides* spp.)  
\*including inhibited immature
- Lungworms: Adult and immature *Dictyocaulus viviparus*.
- Biting and Sucking Lice: *Bovicola bovis*, *Linognathus vituli*.

### Production Enhancement:

Increases milk production in grazing dairy cows. Data has shown that milk production increases by a median of +0.63kg liquid milk per day when cows or heifers infected with gastrointestinal nematode parasites are treated with an effective anthelmintic; this increase occurs without any reduction in milk quality.

## General Information

### Dose Rate:

1ml/20kg (500mcg/kg abamectin)

### With-holding periods:

Meat – 35 days, Milk – nil

### Active ingredients:

10g/L abamectin

### Administration method:

Apply in a line down the middle of the back with an approved applicator. Rinse gun after use with warm soapy water.

### Rain:

Treatment of animals with wet hides or when rain threatens should be avoided.

### Storage:

Store below 25°C

### Pack Sizes:

5L carry packs, 20L jerry cans.

### Dose table:

**Do Not** treat calves below 100kg body weight.

Live weight	Dose	5L Pack Treats	20L Pack Treats
101-150kg	7.5 mL	666	2664
151-200kg	10 mL	500	2000
201-250kg	12.5 mL	400	1600
251-300kg	15 mL	333	1332
301-350kg	17.5 mL	285	1140
351-400kg	20 mL	250	1000
401-450kg	22.5 mL	222	888
451-500kg	25 mL	200	800
501-550kg	27.5 ml	181	724
551-600kg	30 ml	166	664
601-650kg	32.5ml	153	612

DOSE: 1ml per 20kg bodyweight (0.5 mg abamectin per kg bodyweight)

### Product Features

- Convenient pour-on application
- Nil milk withholding period
- Solvent base delivering high blood peak of abamectin
- Broad spectrum of control

**Note:** Due to the widespread presence of resistance on New Zealand properties Alleva recommends use of single active anthelmintic products ONLY in adult animals and ONLY in situations where withholding period limitations preclude the use of combination products. Farmers should be aware that continued use of ineffective products may result in reduced animal productivity and may also help speed up the development of resistance. The role of veterinary advice to ensure integration of parasite control with other disease and grazing management practices is recommended.

REFLEX® is a registered trademark of



Alleva Animal Health Limited,  
15 Calman Place, Birkenhead, Auckland.

REFLEX® Pour-on is registered pursuant to the ACVM act, No. A10666. See [www.foodsafety.govt.nz](http://www.foodsafety.govt.nz) for registration conditions.