CAUTION

KEEP OUT OF REACH OF CHILDREN
READ SAFETY DIRECTIONS BEFORE OPENING OR USING
FOR ANIMAL TREATMENT ONLY

PASTORAL AG

Ivermectin

Injection for Cattle

ACTIVE CONSTITUENT: IVERMECTIN 10 mg/mL

For the treatment and control of ivermectin sensitive internal and external parasites of cattle.

APVMA Approval No.: /

Contents: 200mL; 500mL; 1L

PASTORAL AG

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INTRODUCTION

PASTORAL AG Ivermectin Injection for Cattle is a low volume dose injectable parasiticide which effectively controls ivermectin sensitive internal and external parasites of cattle.

PRODUCT DESCRIPTION

PASTORAL AG Ivermectin Injection for Cattle is a sterile, ready-to-use solution of ivermectin. Ivermectin is a semi-synthetic macrocyclic lactone derived from the parent compound, avermectin B_1. Avermectin B_1 is a microbial metabolite of the soil organism, *Streptomyces avermitilis*. Ivermectin is a 80:20 mixture of 22,23 dihydroavermectin B_{1a} and B_{1b}.

PASTORAL AG Ivermectin Injection for Cattle is formulated to provide the recommended dose rate of 200µg/kg liveweight. The product is for to given subcutaneously at the rate of 1mL/50kg.

MODE OF ACTION

Ivermectin increases the release of γ – amino butyric acid (GABA) and opens chloride channels resulting in interference with neurotransmission leading to parasite paralysis and eventual death. Ivermectin is particularly active and useful for controlling gastrointestinal roundworm, lungworm, mange mite, cattle tick and lice infections of cattle. Ivermectin has a long intrinsic half life which provides excellent residual protection against parasitic reinfestation for a varying period depending on the target parasite and the pharmaceutical nature of the ivermectin formulation.

PRODUCT INDICATIONS

PASTORAL AG Ivermectin Injection for Cattle is effective in the treatment and control of ivermectin-sensitive species of the following harmful species of gastrointestinal roundworms, lungworm, eyeworm, sucking lice, mites and cattle tick:

Gastrointestinal roundworms:

Ostertagia ostertagi – Small brown stomach worm
– adults and L_4 and L_3 immature stages (including inhibited fourth stage larvae).

O. lyrata – Brown stomach worm
– adults and L_4 stage

Haemonchus placei – Barber's pole worm
– adults & L_4 and L_3 immature stages

Trichostrongylus axei – Stomach hair worm
– adults and L_4 immature stages

T. colubriformis – Intestinal hair worm
– adults and L_4 immature stages

Cooperia spp. – Small intestinal worm
– adults and L_4 and L_3 immature stages

Bunostomum phlebotomum – Hookworm
– adults and L_4 and L_3 immature stages

Oesophagostomum radiatum – Nodule worm
– adults and L_4 and L_3 immature stages

Nematodirus spathiger – Thin necked intestinal worm
– adults

N. helvetianus – Thin necked intestinal worm
– adults

Strongyloides papillosis – intestinal thread worm
– adults

Toxocara vitulorum – Large roundworm
– adults

Trichuris spp. – Whipworm
– adults

Lungworm:

Dictyocaulus viviparus – Adults and immatures (including inhibited stages)

Eyeworm:

Thelazia spp. – adult stages

Screw Worm Fly:

Chrysomya bezziana – Effective against early infestations but less effective against established infestations. Sustained efficacy for 14 days against the early larval stages can be achieved if the animals are treated in the very early stages of infestation, or as prevention. (Not reported in Australia, but present in Papua-New Guinea).

Sucking Lice:

Linognathus vituli
Haematopinus eurysternus
Solenopotes capillatus
Does not provide full control of the cattle biting louse, *Bovicola* (*Damalinia*) *bovis*

Mites: *Sarcoptes scabei* var. *bovis*

Cattle tick: *Boophilus microplus* including organophosphate, synthetic pyrethroid and amidine resistant strains

Maximum efficacy is reached 4-5 days after treatment. Engorged female ticks that drop from cattle in the initial days after treatment may lay viable eggs. This should be taken into account when planning a strategic tick control program. PASTORAL AG Ivermectin Injection for Cattle should by alternated with conventional dips or pour-ons when the program requires repeat treatments.

Sustained activity: At the recommended dose rate, PASTORAL AG Ivermectin Injection for Cattle effectively controls infections with *Ostertagia* spp. and *Cooperia* spp. acquired up to 7 days after treatment, and *Dictyocaulus viviparus* and *Chrysomya bezziana* up to 14 days after treatment.

At the recommended dose rate of 200µg ivermectin/kg liveweight PASTORAL AG Ivermectin Injection for Cattle aids in the control of:

Mites: *Chorioptes bovis*

DIRECTIONS FOR USE

Restraints:

DO NOT USE in lactating cows or within 28 days of calving where milk may be used or processed for human consumption.

This product is contraindicated in calves at or less than 4 months of age.

Retreatment Interval:

DO NOT re-treat less than 42 days after the last treatment.

Dosage and administration:

Use the contents within 24 hours of first broaching of the vial. Discard the unused portion.

The recommended dose is 1mL PASTORAL AG Ivermectin Injection for Cattle per 50kg liveweight (equivalent to 200µg ivermectin per kg liveweight) by subcutaneous injection.

DO NOT administer by the intravenous or intramuscular route.

Liveweight (kg)	Dose volume (mL)	Cattle treated (1000 mL pack)	Cattle treated (500 mL pack)	Cattle treated (200 mL pack)
Up to 100	2	500	250	100
101-150	3	333	166	66
151-200	4	250	125	50
201-250	5	200	100	40
251-300	6	166	83	33
301-350	7	142	71	28
351-400	8	125	62	25
401-450	9	111	55	22
451-500	10	100	50	20
501-550	11	90	45	18
551-600	12	83	41	16
601-650	13	76	38	15

Cattle heavier than 650kg should be dosed at 1mL per 50kg.

A representative sample of animals should be weighed before treatment either with scales or a weighband.

Dose rate to be based on heaviest cattle in each group (bulls, cows, steers, calves etc). DO NOT underdose.

Where there is a large variation in size within the group, draft into two or more lines based on bodyweight, to avoid excessive underdosing.

NOT TO BE USED FOR ANY PURPOSE OR IN ANY MANNER CONTRARY TO THIS LABEL UNLESS AUTHORISED UNDER APPROPRIATE LEGISLATION.

WITHHOLDING PERIODS

MEAT: DO NOT USE less than 28 days before slaughter for human consumption.

MILK: DO NOT USE in lactating cows or within 28 days of calving where milk may be used or processed for human consumption.

EXPORT SLAUGHTER INTERVAL (ESI):

DO NOT USE less than 42 days before slaughter for export. The ESI on this label was correct at the time of label approval. Before using this product, confirm the current ESI from the distributor on 02 9999 6655 or the APVMA website (www.apvma.gov.au/residues/).

CAUTION – AVOID CARCASE DAMAGE

1. Sterilise all injection apparatus by boiling before use. Disposable plastic syringes should not be boiled. Avoid use of strong disinfectants on apparatus.
2. Maintain cleanliness at all times.
3. Keep needles sharp and clean. Replace frequently.
4. Use 16-G needles, not exceeding 15 mm in length.
5. As far as possible, avoid injection of animals during wet weather or under dusty conditions. Avoid injection of soiled areas on the animal.
6. The product should be injected only under the skin, ie, subcutaneously.
7. Inject high on the neck behind the ear. Injection should only be made under loose skin in an area away from the more valuable carcase muscle. Loose skin on the neck in front of the shoulder is also a suitable site.

NOTE TO USER

Transitory discomfort has been observed in some cattle following subcutaneous administration. A low incidence of soft-tissue swelling at the site of injection has been observed. These reactions have disappeared without treatment.

RESISTANCE

Resistance can develop to any anthelmintic. Treatments with PASTORAL AG Ivermectin Injection for Cattle should generally be timed to use its antiparasitic properties to prevent the development or build up of parasitic infections. For detailed advice and information on a program for parasite control in cattle, consult your veterinarian.

SAFETY DIRECTIONS:

Poisonous if swallowed. Avoid contact with eyes, skin and clothing.

FIRST AID

If poisoning occurs contact a doctor or Poisons Information Centre. Phone Australia 131126. For further information, refer to the Material Safety Data Sheet.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND THE ENVIRONMENT

Ivermectin is extremely toxic to aquatic species. DO NOT contaminate dams, rivers, streams or other waterways with the chemical or used container.

STORAGE

Store below 25°C (Air Conditioning). Store bottle in carton to protect from light.

DISPOSAL

Dispose of empty container by wrapping with paper and putting in garbage.

PRESENTATION

PASTORAL AG Ivermectin Injection for Cattle is available in 200mL, 500mL and 1L collapsible plastic containers designed for use with automatic injection equipment.

MATERIAL SAFETY DATA SHEET

Additional information is listed in the material safety data sheet (MSDS). A material safety data sheet for PASTORAL AG Ivermectin Injection for Cattle is available from TITAN AG Pty Ltd on request. Call Customer Service on (02) 9999 6655 or visit www.titanag.com.au

CONDITIONS OF SALE: TITAN AG Pty Ltd shall not be liable for any loss injury damage or death whether consequential or otherwise whatsoever or howsoever arising whether through negligence or otherwise in connection with the sale supply use or application of this product. The supply of this product is on the express condition that the purchaser does not rely on TITAN AG's skill or judgment in purchasing or using the same and every person dealing with this product does so at his own risk absolutely. No representative of TITAN AG Pty Ltd has any authority to add to or alter these conditions.

BATCH NO:

DATE OF MANUFACTURE: