NDC 30798-637-12

Ivermectin Sheep Drench

(ivermectin) 0.08% Solution Parasiticide

For the Treatment and Control of Worms and Bots of Sheep • 20-100 lb Doses See booklet for additional information.

For Animal Use Only Keep Out of Reach of Children

ANADA 200-327, Approved by FDA

NET CONTENTS: 8 fl oz (240 mL)

www.durvet.com

/	ð	9	10		FACE
nervous system of mammals where GABA functions as a neurotransmitter. STABILITY Ivermectin Sheep Drench is stable for 24 months when stored under normal conditions. SAFETY Ivermectin Sheep Drench has been demonstrated to have a wide safety margin at the recommended dose level and may be used in sheep of all ages. Ewes may be treated at any stage of pregnancy. ACCEPTABILITY Coughing may be observed in some animals during and for several minutes following drenching. ENVIRONMENTAL SAFETY Studies indicate that when ivermectin comes in contact with the soil, it readily and tightly binds to the soil and becomes inactive over time. Free ivermectin may adversely affect fish and certain water-born organisms on which they feed. Do not permit water runnoff from feedlots to enter fakes, streams, or ground water. Do not contanimate water by direct application or by the improper disposal of drug containers. Spills of Ivermectin Sheep Drench should be contained and soaked up with absorbent	towels or into loose soil. Gloves should be worn to prevent skin exposure. All the collected materials (contaminated towels and soil), as well as all used drug containers, should be placed in an impervious film bag (plastic) and disposed of by incineration or in an approved landfill. PRECAUTIONS Ivermectin Sheep Drench has been formulated for use in sheep ONLY. This product should not be used in other animal species as severe adverse reactions, including fatalities in dogs, may result. This product is not to be used parenterally. Protect from light. Store at controlled room temperature between 15°-30°C (59°-86°F), Keep container tightly closed when not in use. HUMAN SAFETY When used as recommended in sheep, lvermectin Sheep Drench does not pose a hazard to human health. As a routine precaution, it is advisable to wash hands after use. As with all drugs, the product should be kept out of reach of children.	avoided, but protective clothing is not required. For customer service, contact Durvet, Inc. Blue Springs, MO 64014 www.durvet.com FOR ORAL USE IN SHEEP ONLY Consult your veterinarian for assistance in diagnosis, treatment, and control of parasitism. DESCRIPTION: Ivermectin Sheep Drench is a ready-to-use, free-flowing solution of ivermectin, It is formulated to deliver the recommended dose rate of 0.2 mg ivermectin be of 3.0 mL per 26 lbs body weight. INDCATIONS: Ivermectin Sheep Drench provides treatment and control of adult and fourth-stage larvae of the following parasites: Gastrointestinal Roundworms - Haemonchus contortus, Ostertagia circumcincta, Trichostrongylus axel, T. colubriformis, Cooperia curicei, Nematodirus spathiger, N. battus, and	Oesophagostomum columbianum; Lungworms – Dictyocaulus filaria; and all the larval stages of Nasal Bot – Oestrus ovis. It also provides treatment and control of adult forms only of the following Gastrointestinal Roundworms – Haemonchus placei, Cooperia oncophora, Strongyloides papillosus, Oesophagostomum venulosum, Trichuris ovis, and Chabetla ovina. DIRECTONS FOR USE: Ivermectin Sheep Drench may be used in any standard direnching equipment or in any equipment which provides a consistent dose volume. Ivermectin Sheep Drench is administered orally at a dose of 3.0 mL (2.4 mg ivermectin) per 26 lbs body weight or 200 mcg ivermectin per kilogram of body weight. Coughing may be observed in some animals during and for several minutes following drenching. KEEP THIS AND ALL DRUGS OUT OF REACH OF CHILDREN. Refrain from smoking and eating when handling. Avoid contact with eyes. Immediately wash hands and any spills	on the skin with plenty of soap and water following use. PACKAGING: Ivermectin Sheep Drench is available in a convenient pack size: The 8 fl oz (240 mL) pack contains sufficient solution to treat 20 sheep averaging 100 lbs. The packs are high-density polyethylene containers, colored opaque white, with screw caps and tamper-evident seals. They are shipped in cardboard cartons as follows: 6 x 240 mL containers per case. Restricted Drug (California) - Use Only as Directed Iss. 01-09	<section-header></section-header>
contained and source up man absorbent					NET CONTENTS: 8 fl oz (240 mL) Www.durvet.com

2

PRODUCT DESCRIPTION

Ivermectin Sheep Drench is a liquid, administered orally to sheep, consisting of an 0.08% solution of ivermectin. Discovered and developed by scientists from Merck Sharp and Dohme Research Laboratories, ivermectin is a unique chemical entity. As such, the chances of cross-resistance in parasites that have developed resistance to other wormers is highly unlikely. Additionally, its convenience, broad spectrum efficacy, and wide therapeutic index make lvermectin Sheep Drench an exceptionally valuable product for parasite control in sheep. Consult your veterinarian for assistance in diagnosis, treatment, and control of parasitism.

DOSING

Ivermectin Sheep Drench is formulated only for administration to sheep; do not use in other species. The recommended dose level is 3 mL of Ivermectin Sheep Drench, containing 2400 mcg ivermectin, which is sufficient to treat 26 pounds of body weight.

ADVANTAGES Unique chemistry-unrelated to existing formulations.

Because Ivermectin Sheep Drench is chemically different, cross-resistance is unlikely in parasite strains which may have developed resistance to other wormers. 3

Broad spectrum effectiveness.

One low-volume dose effectively treats and controls many gastrointestinal roundworms (including *Haemonchus contortus*), lungworms, and nasal bots.

Easy administration.

Ivermectin Sheep Drench can be administered with any standard drenching equipment or any equipment that provides a consistent dose volume.

FORMULATION

Ivermectin Sheep Drench is an 0.08% w/v pale amber colored solution of ivermectin.

Ivermectin is derived from the avermectins, a family of highly active, broad spectrum, antiparasitic agents which are produced from fermentation products of *Streptomyces avermitilis*.

PRODUCT INDICATIONS

Ivermectin Sheep Drench is indicated for the effective treatment of gastrointestinal roundworms (including *Haemonchus contortus*), lungworms and nasal bots in sheep.

When used as recommended, it provides effective control of the parasites shown in the table.

4

IVERMECTIN SHEEP DRENCH KILLS THESE PARASITES					
Gastrointestinal roundworms	Adults	Larvae (4th stage)			
Haemonchus contortus	х	х			
Haemonchus placei	х				
Ostertagia circumcincta	х	х			
Trichostrongylus axei	х	х			
Trichostrongylus colubriformis	х	х			
Cooperia curticei	х	х			
Cooperia oncophora	х				
Oesophagostomum columbianum	х	х			
Oesophagostomum venulosum	х				
Nematodirus battus	х	х			
Nematodirus spathiger	х	х			
Strongyloides papillosus	х				
Chabertia ovina	х				
Trichuris ovis	Х				
Lungworms:					
Dictyocaulus filaria	х	Х			
Nasal bots: Oestrus ovis (al	l larval stage	-			
Oestrus ovis (al	i iarvai stage	S)			

Ivermectin Sheep Drench should only be administered orally at the recommended dose level of 200 mcg ivermectin per kilogram of body weight. Three mL of Ivermectin Sheep Drench contains sufficient ivermectin to treat 26 pounds of body weight.

5

Volume	Sheep Body Weight Dosed
3 mL 6 mL 9 mL 12 mL 15 mL	26 lbs 52 lbs 78 lbs 104 lbs 130 lbs
18 mL 21 mL 24 mL 27 mL 30 mL	156 lbs 182 lbs 208 lbs 234 lbs 260 lbs

To avoid underdosing, it is important to get the dose according to the weight of the heaviest sheep in a group (ewes, lambs or rams), not the average weight. Several of the largest sheep should be weighed, judgment by the eye can be deceiving.

ADMINISTRATION

Any standard drenching equipment, or any equipment which provides a consistent dose volume, can be used. Dose rates and equipment should be checked before drenching commences. Be sure the head is properly positioned for each sheep to

receive the full dose. Ivermectin Sheep Drench is readily accepted by sheep, but inconsequential coughing may be observed in some animals during and for several minutes after drenching. If slobbering occurs, the dose may be lost, and that sheep should be redosed.

FREQUENCY OF DOSING

6

Resistant parasites are a particular problem in sheep. Please consult your veterinarian, county extension office or animal health supplier for the control program recommended in your area.

RESIDUE INFORMATION: Sheep must not be treated within 11

days of slaughter for human consumption

Keep this and all drugs out of reach of children.

The Material Safety Data Sheet (MSDS) contains more detailed occupational safety information. To report adverse effects in users, to obtain an MSDS, or for assistance call 1-800-821-5570.

MODE OF ACTION

The avermectin family of compounds, of which ivermectin is a member, kills certain parasitic nematodes (roundworms) and arthropods. The action is unique and not shared by other antiparasitic agents and involves a chemical that serves as a signal from one nerve cell to another, or from a nerve cell to a muscle cell. This chemical, a neurotransmitter, is called *gamma* aminobutyric acid or GABA. In roundworms, ivermectin stimulates the release of GABA from nerve endings and enhances binding of GABA to special receptors at nerve junctions, thus interrupting nerve impulses - thereby paralyzing and killing the parasite.

The enhancement of the GABA effect in arthropods resembles that in roundworms except that nerve impulses are interrupted between the nerve ending and the muscle cell. Again, this leads to paralysis and death in most species. Ivermectin has no measurable effect against flukes or tapeworms, presumably because they do not have GABA as a nerve impulse transmitter. Recommended doses of ivermectin have a wide safety margin in livestock. The principal peripheral neurotransmitter in mammals, acetylcholine, is unaffected by ivermectin, Ivermectin does not readily penetrate the central