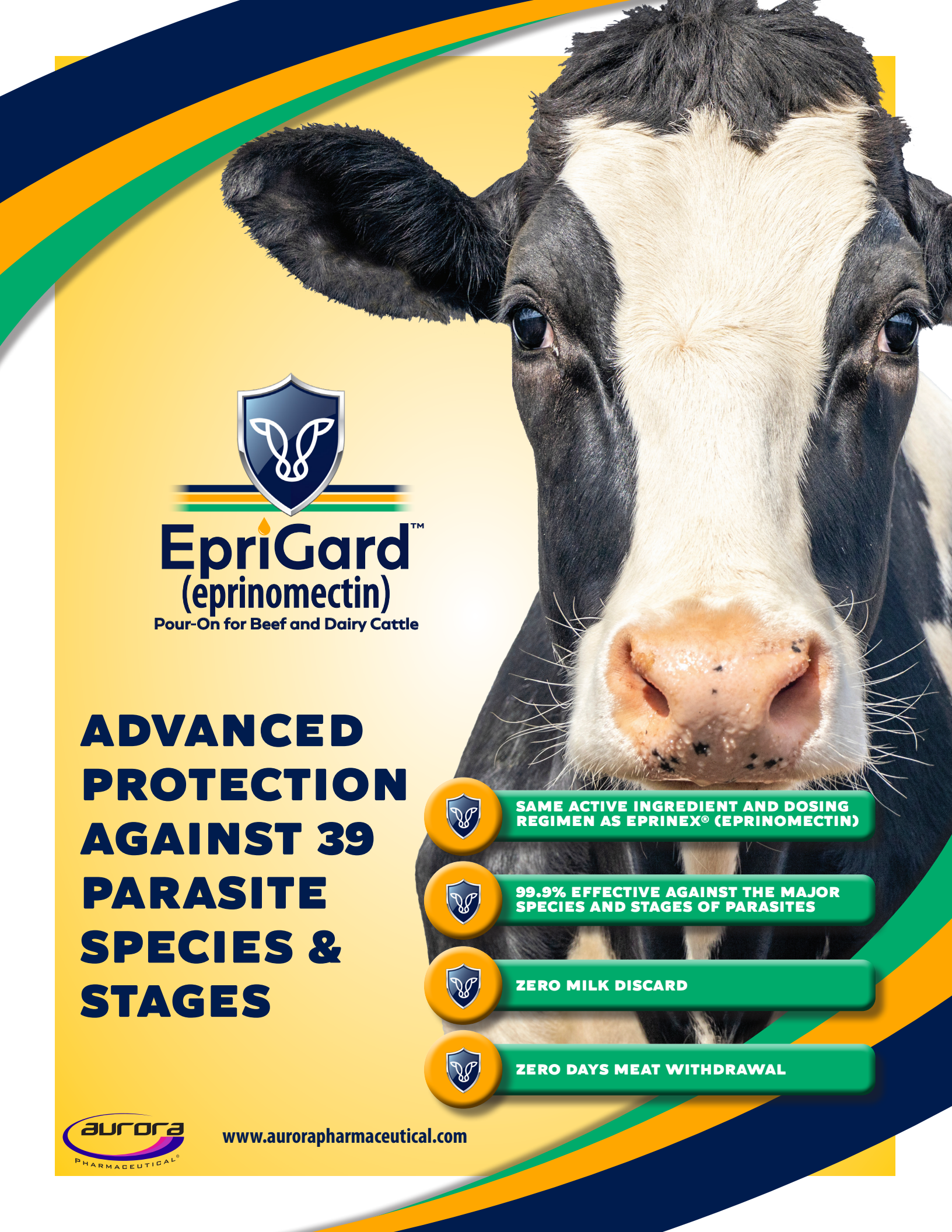


EpriGard™
(eprinomectin)
Pour-On for Beef and Dairy Cattle

ADVANCED PROTECTION AGAINST 39 PARASITE SPECIES & STAGES

- SAME ACTIVE INGREDIENT AND DOSING REGIMEN AS EPRINEX® (EPRINOMECTIN)
- 99.9% EFFECTIVE AGAINST THE MAJOR SPECIES AND STAGES OF PARASITES
- ZERO MILK DISCARD
- ZERO DAYS MEAT WITHDRAWAL

aurora PHARMACEUTICAL®

www.aurorapharmaceutical.com

EpriGard™ (eprinomectin)

Pour-On for Beef and Dairy Cattle

BROAD-SPECTRUM TREATMENT

99.9% effective against 39 of the major species and stages of internal and external parasites

RETURN ON INVESTMENT

Research confirms treatment for parasites with eprinomectin can increase milk yield by 2.07 lbs per cow per day.[1]

SHORTER CALVING INTERVAL

Following treatment for parasites with eprinomectin, both heifers and dairy cows show improved fertility, i.e. 58% v 38% conception rate at first service. [2]

EASY TO USE POUR-ON FOR TREATMENT AND CONTROL OF 39 INTERNAL AND EXTERNAL PARASITE SPECIES AND STAGES

EpriGard™ (eprinomectin) Pour-On contains the same active ingredient as Eprinex® (eprinomectin) Pour-On.

EpriGard™ Pour-On provides broad-spectrum treatment and control against 39 major internal and external parasites in cattle.

WEATHERPROOF FORMULATION

ZERO MEAT WITHDRAWL

ZERO MILK DISCARD

EPRIGARD™ STOPS PARASITES BEFORE THEY IMPACT PERFORMANCE

FOR LONGER CONTROL AND SAFETY

EPRIGARD™ POUR-ON - THE HIGHEST LEVEL OF CONVENIENCE AND SAFETY

- Kills 39 species and stages of internal/external parasites
- Weatherproof formulation works in rain, cold or heat
- Zero milk discard
- Zero days meat withdrawl
- Safe for any age animal including pregnant cows, calves and bulls

RAIN IS NOT AN ISSUE

Where rain is an issue after treatment, eprinomectin was 99% effective against adults and immature larvae (L4) of the most significant internal parasites (worms) and nematodes found in cattle.[3]

DID YOU KNOW?

Studies have shown eprinomectin kept efficacy levels higher than 90% from 2 up to 28 days[4] versus competitive pour-on parasite treatments.

THE MORE YOU KILL, THE MORE YOU YIELD

DID YOU KNOW?

The quality of the milk produced from (eprinomectin) treated animals is superior, with consistently higher milk fat, protein and overall milk solids.

(Kramer LH et al., WAAVP 17th International Conference, 1999 and McPherson WB et al., N Z Veterinary Journal, 2991 (49) 106-110)

THE COST OF LUNGWORM

One study has reported over 80% of costs to a dairy farm affected by lungworm were caused by loss of production through both depressed milk yield and cattle mortality.[4]

Cattle affected with lungworm will suffer marked loss of body condition (up to 10% of bodyweight), with growing cattle losing 44-88 lbs.[5]

GUTWORM

The effects of internal parasites on cattle can vary depending on the level and type of parasitic infestation. Gutworms are economically damaging parasites and are particularly detrimental in mature dairy cows at calving and during lactation resulting in serious economic losses.

The Cost of Subclinical Disease

It was previously assumed that adult dairy cows could easily deal with parasitic infection. However, recent evidence shows a negative impact of gutworm infection on the productivity and performance of adult dairy cows.[6] More often than not it is the subclinical level of the disease that will cause major economic disturbance to farmers, such as:

- Loss in animal productivity
- Reduced feed intake and dramatically lowered
- Reduced body condition
- Extended periods between calving

Treat and Protect

Eprinomectin is effective against more stages of a greater number of species of worms than any other pour on. It also has a persistency of 28 days against destructive roundworms in cattle; this additionally protects against re-infestation when returning to grass.

LUNGWORM

The first and most prominent signs of lungworm infestation is a noticeable drop in the daily milk yield. Lungworm is as economically damaging to the dairyman as it is to the overall health of the entire herd if not prevented.

Warning Signs

Lungworm disease is most prevalent from summer to late autumn with an increase in the number of cases in adult cows being reported.

Signs of lungworm infection will differ depending on the level of infection, varying from reduced milk yield to coughing and increased respiratory rate. Signs become more severe with affected animals struggling to breathe and adopting 'air hunger' positions.

Long-Term Damage

Clinical lungworm disease permanently damages lung tissue and leaves the cow susceptible to secondary diseases and infections.

KNOW YOUR ENEMY

External parasites such as lice, flies, ticks, grubs and mites limit dairy production and animal welfare.

EXTERNAL PARASITES:

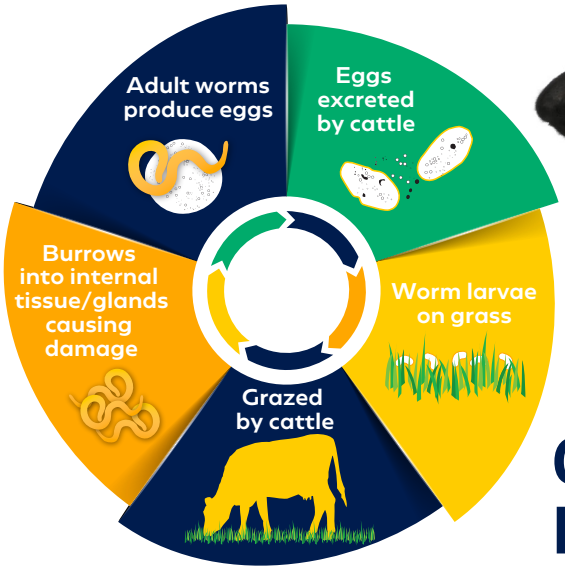
- Feed on body tissues such as blood, skin and hair
- Produce wounds and skin irritation
- Transmit diseases from infected animals to healthy ones
- Cause depressed appetite and subsequent weight loss, reduced milk production and general weakness
- Create sites for secondary invasion of disease organisms

Internal parasites are the most economically damaging parasites and are particularly detrimental in mature dairy cows at calving and during lactation resulting in serious economic losses.

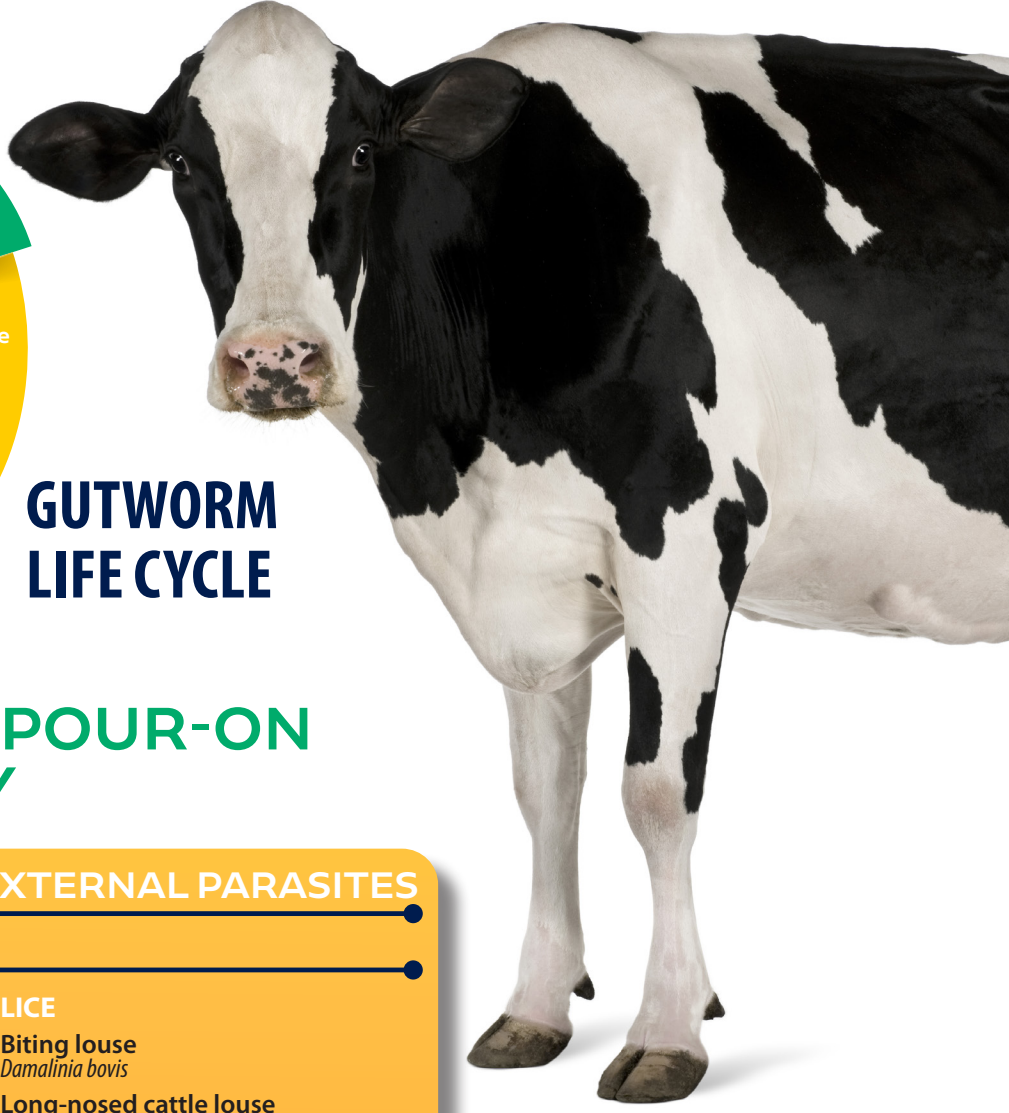
INTERNAL PARASITES:

- Reduced body condition
- Reduced feed intake and dramatically lowered live weight gain
- Loss of milk yield

EpriGard is a Trademark of Aurora Pharmaceutical, Inc. Eprinex and Ivomec are registered trademarks of Merial. Cydectin is a registered trademark of Boehringer Ingelheim. Dectomax is a registered trademark of Zoetis.



GUTWORM LIFE CYCLE



PUT EPRIGARD™ POUR-ON TO WORK TODAY

INTERNAL PARASITES

A=ADULT STAGE L4=LARVAL STAGE

Barbers pole worm *Haemonchus placei*	A, L4
Brown stomach worm *Ostertagia ostertagi (including inhibited L4)*	A, L4
Hairworm *Trichostrongylus axei*	A, L4
Black scour worm *Trichostrongylus colubriformis*	A, L4
Black scour worm *Trichostrongylus longispicularis*	A
Small intestinal worm *Cooperia oncophora*	A, L4
Small intestinal worm *Cooperia punctata*	A, L4
Small intestinal worm *Cooperia surnabada*	A, L4
Thread-necked intestinal worm *Nematodirus helvetianus*	A, L4
Nodular worm *Oesophagostomum radiatum*	A, L4
Hookworm *Bunostomum phlebotomum*	A, L4
Intestinal threadworm *Strongyloides papillosus*	A
Whipworm *Trichuris spp*	A
Lungworm *Dictyocaulus viviparus*	A, L4

EXTERNAL PARASITES

LICE

Biting louse
Damalinia bovis

Long-nosed cattle louse
Linognathus vituli

Short-nosed cattle louse
Haematopinus eurysternus

Small blue louse
Solenopotes capillatus

GRUBS (all parasitic stages)

Common cattle grub
Hypoderma lineatum

Northern cattle grub
Hypoderma bovis

HORN FLIES

Horn flies
Haematobia irritans

MANGE

Mange mite
Chorioptes bovis

Mange mite
Sarcoptes scabiei

RESEARCH SHOWS

The active ingredient in EpriGard™ Pour-On outperformed Cydectin® (moxidectin), Ivomec® (ivermectin) and Dectomax® (doramectin) in head-to-head university studies.[4]

POUR-N-GO

Apply EpriGard™ Pour-On only by topical application at the dose rate of 1 mL per 10 kg (22 lb) of body weight, corresponding to the recommended dose rate of 0.5 mg eprinomectin per kg of body weight.

EpriGard™ Pour-On should be applied topically by pouring along the backline in a narrow strip extending from the withers to the tailhead.

Rainfall at any time before or after treatment will not affect the efficacy of the product.

To ensure administration of a correct dose, body weight should be determined as accurately as possible; accuracy of the dosing device (dosing cup or dosing applicator delivery system) should be checked.

EpriGard™
(eprinomectin)
Pour-On for Beef and Dairy Cattle

CONVENIENT PACKAGING

Aurora offers EpriGard™ Pour-On for Beef and Dairy Cattle in convenient sizes for an economical per-dose application

- 250 mL
- 1 L
- 2.5 L
- 5 L

The 250 mL bottle comes with a measure-squeeze-pour system while the 1L, 2.5L and 5L come in a back-pack style for use with appropriate automatic dosing equipment.

DOSING GUIDE

Body Weight	Dose Volume	Number of doses per pack			
		250 mL	1 L	2.5 L	5 L
220 lbs (100 kg)	10 mL	25	100	250	500
330 lbs (150 kg)	15 mL	16	66	166	333
440 lbs (200 kg)	20 mL	12	50	125	250
550 lbs (250 kg)	25 mL	10	40	100	200
660 lbs (300 kg)	30 mL	8	33	83	166
770 lbs (350 kg)	35 mL	7	28	71	142
880 lbs (400 kg)	40 mL	6	25	62	125
990 lbs (450 kg)	45 mL	5	22	55	111
1100 lbs (500 kg)	50 mL	5	20	50	100

EpriGard is a Trademark of Aurora Pharmaceutical, Inc. Eprinex and Ivomec are registered trademarks of Merial. Cydectin is a registered trademark of Boehringer Ingelheim. Dectomax is a registered trademark of Zoetis.

[1] Nodtvedt A, et al. Increase in milk yield following eprinomectin treatment at calving in pastured dairy cattle. Vet Parasitol. 2002;105:191-206.
[2] McPherson WB, et. al. The impact of eprinomectin treatment on dairy cattle reproductive performance. Proceedings, 44th Annual Meeting American Association of Veterinary Pathologists. 1999; 41.
[3] Cruthers L, Sloan R. Comparative efficacy of commercial pour-on parasiticides applied to wet cattle. Proceedings, 44th Annual Meeting of the American Association of Veterinary Pathologists, 1999, 29.
[4] Paul A, Hutchens D, Hart D, Maciel AE, Robertson C, Gross SJ. Comparison of Eprinomectin with other macrocyclic lactones in cattle. Proceedings, 45th Annual Meeting of the American Association of Veterinary Parasitologists, Salt Lake City, Utah. 2000.
[5] EBLEX Better Returns Program. Beef Disease Directory - http://www.eblex.org.uk/documents/content/returns/brp_b_beefbrpbeefdiseasesdirectoryfeb12.pdf
[6] Increasing productivity in the dairy herd by tackling worms. Agriland Team Publication: May 28, 2018

EpriGard™
(eprinomectin)

Pour-On for Beef and Dairy Cattle
Parasiticide

Contains 5 mg eprinomectin/mL

Not for use in calves to be processed for veal.

INTRODUCTION
EpriGard Pour-On delivers effective internal and external parasite control in one application. EpriGard Pour-On contains eprinomectin, a unique avermectin. Its broad-spectrum efficacy in a weatherproof formulation, margin of safety, zero slaughter withdrawal and zero milk discard, make it a convenient product for parasite control in beef and dairy cattle, including lactating dairy cattle.

MODE OF ACTION
Eprinomectin is a member of the macrocyclic lactone class of endectocides which have a unique mode of action. Compounds of the class bind selectively and with high affinity to glutamate-gated chloride ion channels which occur in invertebrate nerve and muscle cells.

This leads to an increase in the permeability of the cell membrane to chloride ions with hyperpolarization of the nerve or muscle cell, resulting in paralysis and death of the parasite. Compounds of this class may also interact with other ligand-gated chloride channels, such as those gated by the neurotransmitter gammaaminobutyric acid (GABA).

The margin of safety for compounds of this class is attributable to the fact that mammals do not have glutamate-gated chloride channels, the macrocyclic lactones have a low affinity for other mammalian ligand-gated chloride channels and they do not readily cross the blood-brain barrier.

INDICATIONS
EpriGard (eprinomectin) Pour-On is indicated for the treatment and control of gastrointestinal roundworms (including inhibited Ostertagia ostertagi), lungworms, grubs, sucking and biting lice, chorioptic and sarcoptic mange mites, and horn flies in beef and dairy cattle of all ages, including lactating dairy cattle.

Applied at the recommended dose volume of 1 mL/10 kg (22 lb) body weight, to achieve a dose level of 500 mcg eprinomectin/kg body weight, EpriGard Pour-On is indicated for the effective treatment and control of the following parasites.

Gastrointestinal Roundworms

Haemonchus placei	(adults and L4)
Ostertagia ostertagi (including inhibited L4)	(adults and L4)
Trichostrongylus axei	(adults and L4)
Trichostrongylus colubriformis	(adults and L4)
Trichostrongylus longispicularis	(adults only)
Cooperia oncophora	(adults and L4)
Cooperia punctata	(adults and L4)
Cooperia surnabada	(adults and L4)
Nematodirus helvetianus	(adults and L4)
Oesophagostomum radiatum	(adults and L4)
Bunostomum phlebotomum	(adults and L4)
Strongyloides papillosus	(adults only)
Trichuris spp.	(adults only)

Lungworms

Dictyocaulus viviparus	(adults and L4)

Cattle Grubs (all parasitic stages)
Hypoderma lineatum
Hypoderma bovis

Lice
Damalinia bovis
Linognathus vituli
Haematopinus eurysternus
Solenopotes capillatus

Mange Mites
Chorioptes bovis
Sarcoptes scabiei

Horn Flies
Haematobia irritans

Persistent Activity
EpriGard (eprinomectin) Pour-On for Beef and Dairy Cattle has been proved to effectively control infections and to protect cattle from re-infection with *Dictyocaulus viviparus* for 21 days after treatment and *Haematobia irritans* for 7 days after treatment.

Use Conditions
Varying weather conditions, including rainfall, do not affect the efficacy of EpriGard Pour-On.

Management Considerations for Treatment of External Parasites
For best results EpriGard Pour-On should be applied to all cattle in the herd. Cattle introduced to the herd later should be treated prior to introduction. Consult your veterinarian or an entomologist for the most effective timing of applications for the control of external parasites.

Chorioptic Mange: In clinical studies evaluating the efficacy of eprinomectin pour-on solution against chorioptic mange mites, mites were not recovered from skin scrapings taken 8 weeks after treatment; however, chronic skin lesions were still present on some animals.

Horn Flies: For optimal control of horn flies, as EpriGard Pour-On provides 7 days of persistent activity against horn flies, the product should be used as part of an integrated control program utilizing other control methods to provide extended control.

DOSAGE
The product is formulated only for external application to beef and dairy cattle. The dose rate is 1 mL/10 kg (22 lb) of body weight. The product should be applied topically along the backline in a narrow strip extending from the withers to the tailhead.
Do not underdose. Ensure each animal receives a complete dose based on a current body weight. Underdosing may result in ineffective treatment, and encourage the development of parasite resistance.

ADMINISTRATION
Metering Cup with Measure-Squeeze-Pour System 250 mL (8.5 fl oz) Container with 25 mL Metering Cup

This pack contains 1 Metering Cup and 1 dip tube
1. Insert the dip tube into base of the Metering Cup.
2. Unscrew shipping cap from container top.
3. Screw the Metering Cup onto container top.
4. **Measure:** To select the correct dose rate, rotate the adjuster cap (top) in either direction to position the dose indicator to the weight of the animal you want to treat. When body weight is between markings, use the higher setting.
5. **Squeeze** the container gently to fill the Metering Cup to the required dose. Release your grip and any excess will return to the container.
6. **Pour:** Apply the full dose by tipping and pouring along the backline of the animal until the Metering Cup is empty.
7. **Storage:** The Metering Cup should not remain attached to the container when not in use. Detach the Metering Cup after each use and replace the shipping cap to close the container top.

Backpack (1 L/33.8 fl oz, 2.5 L/84.5 fl oz, and 5 L/169 fl oz Packs)
Connect the dosing applicator and draw-off tubing to the backpack as follows:

Attach the open end of the draw-off tubing to an appropriate dosing applicator. Attach draw-off tubing to the cap with the stem that is included in the pack. Replace the shipping cap with the cap having the draw-off tubing.
Gently prime the dosing applicator, checking for leaks. Follow the dosing applicator manufacturer's directions for adjusting the dose and proper use and maintenance of the dosing applicator and draw-off tubing.

ANIMAL SAFETY
Tolerance and toxicity studies have demonstrated the margin of safety for eprinomectin in cattle. In toxicity studies, application of 3 times the recommended dose had no adverse effects on neonatal calves, and application of up to 5 times the recommended dose 3 times at 7 day intervals had no adverse effects on 8 week old calves. In the tolerance study, one of 6 cattle treated once at 10 times the recommended dose showed clinical signs of mydriasis. Application of 3 times the recommended dose had no adverse effect on breeding performance of cows or bulls.

RESIDUE WARNING:
Residue Warnings: When used according to label directions, neither a pre-slaughterdrug withdrawal period nor a milk discard time is required, therefore, meat and milk from cattle treated with EpriGard (eprinomectin) Pour-On may be used for human consumption at any time following treatment.
A withdrawal period has not been established for pre-ruminating calves. Do not use in calves to be processed for veal.

WARNING:
Keep this and all drugs out of the reach of children.
NOT FOR USE IN HUMANS.

As with any topical medication intended for treatment of animals, skin contact should be avoided. If accidental skin contact occurs, wash immediately with soap and water. If accidental eye exposure occurs, flush eyes immediately with water. The safety data sheet (SDS) contains more detailed occupational safety information.

To report suspected adverse drug events, for technical assistance or to obtain a copy of the Safety Data Sheet, contact Aurora Pharmaceutical at 1-888-215-1256 or www.aurorapharmaceutical.com. For additional information about adverse drug experience reporting for animal drugs, contact FDA at 1-888-FDA-VETS or online at http://www.fda.gov.reportanimalae

PRECAUTIONS
This product is for topical application only. Do not administer orally or by injection.

Do not apply to areas of the backline covered with mud or manure.

EpriGard Pour-On is not recommended for use in species other than cattle. Severe adverse reactions have been reported in other species treated with products containing compounds of this class.

Restricted Drug (California) – Use only as directed.

When to Treat Cattle with Grubs
EpriGard Pour-On is effective against all stages of cattle grubs. However, proper timing of treatment is important. For the most effective results, cattle should be treated as soon as possible after the end of the heel fly (warble fly) season. While this is not peculiar to eprinomectin, destruction of *Hypoderma* larvae (cattle grubs) at the period when these grubs are in vital areas may cause undesirable host-parasite reactions. Killing *Hypoderma lineatum* when it is in the esophageal tissues may cause bloat; killing *H. bovis* when it is in the vertebral canal may cause staggering or paralysis. Cattle should be treated either before or after these stages of grub development.

Cattle treated with EpriGard Pour-On at the end of the fly season may be re-treated with EpriGard Pour-On during the winter without danger of grub-related reactions. For further information and advice on a planned parasite control program, consult your veterinarian.

OTHER WARNINGS
Parasite resistance may develop to any dewormer, and has been reported for most classes of dewormers.

Treatment with a dewormer used in conjunction with parasite management practices appropriate to the geographic area and the animal(s) to be treated may slow the development of parasite resistance.

Fecal examinations or other diagnostic tests and parasite management history should be used to determine if the product is appropriate for the herd/flock, prior to the use of any dewormer. Following the use of any dewormer, effectiveness of treatment should be monitored (for example, with the use of a fecal egg count reduction test or another appropriate method).

A decrease in a drug's effectiveness over time as calculated by fecal egg count reduction tests may indicate the development of resistance to the dewormer administered. Your parasite management plan should be adjusted accordingly based on regular monitoring.

Environmental Safety
Studies indicate that when eprinomectin comes in contact with soil, it readily and tightly binds to the soil and becomes inactive over time. Free ivermectin/eprinomectin may adversely affect fish and certain aquatic organisms. Do not permit cattle to enter lakes, streams or ponds for at least 6 hours after treatment. Do not contaminate water by direct application or by the improper disposal of drug containers. Dispose of containers in an approved landfill or by incineration.

As with other avermectins, eprinomectin is excreted in the dung of treated animals and can inhibit the reproduction and growth of pest and beneficial insects that use dung as a source of food and for reproduction. The magnitude and duration of such effects are species and life-cycle specific. When used according to label directions, the product is not expected to have an adverse impact on populations of dung-dependent insects.

ADVERSE REACTIONS
No adverse reactions were observed during clinical trials.

STORAGE CONDITIONS
Store bottle or pack in the carton to protect from light and at temperatures up to 86°F/30°C. Storage at temperatures up to 104°F/40°C is permitted for a short period of time, however, such exposure should be minimized.

For the 250 mL/8.5 fl oz bottle with a measure-squeeze-pour system, the Metering Cup should not remain attached to the container when not in use. Detach the Metering Cup after each use and replace the shipping cap to close the container top.

HOW SUPPLIED
EpriGard (eprinomectin) Pour-On for Beef and Dairy Cattle is available in a 250 mL/8.5 fl oz bottle with a measure-squeeze-pour system, or in a 1 L/33.8 fl oz, 2.5 L/84.5 fl oz or 5 L/169 fl oz backpack, intended for use with appropriate automatic dosing equipment.

Approved by FDA under ANADA # 200-741

Manufactured by:
Aurora Pharmaceutical, Inc.
Northfield, Minnesota 55057

IN 55-1696
02/2023

TAKE TIME OBSERVE LABEL DIRECTIONS

EpriGard™
(eprinomectin)
Pour-On for Beef and Dairy Cattle

www.aurorapharmaceutical.com

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