



Dectogard™

(doramectin topical solution)
Pour-On

The
Cattlemen's
Pour-N-Go
Solution to
Parasite
Control That
Works As
Hard As
You Do



www.aurorapharmaceutical.com



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Parasite Protection for the Long Haul

Beef and feedlot cattle producers know parasites are a major cause of disease, production loss and greatly impacts animal welfare. The negative impact parasites also have on the health and welfare of animals includes:

- ◆ Depresses cattle appetites, potentially affecting body condition and profit potential.
- ◆ Reduces feed efficiency by destroying some of the glands in the stomach that are necessary to break down ingesta into nutrients the cattle can use.
- ◆ Impacts immune system response by decreasing feed intake and nutrient absorption that can reduce the ability to respond to disease challenges.



For beef cattle producers, new **Dectogard™ (doramectin topical solution) Pour-On** from Aurora Pharmaceutical®, helps control 33 parasites and larval stages for broad coverage against internal and external parasites in beef cattle. Dectogard™ Pour-On contains a weatherproof¹ formulation and provides protection for up to 77 days against the biting cattle louse (*Bovicola bovis*). Varying weather conditions, including rainfall, do not affect the efficacy of Dectogard™ Pour-On



Dectogard™ is the first generic doramectin topical solution approved by FDA for treatment and control of gastrointestinal roundworms, lungworms, eyeworms, grubs, biting and sucking lice, horn flies, and mange mites in cattle.

Approved by FDA under ANADA # 200-738
Consult your veterinarian for assistance in the diagnosis, treatment and control of parasitism.

Not for human use
Restricted Drug (CA) Use only as directed.

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

Dectogard is a Trademark of Aurora Pharmaceutical, Inc.
Dectomax is a Registered Trademark of Zoetis Animal Health.

¹Skogerboe TL, Cracknell VC, Walstrom DJ, Ritzaup L, Karle VK. The effect of simulated rainfall on the efficacy of doramectin pour-on against nematode parasites of cattle. Vet Parasitol. 1999;86:229-234.

Only DectoGard™ Provides Long-Lasting, Broad-Spectrum Lice Control

Lice are a common winter problem in cattle, especially in cold climates. Heavy infestations can rob valuable nutrition when cattle need it most, decreasing gain and leaving cattle more susceptible to disease.

Two types of lice infest cattle, chewing lice and sucking lice. Chewing lice are the most common, but large populations of sucking lice are the most damaging. All lice cause severe irritation and itching, causing cattle to react by rubbing, licking or chewing on themselves. Infested animals are often restless, focusing on their discomfort rather than eating – and the broken skin that can result is an avenue for secondary infection.



Lice Problem Solved

DectoGard™ – with active doramectin – has a long duration of protection for up to **77 days against the biting cattle louse (*Bovicola (Damalinia) bovis*)** and **42 days against the long-nosed cattle louse (*Linognathus vituli*)**.

Most ranchers treat for lice at fall weaning; in some regions, this treatment also gets the last of the horn flies, as well as grubs. **DectoGard™ Pour-On** formulation is effective against both chewing and biting lice. 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.

Product Benefits

- ◆ Contains the same active ingredient and control regimen as Dectomax® (doramectin) Pour-On, but at a fraction of the cost per head
- ◆ Contains convenient weatherproof¹ formulation for enhanced protection in any climate. Varying weather conditions, including rainfall, do not affect the efficacy of DectoGard™ Pour-On
- ◆ Controls external and internal parasites with a single dose
- ◆ Convenient 45-day, pre-slaughter withdrawal period
- ◆ Delivers a long duration of activity against major cattle lice species:
 - ▶ 77 days against the cattle-biting louse (*Bovicola bovis*)
 - ▶ 42 days against the long-nosed cattle louse (*Linognathus vituli*)
- ◆ Is the only generic doramectin pour-on on the market to provide at least 28 days of protection against the most damaging internal parasites:
 - ▶ Roundworms (*Ostertagia ostertagi*, *Cooperia oncophora*, *C. punctata*, *Haemonchus placei*), nodular worms (*Oesophagostomum radiatum*) and lungworms (*Dictyocaulus viviparus*)
- ◆ Effectively controls infections and protects cattle from reinfection with roundworms (*Cooperia oncophora*), lungworms (*Dictyocaulus viviparus*), roundworms (*Ostertagia ostertagi* and *Oesophagostomum radiatum*) for 28 days and roundworms *Cooperia punctata* and *Haemonchus placei* for 35 days after treatment
- ◆ Doramectin topical solution has proved to effectively control infestations and to protect cattle from reinfestation with biting lice (*Bovicola bovis*) for 77 days and sucking lice (*Linognathus vituli*) for 42 days after treatment
- ◆ DectoGard™ provides 7 days of persistent activity against horn flies. The product should be used as part of an integrated control program and be combined with other methods for extended horn fly control
- ◆ Backed by Aurora's Best-Price-Always guarantee

Advantages of Deworming

Beef producers recognize the value of deworming as a tool to greatly improve the efficiency and quality of their animals. The goal of strategically timed deworming application is to help prevent economic losses due to environmental parasite contamination and eliminate worm egg shedding.

Deworming with DectoGard™ includes:

- ◆ Higher carcass quality
- ◆ Higher body condition scores
- ◆ Heavier weaned calves
- ◆ Improved feed efficiency and dry matter intake
- ◆ Improved reproductive efficiency
- ◆ Stronger immune systems to fight off stress and production diseases

Seasonal Advantages

This first goal of deworming is to make sure cattle are parasite-free during the winter and at the beginning of the grazing season. If cattle are harboring adult worm populations in late winter or early spring, these parasites will begin contaminating the pastures immediately as temperatures warm up. In most parts of the U.S., parasite challenge is minimal during the winter months. Cattle dewormed at the beginning of winter in late November or early December will most often remain relatively parasite-free until the following spring. The dewormer used must have a high degree of efficacy; otherwise, a second treatment given in early spring is required to remove all adult parasites before grazing begins.

Timing Critical for Effective Parasite Control

Optimal deworming occurs after spring grazing begins. This spring deworming(s) needs to be given after the cattle have had a chance to graze but before the invading larvae have developed into adult parasites. Grazing cattle begin consuming the larvae as soon as they begin grazing. Within six weeks after ingestion, larvae will have time to reach maturation to an adult and begin laying worm eggs. This is the ideal time when the cattle should be dewormed strategically to prevent worm egg contamination back on the pastures.

Broadest Spectrum Parasite Control for the Dollar

For beef, feedlot and stocker cattle producers, new **DectoGard™ Pour-On** helps control 33 parasites and larval stages for broad coverage against internal and external parasites in beef cattle.





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CATTLE INTERNAL PARASITES ADULTS L₄

GASTROINTESTINAL ROUNDWORMS		
<i>Ostertagia ostertagi</i>	X	X
<i>O. lyrata</i>	X	
<i>Haemonchus placei</i>	X	X
<i>Trichostrongylus axei</i>	X	X
<i>T. colubriformis</i>	X	X
<i>Cooperia oncophora</i> ²	X	X
<i>C. pectinata</i>	X	
<i>C. punctata</i>	X	X
<i>C. surnabada</i>	X	
<i>Bunostomum phlebotomum</i>	X	
<i>Oesophagostomum radiatum</i>	X	X
<i>Trichuris</i> spp.	X	
LUNGWORMS		
<i>Dictyocaulus viviparus</i>	X	X

CATTLE EXTERNAL PARASITES ADULTS

CATTLE GRUBS (PARASITIC STAGES)	
<i>Hypoderma bovis</i>	X
<i>H. lineatum</i>	X
EYEWORMS	
<i>Thelazia gulosa</i>	X
<i>T. skrjabini</i>	X
BITING LICE	
<i>Bovicola (Damalinia) bovis</i>	X
SUCKING LICE	
<i>Linognathus vituli</i>	X
<i>Haematopinus eurysternus</i>	X
<i>Solenopotes capillatus</i>	X
HORN FLIES	
<i>Haematobia irritans</i>	X
MANGE MITES	
<i>Chorioptes bovis</i>	X
<i>Sarcoptes scabiei</i>	X



DectoGard™ Pour-On has a 45-day pre-slaughter withdrawal period. Do not use in female dairy cattle 20 months of age or older. Do not use in calves to be processed for veal. DectoGard has been developed specifically for cattle. Consult your veterinarian for assistance in the diagnosis, treatment and control of parasitism.

²Efficacy below 90% was observed against adult *C. oncophora* in some clinical studies.

Dosage and Administration

Apply DectoGard™ Pour-On topically along the mid-line of the back in a narrow strip between the withers and tailhead. Dosing guidelines are provided in the following table:

Body Weight (lb.)	Dose (mL)
Up to 110	5 mL
111-220	10 mL
221-330	15 mL
331-440	20 mL
441-550	25 mL
551-660	30 mL
661-770	35 mL
771-880	40 mL
881-990	45 mL
991-1100	50 mL

Highly Effective on Grubs

DectoGard™ Pour-On Solution is highly effective against cattle grubs. For most effective results, cattle should be treated as soon as possible after the end of the heel fly (warble) season. Destruction of *Hypoderma larvae* (cattle grubs) when these grubs are in vital areas may cause undesirable host-parasite reactions (see label for specific application timing). Cattle should be treated either before or after the migratory phase of grub development. Cattle treated with DectoGard™ Pour-On after the end of heel fly season may be re-treated during the winter for internal parasites, mange mites, or biting and sucking lice without danger of grub-related reactions.

Minimal Risk to Dung Insects

DectoGard™ -- when used according to label directions -- should not cause any adverse impact on populations of dung-dependent insects.

Available in Convenient Sizing

DectoGard™ Pour-On solution is available in 2.5-L and 5-L multi-dose containers.




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Dectogard™ (doramectin topical solution)

Pour-On

Antiparasitic

0.5% pour-on solution for cattle 5 mg/mL

PRODUCT DESCRIPTION:

Dectogard Pour-On solution is a ready-to-use, systemically active, clear, light blue solution containing 0.5% w/v doramectin (5 mg/mL). It is formulated to deliver the recommended dosage of 500 mcg/kg (227 mcg/lb) of body weight when given by topical administration at the rate of 1 mL/22 lb (10 kg) of body weight.

PRODUCT CHARACTERISTICS:

Dectogard Pour-On solution is a highly active, broad-spectrum parasiticide for topical administration to cattle. It contains doramectin, a novel fermentation-derived macrocyclic lactone. Doramectin is isolated from fermentations of selected strains derived from the soil organism *Streptomyces avermitilis*.

A primary mode of action of macrocyclic lactones is to modulate chloride ion channel activity in the nervous system of nematodes and arthropods. Macrocyclic lactones bind to receptors that increase membrane permeability to chloride ions. This inhibits the electrical activity of nerve cells in nematodes and muscle cells in arthropods and causes paralysis and death of the parasites. In mammals, the neuronal receptors to which macrocyclic lactones bind are localized within the central nervous system (CNS), a site reached by only negligible concentrations of doramectin.

One dose of Dectogard Pour-On solution effectively treats and controls a wide range of roundworm and arthropod parasites that impair the health and productivity of cattle.

Studies have demonstrated the safety margin of doramectin. In USA trials, no toxic signs were seen in cattle given up to 25 times the recommended dose of doramectin injectable solution. A study using doramectin injectable solution also demonstrated safety in neonatal calves treated with up to 3 times the recommended dose. In breeding animals (bulls, and cows during folliculogenesis, organogenesis, implantation, and through gestation), a dose 3 times the recommended dose of doramectin injectable solution had no effect on breeding performance. A pharmacokinetic study demonstrated that systemic exposure to doramectin from doramectin topical solution was less than systemic exposure to doramectin from doramectin injectable solution.

PRODUCT INDICATIONS:

Dectogard Pour-On solution is indicated for the treatment and control of the following species of gastrointestinal roundworms, lungworms, eyeworms, grubs (see PRECAUTIONS), biting and sucking lice, horn flies, and mange mites in cattle. Consult your veterinarian for assistance in the diagnosis, treatment, and control of parasitism.

Gastrointestinal roundworms

Ostertagia ostertagi (adults and L₄, including inhibited larvae)
O. lyrata (adults)
Haemonchus placei (adults and L₄)
Trichostrongylus axei (adults and L₄)
T. colubriformis (adults and L₄)
Cooperia oncophora (adults¹ and L₄)
C. pectinata (adults)
C. punctata (adults and L₄)
C. surnabada (adults)
Bunostomum phlebotomum (adults)
Oesophagostomum radiatum (adults and L₄)
Trichuris spp. (adults)

¹ Efficacy below 90% was observed against adult *C. oncophora* in some clinical studies.

Lungworms (adults and fourth stage larvae)

Dictyocaulus viviparus

Eyeworms

Thelazia gulosa (adults)
T. skrjabinii (adults)

Grubs

Hypoderma bovis
H. lineatum

Lice

Biting Lice

Bovicola (Damalinia) bovis

Sucking Lice

Haematopinus eurysternus
Linognathus vituli
Solenopotes capillatus

Horn Flies

Haematobia irritans

Mange Mites

Chorioptes bovis
Sarcoptes scabiei

Doramectin topical solution has been proved to effectively control infections and to protect cattle from reinfection with *Cooperia oncophora*, *Dictyocaulus viviparus*, *Ostertagia ostertagi*, and *Oesophagostomum radiatum* for 28 days; and *Cooperia punctata* and *Haemonchus placei* for 35 days after treatment.

Doramectin topical solution has been proved to effectively control infestations and to protect cattle from reinfection with *Bovicola (Damalinia) bovis* for 77 days and *Linognathus vituli* for 42 days after treatment.

Management Considerations for Horn Flies

Dectogard Pour-On solution provides 7 days of persistent activity against horn flies. The product should be used as part of an integrated

control program and be combined with other methods for extended horn fly control. For optimal horn fly control, consult with your veterinarian or a livestock entomologist.

DOSEAGE:

Administer Dectogard Pour-On solution to cattle topically at a dosage of 500 mcg doramectin per kg (227 mcg/lb) of body weight. Each mL contains 5 mg of doramectin, sufficient to treat 22 lb (10 kg) of body weight.

For the best results, Dectogard Pour-On solution should be a part of a parasite control program for both internal and external parasites based on the epidemiology of these parasites. Consult a veterinarian or an entomologist for information regarding the most effective timing of applications.

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:

Dectogard Pour-On solution should be applied topically along the mid-line of the back in a narrow strip between the withers and tailhead.

Dosing Cup (1-L bottles)

A dosing cup is provided for use with Dectogard Pour-On solution supplied in 1-L bottles. The Dectogard Pour-On solution dosing cup should be installed by attaching the dip tube to the base of the measuring cup, unscrewing the shipping cap from the container, and screwing the measuring cup onto the bottle neck until tight.

The dosing cup tube should be positioned at the bottom of the bottle. When the dosing cup is in the closed position ("CLOSED" or "OFF" or "SHUT" at set dosage mark on screw), product does not enter the cup reservoir. Select a dose [1 mL per 22 lb (10 kg) of body weight] by twisting the adjuster cap on the top of the dosing cup to the desired position. When body weight is between weight markings on the dosing cup, use the higher dose volume.

To fill the dosing reservoir, hold the bottle upright and squeeze it until a slight excess has been delivered as indicated by the calibration lines. Release the pressure and excess will automatically drain from the reservoir and return to the bottle.

Tilt the bottle to deliver the dose. Dectogard Pour-On solution should be delivered to cattle on the back in a single pass from the withers to the tailhead.

Applicators (1-L, 2.5-L and 5-L bottles)

Applicators are available for use with Dectogard Pour-On solution supplied in 1-, 2.5- and 5-L bottles. Directions for use with compatible applicators are provided below. Some applicators may be incompatible with this formulation.

1. Replace the shipping cap on the 1-, 2.5- or 5-L bottle with the draw-off cap provided and tighten firmly.
2. Thread the draw-off tubing through the anti-kink spring. Attach the tube to the draw-off cap. Screw the spring over the tubing and draw-off spigot.
3. Invert the bottle.
4. Set the dose to maximum (50 mL). Gently prime the applicator, checking for leaks.
5. Follow the dosing applicator manufacturer's directions to set the required dose and administer.
6. To disconnect the system, proceed as follows:
 - a) Set backpack in upward position.
 - b) Discharge residual material from the applicator and draw-off tubing into a separate, clean, dry receptacle.
7. Follow the manufacturer's recommendations for care and maintenance of the dosing applicator.
8. Remove the draw-off cap. Replace with the original cap and tighten firmly.

WARNING:

Flammable! Keep away from heat, sparks, open flame, and other sources of ignition. Not for human use. Keep out of reach of children. The Safety Data Sheet (SDS) contains more detailed occupational safety information. To report adverse effects in users, to obtain more information, or to obtain an SDS, call 1-888-215-1256.

Dectogard Pour-On solution for cattle may be irritating to human skin and eyes, and users should be careful not to apply it to themselves or to other persons. Operators should wear protective clothing including a long-sleeved shirt, protective gloves, and boots with a waterproof coat when applying the product. Protective clothing should be washed after use. If accidental skin contact occurs, wash the affected area immediately with soap and water. If accidental eye exposure occurs, flush the eyes immediately with water and get medical attention.

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 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.

PRECAUTIONS:

Dectogard Pour-On solution has been developed specifically for use in cattle only. This product should not be used in other animal species as severe adverse reactions, including fatalities in dogs, may result.

This product is to be applied to skin surface only. Do not administer orally or parenterally.

Do not apply to areas of skin which are caked with mud or manure.

Wash hands after use.

Do not smoke or eat while handling the product.

Cloudiness in the formulation may occur when Dectogard Pour-On solution is stored at temperatures below 0°C (32°F). Allowing to warm to room temperature will restore the normal appearance without affecting efficacy.

Dectogard Pour-On solution is highly effective against cattle grubs. However, proper timing of treatment is important. For most effective results, cattle should be treated as soon as possible after the end of the heel fly (warble) season.

Destruction of *Hypoderma larvae* (cattle grubs) at the period when these grubs are in vital areas may cause undesirable host-parasite reactions including the possibility of fatalities. Killing *H. lineatum* when it is in the tissue surrounding the gullet may cause bloat; killing *H. bovis* when it is in the vertebral canal may cause staggering or paralysis. These reactions are not specific to treatment with Dectogard Pour-On solution, but can occur with any successful treatment of grubs. Cattle should be treated either before or after the migratory phase of grub development. Consult your veterinarian concerning the proper time for treatment.

Cattle treated with Dectogard Pour-On solution after the end of heel fly season may be re-treated with Dectogard Pour-On during the winter for internal parasites, mange mites, or biting and sucking lice, without danger of grub-related reactions. A planned parasite control program is recommended.

RESIDUE WARNING:

Cattle must not be slaughtered for human consumption within 45 days of treatment. Not for use in female dairy cattle 20 months of age or older. A withdrawal period has not been established for this product in premarketing calves. Do not use in calves to be processed for veal.

USE CONDITIONS:

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

ENVIRONMENTAL SAFETY:

Studies indicate that when doramectin comes in contact with the soil, it readily and tightly binds to the soil and becomes inactive over time. Free doramectin 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, doramectin 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.

Store Below 30°C (86°F)

Protect From Light

To report suspected adverse drug events, for technical assistance or to obtain a copy of the SDS, 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 <http://www.fda.gov/reportanimalae>

HOW SUPPLIED:

Dectogard Pour-On solution is available in 1-L, 2.5-L, and 5-L multi-dose containers.

Approved by FDA under ANADA # 200-738

Consult your veterinarian for assistance in the diagnosis, treatment, and control of parasitism.

Not for human use

Restricted Drug (CA) Use only as directed.

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

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