

BARBER POLE WORM

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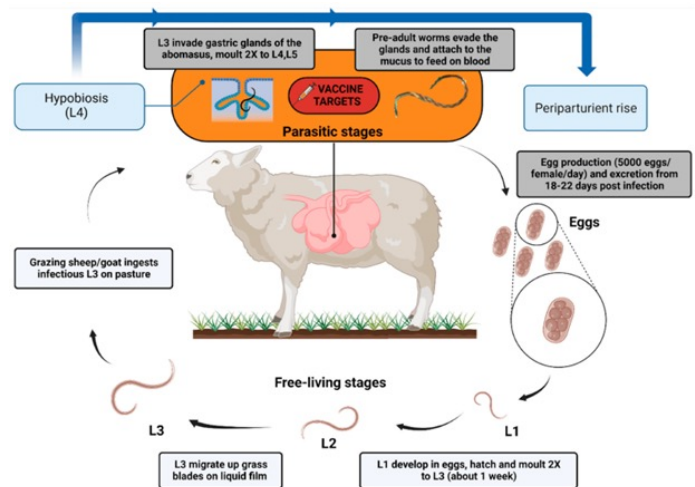
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Gastrointestinal nematodes, commonly known as worms, present the greatest danger to the sheep and goat industry in the Southeastern region of the United States. *Haemonchus contortus*, referred to as the barber pole worm, is a clinical problem for small ruminants. Anemia, low packed cell volume (PCV), diarrhea, dehydration, and peripheral and internal fluid accumulation are common signs of barber pole worm infestation.

Infested sheep and goats have lower growth rates, reduced reproductive performance and have higher rates of illness and death. Consequently, *H. contortus* can account for reduced profits in a small ruminant operation.

LIFE CYCLE

Small ruminants become infested with the nematode by consuming the L3, or infecting larvae. The L3 larvae then burrow into the internal layer of the animal's abomasum (true stomach), where they develop to an L4, or pre-adult larvae. Then L4 molts into an L5, which is the adult form. Adult male and female worms live in the abomasum of the animal, where they feed on blood. The worms mate and produce eggs, which are deposited by the females and can range anywhere from 5,000 to 10,000 eggs per day, which are passed through the animal's feces to the pasture. When the soil is warm and moist (>85°F), eggs will hatch into L1 larvae (first stage juveniles). The L1 larvae then develop through stages L2 and L3, with large numbers of juvenile parasite (L3) accumulates on overstocked grazing pastures.



Life cycle of *H. contortus*,

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LIFE CYCLE

- Keep stocking rates low.
- Provide clean water and minerals.
- Use gravel or concrete in the feedlot area to break the worm life cycle and to prevent re-infestation.
- Provide high-quality hay for animals raised in areas where forage is not available year-round or when the pasture conditions are poor. Hay should be kept off the ground to avoid contamination by feces.
- Incorporate browse plant species when possible. Sheep and goats prefer to browse shrubs and forages that are above ground to grass. If animals consume forages at least six inches tall, infestation from barber pole worms is reduced.
- Try a mixed species grazing program using cattle and small ruminants.
- When possible, utilize pastures for hay cutting after grazing. This will help to break the worm's life cycle, decrease larvae in the pasture and prevent re-infestation. Direct sunlight during the summer months also will help decrease the population of larvae that remain in the soil.
- When possible, alternate the pasture with a short cycle crop, such as alfalfa. This management practice will help to break the worm's life cycle and decrease larvae population in the pasture and prevent re-infestation.
- Use clean feeders and continue to practice good hygiene in the pens and pasture.
- Provide a well-balanced nutritional program. Animals on a properly balanced diet have an increased immune response to internal parasites.

- Deworm the females soon after she has kidded/lambbed. The pregnancy hormone progesterone and the lactate hormone prolactin have been shown to reduce the ability of does to fight worm infestation. Progesterone suppresses the female's immune system. Females that are lactating and raising kids/lambs are more susceptible to parasites. Monitor the herd closely from kidding/lambing to weaning.
- Small ruminant genetics are an important component that will determine an animal's ability to resist *H. contortus* infestation. Resistance can be measured by fecal egg counts (FEC). The resistance to worm infestation is heritable. The doe's ability to withstand infestation is defined as resilience and is measured by packed cell volume (PCV). Resilience is less heritable than resistance.

TREATMENT OF BARBER POLE WORM

Barber pole worms continue to plague small ruminant producers in the Southeast due to the humid climate. The treatment of barber pole worm can vary from farm to farm due to the ineffectiveness of some anthelmintics because of overuse. The most common anthelmintics used include Cydectin, Prohibit, Safe-guard, Valbazen and Ivomec. Producers also have found that copper boluses are effective in controlling barber pole worms. Check with your local Extension office or veterinarian for dewormers that work best in your area. Sheep and goats should only be given dewormers when needed to prevent them from becoming resistant to certain anthelmintics.

CYDECTIN

Cydectin oral drench is a ready-to-use dewormer. Do not mix with any other products before use. Cydectin should be given as an oral drench at a rate of 1 cc per 11 lbs. for sheep and 1 cc per 22 lbs. for goats. Sheep and goats should not be slaughtered until seven days after receiving Cydectin. Cydectin is not approved for use on sheep or goats used for milk production. Cydectin use in goats is considered off-label use, and producers should consult with their veterinarian before use.

Precaution: Do not use injectable formulation of Cydectin due to the 120-130-day withdrawal time.

COPPER BOLUS

Copper boluses are given orally to goats and sheep. However, producers should be cautious when giving copper boluses to sheep due to copper toxicity which can lead to death. Make sure to read the label and ask your veterinarian before giving this product to sheep.

Dosage rates for goats are:

0.5 gram - goats 30 lbs. and under

1 - 2 grams - goats 31 lbs - 50 lbs

1.5 - 3 grams - goats 51 lbs - 90lbs

2 - 4 grams - goats over 90lbs

SAFE-GUARD

Safe-guard is a ready-to-use dewormer. It must be given orally at 2.3 cc per 100 lbs to be most effective. Safe-guard is a very safe option for your sheep or goats. If you remove feed from the animals 24 hours before administering this product, it will increase the effectiveness.

PROHIBIT

Prohibit drench dewormer is a concentrate and needs to be mixed with water. For mixing instructions, read the packet label. Prohibit should not be given to any sheep or goats used for milk production. Do not slaughter sheep or goats within 72 hours of administration. Prohibit is often used as a rescue dewormer if Cydectin or Ivomec is not providing effective control. For dosage rates, consult with your veterinarian.

Prohibit, if overdosed, can result in death of sheep and goats!

VALBAZEN

Valbazen is an oral drench sheep and goat dewormer. Dosage rates vary from sheep to goats so be sure to read the bottle label for correct dosage rates. Valbazen is an effective dewormer, as it treats 25 different parasites and larval stages. Remove feed 24 hours before administration for the most effective results. For dosage rates, consult with your veterinarian.

Precaution: Valbazen can cause abortion in late stage gestation. Consult with your veterinarian before giving this dewormer to goats.

IVOMEC

Ivomec sheep drench is given as an oral drench. Check the label for dosage rates in sheep. Before giving to goats, consult with your veterinarian for off-label use. Ivomec is one of the most used dewormers, and studies have shown that Ivomec has become less effective over the years. For dosage rates, consult with your veterinarian.

Remember to always check with your veterinarian before using any of these products for off-label use.

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