

Parasite Focus - Haemonchus Contortus

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INTRODUCTION

- Haemonchus Contortus (also known as the Barber's pole worm) is a gastrointestinal parasite infecting small ruminants worldwide and is considered the most pathogenic nematodes^{10,14}



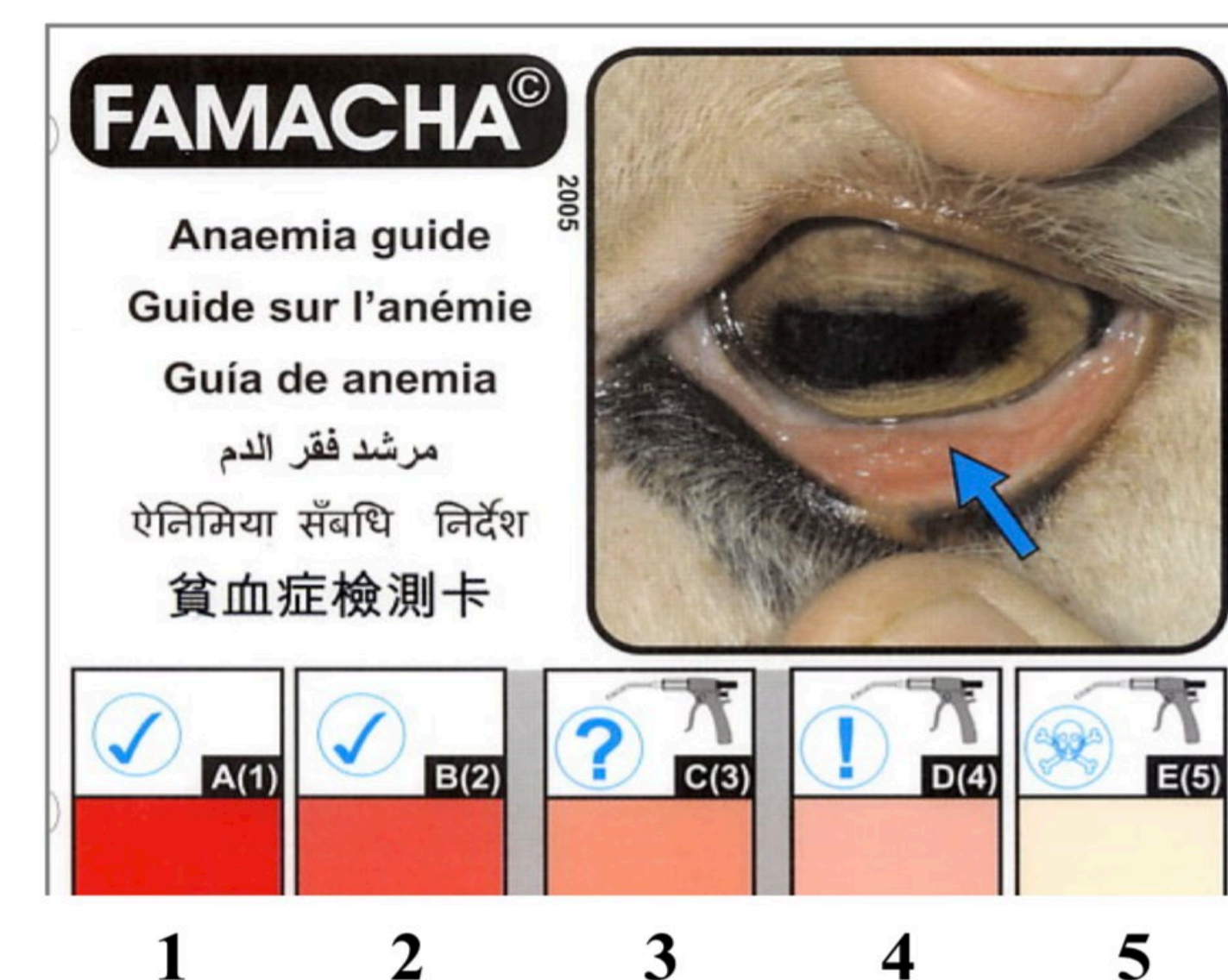
ENVIRONMENT

- H. contortus favors warm moist climates in countries around the world such as: The United States, Australia, and Africa⁹
- H. contortus poses as an issue year-round, but is most prevalent during hot, humid conditions⁹
- In the winter, larvae become metabolically inactive:
 - Undergo hypobiosis and survive in the abomasum of the host⁸
 - Hypobiosis also occurs on pasture in the fecal pack

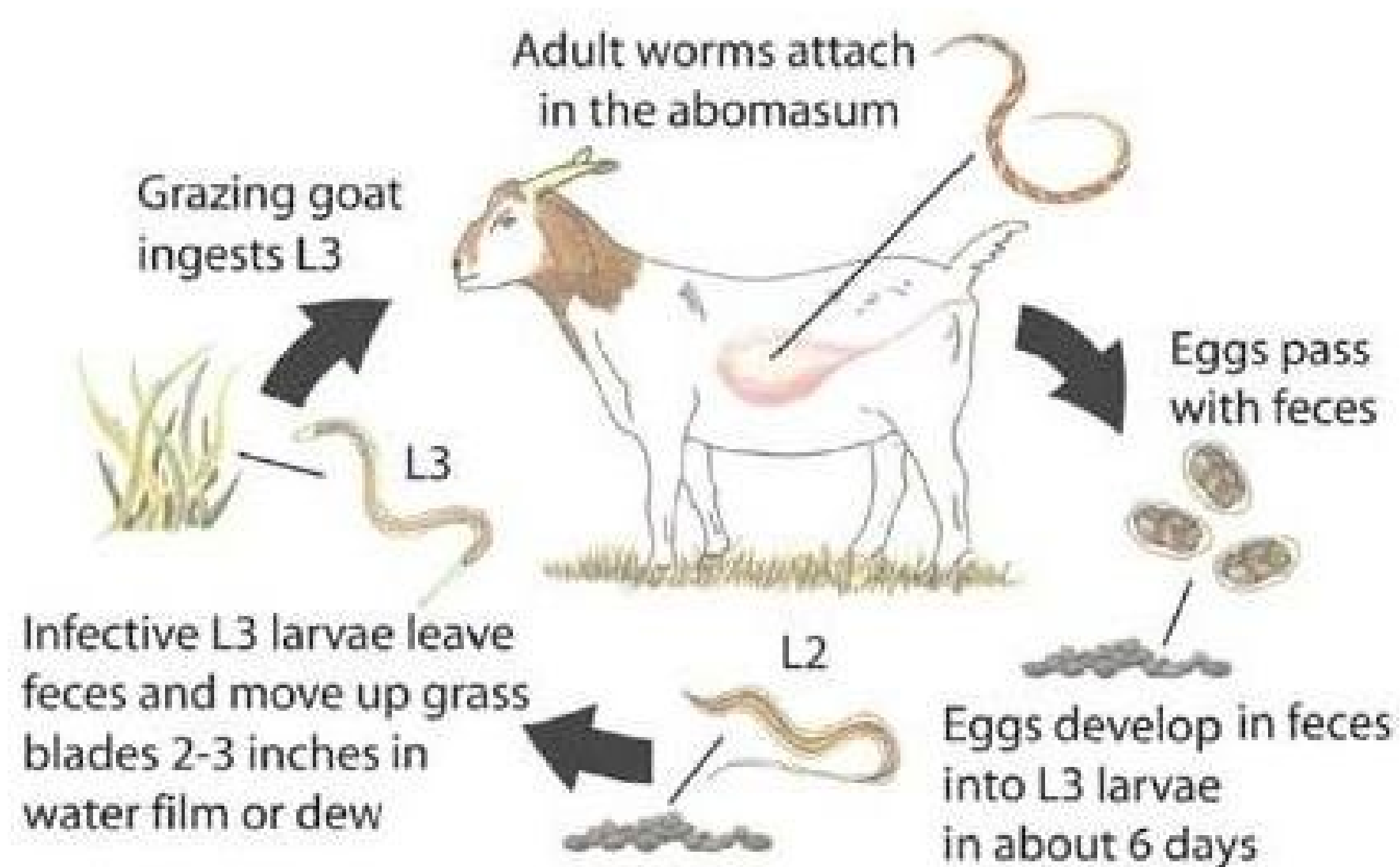
DIAGNOSIS AND TREATMENT

- Parasitic infection can be classified as hyperacute, acute, or chronic⁷
 - Hyperacute:** presents with few to no symptoms, can cause death within 1 week
 - Acute:** presents with anemia, submandibular subcutaneous edema ("bottle jaw"), chronic infection, and weight loss
 - Chronic:** presents with subclinical signs such as edema in the abomasum, which leads to inflammation of infected tissues, increased gastric secretions, and tissue damage⁹
- Diagnostics include fecal flotation, FAMACHA[®] eye scoring, and PCV (packed cell volume) testing⁶
 - FAMACHA[®] eye scoring can be easily used to identify anemia by examining the color of an animal's ocular mucous membrane⁸
 - Note – only valid for H. contortus
 - PCV is more invasive as it requires a blood sample, however, this test most accurately determines overall anemia and thus is used to base treatment recommendations upon

FAMACHA[®] eye scoring is important for estimating anemia and is used to make treatment decisions



It is important to note the life cycle of H. contortus



ECONOMIC IMPACT

Effects of intestinal parasites on mortality and economic loss in Ohio

	Sheep	Lamb
Total Deaths (2018)	6,000	12,000
-Due to intestinal parasites	720	1,440
-Expected economic impact	\$161,280	\$324,000
Total Deaths (2014)	6,036	10,025
-Due to intestinal parasites	714	1,158

- Estimated economic loss in 2018 is based upon the percent of sheep and lambs lost due to intestinal parasites in 2014^{11,12}
- Cost of lamb and sheep was estimated at \$224 per head¹
- Overall, estimated loss for Ohio producers in 2018 was \$485,000

MANAGEMENT

Strategies to prevent and control

- Judicious use of anthelmintic⁵
 - The most common cause of anthelmintic (dewormer) resistance is over or under dosing due to the lack of not weighing livestock
 - H. contortus has developed high resistance to all classes of anthelmintic³
- Treatment 2 weeks before lambing/kidding²
 - H. contortus can remain dormant in host, but increased stress can cause eggs to be shed (i.e lambing/kidding)
 - Pasture lambing and co-grazing will introduce lambs to parasites from infected females
- Monitoring egg counts
 - Use a base fecal egg count to determine if animals need to be treated
 - < 200 eggs per gram of feces = no treatment necessary²
 - 10,000 adult worms are enough to kill an adult sheep or goat³
 - Adults worms can consume approximately 0.05 mL of blood daily³

Proper drenching techniques are critical to ensure anthelmintic resistance does not occur



CONCLUSION

- H. contortus is one of the most common parasite found in small ruminant operations that takes a devastating toll on the farm
- As parasitic resistance increases, there is a demand to find an effective way to treat and/or manage parasites
- Strict management practices should be kept to in order to best prevent infection
- There is no silver bullet to manage parasitic infection, therefore, implementing two or more management practices is the key to success

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PICTURES

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