The Inside Story

Youth Activities: Advanced

Main Activity – Analyze This!

Read and analyze the five parasite scenarios. Use the charts provided by your leader for identification of parasite eggs and anthelmintics.

Scenario 1:
A group of ten (10) yearling Morgan fillies are housed on a two acre pasture. The average body condition of the horses has dropped from 6/9 to 4/9 despite good grass growth and the addition of grain to their daily diet. Two of the yearlings have soft feces. Historically, the herd has been dewormed with ivermectin every two months. The last dose was given three weeks ago. Concerned about the weight loss, you submit feces for analysis. The veterinarian reports that there is an overwhelming amount of parasite eggs (Figure 1) and the fecal egg count is 1100 eggs/gram. Your veterinarian advices you to deworm everyone with ivermectin and to dose all the horses based on the heaviest weight in the group.

Ten days later the feces is still soft and the yearlings have lost even more weight. A second fecal analysis is performed. The same type of eggs are present and the fecal egg count is 970 eggs/gram.

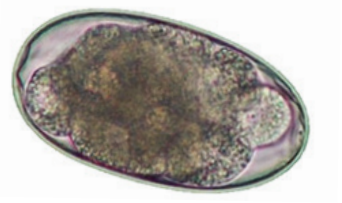

Figure 1

1. What general type of parasite was discovered on fecal analysis?

2. It was determined that the specific parasite was cyathostomes. Is Ivermectin a good choice for treating this parasite?

3. Why was the fecal egg count still high after deworming?

Scenario 2:
Three Shetland ponies are housed with five donkeys. They are part of a traveling petting zoo. One pony has been coughing and having trouble maintaining its body weight. The veterinarian detects abnormal lung sounds when auscultating (listening) to the lungs. Pneumonia is of concern, but the animal does not have a fever or snotty nasal discharge. Because of the decreased body condition (4/9), a fecal sample is submitted to determine if parasites are causing the ill-thrift. Fecal analysis reveals this egg (Figure 2).

Figure 2

1. What parasite was found on fecal analysis?

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2. How could this parasite be causing the coughing?

3. How could this problem be prevented?

Scenario 3:
A 32 year old Clydesdale gelding colics (has abdominal pain) and has surgery. During surgery, when the cecum is opened, parasites are found in the fecal ingesta (Figure 3). Because of the parasites found during surgery, fecal analysis is performed on the five other horses on the farm. These two eggs are found (Figures 4 & 5). Fecal egg count is 400 eggs/gram. The entire herd was treated with Praziquantel. One month later you notice that one of the horses has alopecia on the rump and broken hairs on the tail (Figure 6).

1. What parasites were discovered on the fecal analysis?

2. Why would this horse be scratching its hind end?

3. Why didn't the deworming work?

Figure 3

Figure 4

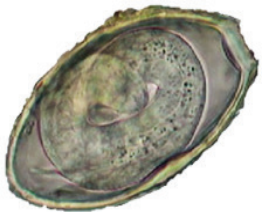

Figure 5

Figure 6

Scenario 4:
Ten Arabian horses are examined as part of their yearly physical exam routine. The horses are bright, alert, and have a shiny coat. Their body condition scores range from 6/9 – 7/9. Fecal analysis is performed and demonstrated a few eggs (Figure 7), with an overall fecal egg count of 75 eggs/gram.

1. What general type of parasite egg was discovered on fecal analysis?

2. It was determined that the specific parasite was large strongyles. What recommendation would you make to the owner regarding deworming the horses?

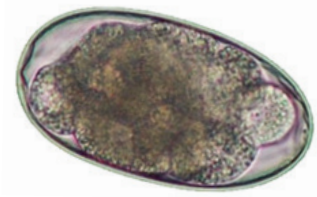

Figure 7

Advanced Level Handout

Scenario 5:
A rescue agency acquires a two-year-old Quarter Horse stallion. The horse has no history of deworming or preventative health care. He is ill-thrifty, has overgrown hooves, and a body condition score of 2/9. The agency suspects he has intestinal parasites, so feces is submitted for analysis. Because they are worried about the condition of the horse, a dose of moxidectin is administered before fecal results are available.

Figure 8

Two days later the horse experiences severe abdominal pain and is referred to a hospital for an exploratory abdominal surgery. During surgery, the veterinarian discovers that the small intestine is filled with worms (Figure 8), preventing feces from moving through the intestinal tract, resulting in colic.

After surgery the fecal analysis results arrive. The sample had a predominance of this type of egg (Figure 9) and a fecal egg count of 650 eggs/ gram.

Figure 9

1. What parasite was discovered on fecal analysis?

2. Why did the horse colic?

3. What could be done to prevent the impaction colic?

Riding Further Activity – Medication Match
Divide into teams for this activity. Choose a creative parasite type name for your team.

This is a fun way to test your knowledge about dewormers and information regarding deworming recommendations. Your leader will have the names of dewormers posted to help you out. If your leader has chosen to use candy for correct answers be sure to tell them if you have any food allergies.

Prior to starting the game:
- Decide with input from your leader if an incorrect answer will result in a penalty (removal of a piece of candy or ball) or simply no change in the current total. For educational purposes you may choose to play the game in several rounds - with no penalties for the first game and then include a penalty for the second round.
- Decide if the moderator should give the correct answer or if the question should be returned to the "draw" bowl.
- Decide if questions that are more difficult or require more than one answer should be designated as BONUS questions and be rewarded with 2 pieces of candy or balls for a correct answer.