

# GIN (Gastro-intestinal Nematodes) Control

## Small Ruminant Internal Worm Info + Control Sheet

### **What are GINs?**

Gastro-intestinal nematodes (GIN) are worms that are picked up by ruminants while they are on pasture. This classification is a broad group of worms, that is based on the visual appearance of the eggs noted on fecal examination.

### **How do my animals get infected with GIN?**

Female worms, that live in infected animals, lay eggs that are passed with the animals' manure. These eggs hatch when in the right environment and turn into larvae. Once these larvae enter the right stage, they can be picked up by other animals in the environment while they are grazing. These larvae then migrate through the body of the animal until they reach the gastrointestinal tract. At this point, they mature and restart the life cycle.

Ultimately, these worms are passed from animal to animal via pasture, and fecal contamination on pasture.

### **Are my animals infected?**

Animals that have a GIN infection can often be clinically normal, meaning they do not show us any signs that they are infected. However, if the amount of worms are high enough, we can see various signs; including diarrhea, weight loss, slower growth than expected, anemia (pale mucous membranes), as well as death.

### **How do I know if they truly have worms?**

When talking to your veterinarian, they may recommend performing a fecal egg count which can be performed in clinic. This involves collecting a fresh fecal sample, and having a technician perform the examination of the sample. If there are adult worms in your animals, eggs should be present in the sample.

### **Treatment options:**

Unfortunately, a lot of the worms found in small ruminants (sheep and goats), have shown a increasing level of resistance to the dewormers commonly used to treat them. As a result, in order to treat responsibly, talking with a veterinarian is critical.

#### General plan:

1. Performing fecal egg counts are the first step in ensuring that your animals are truly infected / confirming the suspected diagnosis.
2. Working with veterinarian to identify the animals that are clinically affected by worms

3. Performing FAMACHA scoring on each animal to identify those who need to be treated.
4. Discuss with veterinarian various deworming options
5. Treat animal with appropriate dose.
6. Retest FEC in 14 days to assess egg counts (helps know if there is resistance to dewormer)

**NOTE:** identification of which worm is predominate species is important – FAMACHA scores will only be helpful in cases of haemonchus worms

FAMACHA Score chart



### What else can I do?

#### Pasture rotation:

Moving animals strategically between pastures can help reduce burdens of the larvae in the environment. Selective treatment of animals that are clinical, waiting for 3-5 days and then moving to a new pasture can be helpful overall herd health. We are attempting to help those that are sick, but also trying to minimize the population of worms in the environment, being that of a resistant population only.

#### Timely treatment:

Treating the adults prior to lambing can help reduce the shedding of eggs in the environment. If possible, using FAMACHA scoring to help guide treatment is ideal. After youngstock are born, continue to monitor their health; ideally only treating the youngstock when clinically necessary. This method, if under ideal circumstances, can allow us to avoid treating the kids/ewes until post-weaning

*For instance, if ewes were to lamb in early spring (March / Apr), treat the ewes before lambing. Monitoring of lambs, and treating when needed in July.*

*If you have any questions, please contact a veterinarian for advice!*