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## **Small Ruminant Parasite Management Quick Sheet:**

### **Understanding the Issue:**

Sheep and goats under most production systems in Missouri are subject to heavy exposure to internal parasites. Small ruminants are more susceptible to internal parasitism when compared to other species and resistance to available dewormers is becoming widespread. 'Worms' (primarily *Haemonchus contortus* - called the barber pole worm), represent the greatest threat to successful and profitable small ruminant production. The barber pole worm attaches to the lining of the stomach and feeds on the blood of the host resulting in poor production, weight loss, anemia and possible death.

### **Barber Pole Life Cycle:**

Adult worms mate inside the host and release eggs that are passed in the feces of the sheep or goat. These eggs hatch into larvae which molt through a series of larval stages. The third stage larva (L3) is infective and may develop in as little as six days. These larvae may survive in the environment for as many as 180 days during colder weather. The larva then migrates up the available forage (usually only 1-2 inches) and is consumed by the sheep or goat in which it completes its development into an adult worm.

### **Signs of Parasitism:**

All animals in a herd can be expected to carry some level of parasite burden. It is impractical if not impossible for the producer to try to completely eliminate the presence of worms within a herd. Instead, the goal should be a 'managed' parasite burden at a level that has little impact on the well-being and production of the host animal. Animals should be monitored for signs of an overwhelming parasite burden. These signs may include:

- Weight loss
- Poor/Rough Hair coat
- Diarrhea
- Bottle jaw
- Pale gums/eyelids (anemia)
- Death

### **Management:**

Previous experience has proven that relying solely on the use of chemical dewormers to prevent overwhelming parasitism in small ruminants is a recipe for failure. Resistance to various deworming products has become widespread and on some farms no dewormer is effective. Other techniques for combating internal parasitism must be implemented into the herd management plan and a more sustainable approach

must be taken. The following suggestions can go a long way in decreasing worm burdens and the need for using chemical dewormers.

- Don't overgraze pastures: Animals grazing taller grasses or browse are less likely to ingest infective larvae.
- Decrease stocking rate: Larvae generally migrate less than 12 inches from a manure pile. A stocking rate of 6-8 animals per acre decreases exposure to infective larvae
- Rotate pastures: Rotating to clean pastures before larvae have a chance to develop will also decrease exposure. Ideally, rotating once/week and allowing each pasture 90 day's rest before regrazing will eliminate the majority of exposure to infective larvae.
- Cross grazing/Haying: Grazing pastures with alternate species such as cattle or horses 'cleans up' infective larvae from the pasture. These larvae are species specific and die after ingestion by other species. Haying a pasture has a similar effect.
- Tannin rich forages: These forages such as sericea lespedeza have been shown to have an anthelmintic effect when grazed by sheep or goats.
- Select resistant stock: Select for individuals within the herd that appear to be more resistant to parasitism. Cull those animals that require the most frequent treatments.

### **Treatment:**

Implement the FAMACHA system and treat only those animals within a herd that require treatment based on estimated level of anemia. This system eliminates herd-wide treatments that, in effect, leave only resistant worms to mate and produce the next generation of parasites (theoretically all with resistance to the dewormer used).

Use Smart Drenching techniques:

1. Find out which dewormers work on your farm with a fecal egg count reduction test or a larval development assay.
2. Estimate animal weights accurately or use a scale to determine appropriate dosages.
3. Administer oral dewormers with a drench tip syringe. For goats, double the labeled dose for cattle/sheep. One exception: Levamisole: administer orally at 1.5 times the sheep dose.
4. Withhold feed for 12-24 hours prior to the administration of oral dewormers.
5. Benzimidazole efficacy is greatly enhanced by repeating the drench 12 hours after the first treatment.
6. Simultaneously use two classes of dewormers if resistance is suspected and on new additions to the herd prior to introduction.

*\*This information is a summary adapted primarily from ATTRA publications and provided for use by CCVS clientele.*

For veterinary consultation and professional services contact:

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