

## **FAMACHA PRINCIPLES**

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### **Introduction:**

Parasites, specifically *Haemonchus contortus*, have a dramatic impact on financial losses in sheep flocks and goat herds on a worldwide basis. Also called, the “barber-pole worm”, *Haemonchus contortus* is the most important and devastating parasite in sheep and goats. This parasite is currently resistant to many types of dewormers through out the world. Frequent deworming practices in flocks, that are not evidence based, are no longer a recommended practice. At the University of Minnesota, the most common complaint from sheep and goat producers is the loss of production and financial losses related to this parasite. Since we all know that parasite resistance to our traditional dewormers is quickly becoming a significant problem, now more than ever, we need to make informed decisions before using any dewormer in sheep and goats. Fortunately, there is a team of national and international experts, called the SARE Novel Parasite Control Group, which continues to work on this problem.

### **What is *Haemonchus contortus*?**

The primary impact of this parasite is anemia and loss of blood and protein from the intestinal tract. When examining small ruminants with severe *Haemonchus* infestation, they will often have very pale conjunctiva (tissue surrounding the eyes) and bottle jaw (edema from loss of body protein).

Although there may be other causes of anemia and bottle jaw, *Haemonchus*

is the most common reason. Some of these reasons include Johne's disease and chronic very poor nutrition. In sheep with *Haemonchus* parasitism, one can indirectly measure the parasite burden based on the color of the conjunctiva. When small ruminants are necropsied, one can often find this parasite residing in the abomasums (4<sup>th</sup> stomach).

### **What does FAMACHA mean?**

The FAMACHA system is named after Dr. Francois "Faffa" Malan, who invented the FAMACHA chart. By using the chart, the number of anthelmintic treatments can be significantly reduced when compared to traditional deworming practices. In addition, the FAMACHA method can significantly decrease the rate at which the *Haemonchus* parasite develops resistance. The eye chart (demonstrated in the lecture) has a scale of 1-5 with #1 indicating pink conjunctiva with no evidence of anemia to #5 indicating white conjunctiva with severe anemia. Use the chart as a guide to determine which animals to treat. Make sure that you record your findings on all animals. In addition, you may also institute pasture management changes based on your flock data. Since lambs, weanlings, pregnant small ruminants, and ones in poor body condition are most vulnerable; you may decide to treat these groups more aggressively with dewormers. Cull animals that need treatment more often or chronic poor doers since they may be the 20-30% of the population harboring most of the parasites. Once trained, producers and veterinarians can use the chart to determine which animals should be treated for *Haemonchus*. However, one must remember that the FAMACHA chart is only one component of your integrated farm management protocol.

### **Smart Drenching and Monitoring:**

“Smart Drenching” is an approach we use based on a scientific, informed decisions. We must take into account all the variables related to parasite management before deworming a flock. These variables include: nature of the parasite, our training, pasture management, stocking density, farm location, time of year, deworming history, and the flock’s parasite load. Making an informed decision before we deworm any animal will help us maximize the effectiveness of treatments while decreasing the selection of drug resistance. Many times, producers will unnecessarily deworm sheep and goats that have very low numbers of parasites, or use improper dosing regimens. Small ruminants that don’t respond to deworming strategies should be considered as cull animals. One common question is the use of moxidectin (Cydectin). Although this product is very effective, producers must use this product judiciously and not on a routine, wide scale basis. To preserve its efficacy, use moxidectin only in clinically ill animals and stick to your goal of preventing *Haemonchus* resistance.

### **FAMACHA Training:**

Many extension agents and veterinarians are now trained in FAMACHA. The training session takes about 2 hours and once completed, you will be able to purchase the laminated card at a cost of about \$12. I highly recommend the process. FAMACHA training is educational, thought provoking, and fun. But remember, FAMACHA is only part of a total worm control program and not a replacement! Producers must make every effort to control parasites through management strategies such as rotational grazing, resting pastures, and monitoring fecal egg counts.

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