



Likely one of the things we observe done incorrectly most frequently with 4-H market project animals is deworming. Failing to deworm frequently enough, deworming too frequently or deworming with ineffective medications are the most common mistakes.

### **Swine-**

Pigs in need of deworming often have rough hair condition, poor skin and may even cough or have scours. If you are tracking weights and rate of gain, you may even notice your pig's weekly rate of gain go down. Barring other feeding and health issues that can also be a sign that they need to be dewormed.

When purchasing your project animal in late March or early April, make sure that the breeder you purchase your animal from has already dewormed it at least once. Ask what product they used.

Here is one deworming plan for market hogs you can follow:

Late April- deworm with a fenbendazole based product. Some show feeds offer this already incorporated into their feed. Read the label and make sure you are feeding enough of the product for a long enough time for the number of animals you have on feed. Under dosing can lead to resistance in parasites. You can also purchase fenbendazole crumbles and top dress feed but you need to make sure that each individual animal gets their correct dose. Be sure to record this on a treatment record.

Late May/early June- deworm with injectable Ivomectin. This is a weight based dosage so you need to know the weights of your animals. Use proper restraints and again record on a treatment record.

Deworm again with injectable ivermectin three weeks after the first dose. Be sure to follow the labeled withdrawal times for the dewormer you chose to use as you get later in June. You must plan ahead because withdrawal needs to be completed by the time you arrive at the DSF. You may need to deworm still another time depending on the burden of internal parasites your hog is carrying.

### **Market Lambs and Market Goats-**

Too often market lamb and market goat exhibitors are deworming by the calendar (deworming too frequently) and with ineffective products. The Barber Pole Worm or *Haemonchus* is the internal parasite that is of most concern to small ruminant producers as it causes anemia in sheep and goats and high burdens can lead to death. It is the one we most often focus on controlling.

Research done by Delaware State University on parasite resistance in Delaware showed that the majority of small ruminant operations in Delaware are resistant to drugs

in the benzimidazole category (white drenches), such as fenbendazole the active ingredient in products like Safe Guard. Deworming market lambs and market goats with drugs in this category like Safe Guard and Panacur is ineffective, a waste of time and money and merely contributes to the parasite resistance issue. We also have a high level of resistance to ivermectin based products.

The top practices which accelerate dewormer drug resistance are:

1. Frequent deworming
2. Underdosing
3. Injecting dewormers
4. Pouring on dewormers
5. Feeding dewormers
6. "persistent activity" dewormers- i.e. Moxidectin
7. Putting dewormer in mouth (vs. drenching)
8. Deworming on full stomach- best to fast the animals 12 hours before deworming
9. Deworming when infection levels are low
10. Putting treated animals on clean pasture
11. Treating everyone
12. Improper use and storage of dewormers

Goats appear to metabolize dewormers more rapidly than sheep. Thus, the prescribed dose of a dewormer for sheep may not have as good a kill rate in goats. This means that worms that are only partially resistant to the dewormer but able to tolerate a moderate amount of the dewormer may be able to survive as well as worms that are completely resistant to that dewormer. The net effect of this will be to increase resistant genes in the worm population

You should be utilizing a combination of the FAMACHA system<sup>©</sup> and 5 Point Check<sup>©</sup> system to determine which animals truly need to be dewormed. FAMACHA is an eyelid score (estimate of level of anemia in the animal) and that is combined with the remaining 5 Point Check information (body condition scoring, a dag score (look at tail), presence of bottle jaw, and coat condition) to arrive at a determination of which animals to deworm. This is known as targeted selective treatment. You are only treating the animals that truly need to be treated and not the entire population. Extension offers annual trainings on this.

Excellent Resource: American Consortium for Small Ruminant Parasite Resistance (ACSRPC) [www.acsrps.org](http://www.acsrps.org)

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