



## Texas Agricultural Extension Service

# Internal Parasite Control in Farrowing Operations

Bruce Lawhorn  
Extension Veterinarian  
The Texas A&M University System

Internal parasites are a common problem in swine operations. The degree of economic damage they cause depends on the management practices used (deworming, nutrition, sanitation), the design of the facility and the reinfection rate.

There are many internal parasites of swine. Roundworms, whipworms, nodular worms and lungworms are examples. Economic damage is best exemplified by the common swine roundworm. Pigs may eat the microscopic roundworm eggs when their environment is contaminated with manure. Larvae from these eggs migrate through the liver and lungs to the small intestine. They cause coughing, pneumonia, liver abscesses and reduced growth rate. In the small intestine larvae mature to egg-laying adults in about 60 days. These adult worms seed the environment with eggs that are extremely resistant and long-lived and may infect or reinfect all exposed pigs.

Roundworms are commonly diagnosed by microscopic examination of swine manure samples using the flotation technique. Since the animal may be infected with migrating larvae which have not yet become egg-laying adults in the intestines, this test is less than 100 percent accurate. Knowledge of liver scars in animals marketed from a herd may indicate whether or not a worm problem exists in breeding animals purchased from that herd.

Many producers prefer to routinely deworm new breeding animals during an isolation period. Depending on the dewormer used, only the adult worms or recently hatched larvae in the intestine may be killed, while migrating larvae will persist. SafeGuard® (fenbendazole) added to feed is a recently approved broad spectrum dewormer that kills adult worms in the intestines and lungs as well as migrating larvae. It is highly effective against whipworms. Ivomec® (ivermectin), at 1cc per 75 pounds of body weight injected subcutaneously or under the skin, is an even newer broad

spectrum dewormer. However, it has limited effectiveness against whipworms. Atgard®\* (dichlorvos), Tramisol® (levamisole) and Banmith® (pyrantel tartrate) are added to feed and mainly kill adult worms in the intestines. Levamisole is used also in water and Atgard® cannot be fed in pelleted feed. Pyrantel tartrate can be used at a low level in the feed for 30 days or more to kill roundworm larvae as they emerge from eggs in the intestines. Dichlorvos is highly effective against whipworms. Levamisole has limited effectiveness against whipworms.

No matter what precautions are taken with newly purchased breeding animals or those selected from the herd, if the environment is contaminated with eggs all pigs will soon be infected. For this reason a swine producer should have an ongoing program for controlling internal parasites within his herd. The key to control lies with the breeding herd. An initial control program should include the following steps:

1. Deworm the entire breeding herd with SafeGuard®, Atgard®, Tramisol®, Ivomec® or Banmith® three times at 21-day intervals. Different products may be used at each deworming.
2. After step 1 has been completed, routinely deworm sows about 2 weeks before farrowing to minimize transmission of worms from sows to pigs.
3. Wash sows before farrowing and put them into a clean, disinfected farrowing area.
4. Routinely deworm all sows at weaning.
5. Deworm boars at least every 3 to 6 months.
6. Deworm pigs at 8 to 10 weeks of age in two applications 3 to 4 weeks apart. Use SafeGuard®, Atgard®, Ivomec® or Tramisol®. An optional program, if roundworms are a particular problem, is to deworm pigs with Banmith® beginning at 4 weeks of age and continuing for 30 days.

7. Monitor the effectiveness of the program by conducting routine fecal examinations and checking for liver scars when market pigs are slaughtered. Animals that die on the farm also should be checked for liver scars.

\*Atgard®, an organophosphate dewormer, should not be used within 3 weeks of other organophosphates (i.e., Tiguvon®, lice pour-on, Prolate®).

8. Deworm all incoming breeding animals while they are kept in an isolation area. The need for this step is determined by the source of the breeding stock and/or fecal sample examination.

After internal parasite problems are reduced, steps 2, 5 and 6 may be sufficient for control. It may even be possible to eliminate step 6 once the breeding herd is free of parasites, provided animals are not exposed to worm eggs in their environment.

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Issued in furtherance of Cooperative Extension Work in Agriculture and Home Economics, Acts of Congress of May 8, 1914, as amended, and June 30, 1914, in cooperation with the United States Department of Agriculture. Zerle L. Carpenter, Director, Texas Agricultural Extension Service, The Texas A&M University System.

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