

Piperazine Compounds and Swine Sanitation

*A Practical System to
Control Roundworms
in Swine*



Case
5
544.3
.N9
A8
no. 245

NDSU LIBRARIES

NDAC Extension Service, Fargo

NORTH DAKOTA AGRICULTURAL COLLEGE

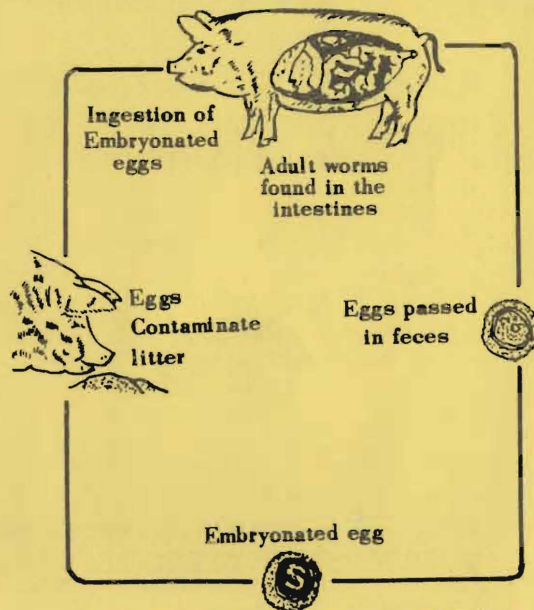
Control Large Roundworms in Swine

You can control large round worms and reduce other hog lot diseases, with a combination of piperazine compounds and swine sanitation practices.

Round worms cause heavier losses for North Dakota producers than any other parasite that infests hogs.

PIPERAZINE COMPOUNDS ARE YOUR BEST WORM KILLERS

1. Use piperazine compounds as recommended by your veterinarian.
2. Piperazine compounds can be given either in the feed or water.
3. Glits kept for breeding purposes should be wormed one month before farrowing.
4. Treat all your pigs at weaning time and again two months later.



LIFE CYCLE OF LARGE ROUNDWORM

5. Do not starve the animals before treatment, but underfeed them slightly for 24 hours before they are treated.
6. When piperazine compounds are used according to directions, there is very little danger of poisoning.

LIFE CYCLE OF LARGE ROUNDWORMS STEPS IN CYCLE

1. Mature worms in hogs intestines produce eggs.
2. Worm eggs are expelled in manure.
3. Little pig swallows eggs in filth and dirt on floor, on sow's udder or on the ground.
4. Eggs hatch in baby pig's digestive tract.
5. Small worms called larvae enter liver and lungs. Do greatest damage in this stage.
6. Small worms are coughed up and swallowed again.
7. Worms grow to maturity in hog's intestines.

SWINE SANITATION IS VERY IMPORTANT

1. Greatest damage is done by round worms before the worms get large enough to be killed by treating.
2. Worms do greatest damage to young pigs; wormy pigs are stunted and unthrifty.
3. Movement of the worm larvae through the lung and liver tissue develops into severe damage to these organs.
4. Sometimes the mature worms completely block the small intestine of the pig, or the bile duct leading from the liver to the intestine.
5. Many carcasses are condemned in packing plants because of abscesses caused by bacteria introduced into the tissues by worms.

FOUR STEPS IN SANITATION AND WORM CONTROL

1. CLEAN AND SCRUB THE FARROWING PEN.



Shovel, scrape and sweep the pen.

Use 1 pound lye per 20 gals hot water.

If dirt floor is used, shovel off 4 inches of dirt and replace it with soil that has never been used by hogs.

2. BRUSH SOW AND WASH UDDER WITH SOAP AND WATER AS YOU PUT THE SOW INTO A FARROWING STALL OR FARROWING PEN

Treating the Pig and Sanitation Practices Stop Roundworms

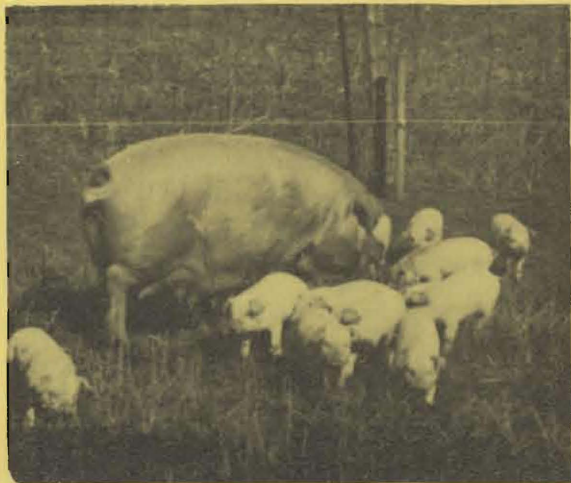
Four Steps In Sanitation And Worm Control



Two days before farrowing, wash sow's udders so young pigs won't pick up worm eggs the first time they nurse.

Use dry straw, and clean pen daily.

Keep little pigs away from sow's droppings as much as possible.



3. KEEP PIGS ON CLEAN LOTS OR PASTURES

Clean concrete lots with boiling water or live steam if possible.

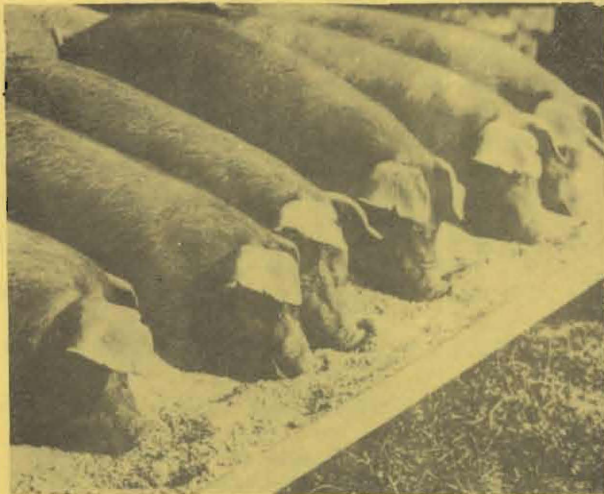
Clean lots regularly.

Rotate pastures:

Get NDAC Circular No. A-149 "Good Hog Pastures".

Use pasture areas on which swine or poultry have not run for at least 2 years.

Keep litters of same size together as much as possible.



4. TREAT PIGS WITH PIPERAZINE COMPOUND

Treat all pigs at weaning time.

Treat again 2 months later.

Treat breeding sows and gilts one month before farrowing.

Prepared by: Dr. D.F. Eveleth, Experiment Station
Veterinarian
Dr. R.F. Shumard, Assistant
Parasitologist
George E. Strum, Extension Agent,
Livestock

Extension Service, North Dakota Agricultural College and U.S. Department of Agriculture Cooperating. E. J. Haslerud, Director, Fargo, North Dakota. Distributed in furtherance of the Acts of Congress of May 8 and June 30, 1914