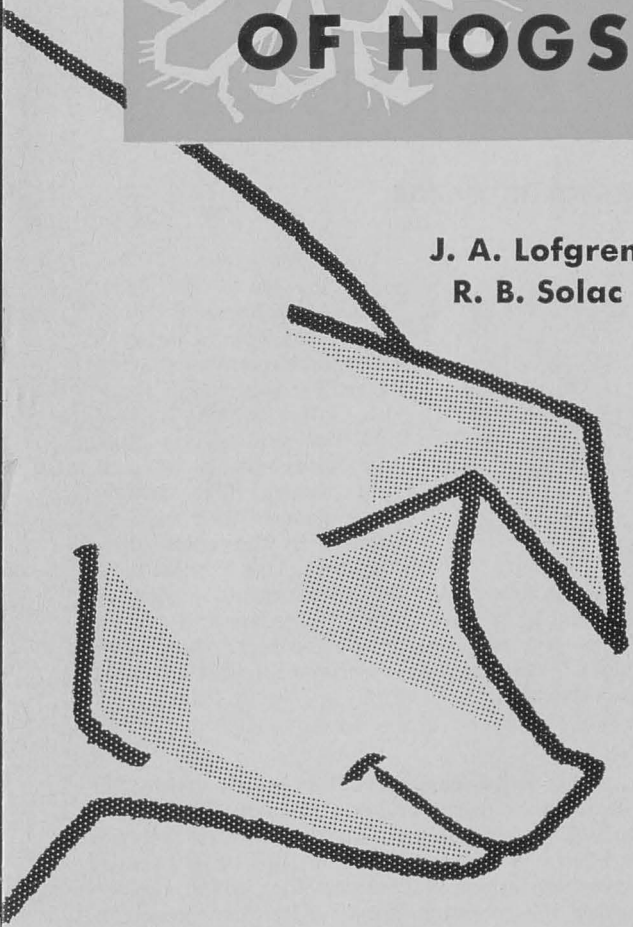


# PESTS and PARASITES OF HOGS

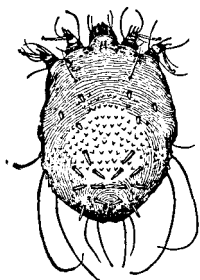
J. A. Lofgren  
R. B. Solac



Pests and parasites, internal or external, are a real menace to the swine industry. The hog producer who ignores their presence may soon find his swine production falling sharply. His hogs are likely to gain poorly and carcasses may be downgraded—resulting in poor profits at market time. The efficient swine producer should take strong measures for the prevention and control of these problems in his management plans.

## External Pests

### SARCOPTIC MANGE



Look for signs of this along the top of the neck, on the shoulders, and on the upper back around the eyes and ears. Sarcoptic mange is caused by tiny round parasitic mites which burrow into the skin where they feed on lymph, blood, and skin tissues. The female mites deposit their eggs in tunnels in the outer skin.

Each mite lays from 40 to 50 eggs. The eggs hatch into larval mites in about 4 days. In 10 to 15 days the mites are full-grown. Young pigs are usually affected more than older animals. Baby pigs may become infested by mites from the sows.

Mange mites cause irritation which makes the infested animals rub and scratch themselves vigorously. The skin thickens, cracks, and often “weeps” or bleeds. Secondary infection sometimes results. Advanced lesions may attract flies which further irritate the condition. Heavy infestations result in weight loss, and mangy hogs are downgraded at the market.

**Thorough spraying or dipping with lindane (see table) will control sarcoptic mange as well as lice if they are present.**

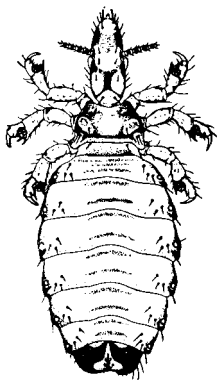


## DEMODECTIC MANGE

Characterized by hard, round swellings on or just under the surface of the skin, this mange (sometimes called follicular mange) is caused by tiny worm-like mites. These mites live in the hair follicles or oil glands. **There is no satisfactory chemical control although the treatment for sarcoptic mange may help to check spread of the infestation.** Heavily infested animals with advanced lesions should be slaughtered.

## LICE

A lousy hog will scratch and rub himself vigorously; this rubbing may destroy the hair in patches or even wound the skin. This condition is brought about by the feeding habits of the lice. Since they feed on blood, lice obtain their food by puncturing the skin of the host with their mouthparts. Lice feed frequently and at each feeding make a new puncture—thus causing the irritation and itching.



Hog lice are about the largest of the blood-sucking lice attacking warm-blooded animals. The adult females may reach a length of  $\frac{1}{4}$  inch. As in the case with mange mites, the life cycle is passed entirely on the host. The eggs, or "nits," are fastened to the hair. A female louse may lay

about 90 eggs during a 25- to 30-day period. The eggs hatch in about 2 weeks. Young lice often congregate in the ears of hogs. They become full-grown in 10 or 12 days.

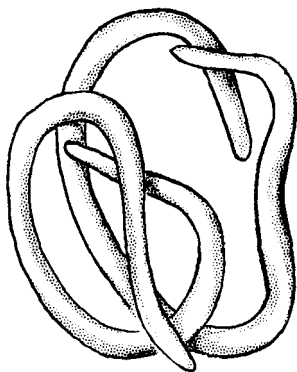
Heavy infestations cause lowered feed efficiency, arrested growth of young pigs, and a general unthriftiness which makes the animals subject to the attack of other parasites or diseases. Lice probably transmit a virus which causes swine pox.

You may apply lindane in the same way as prescribed for the control of sarcoptic mange. Or in addition to lindane, several other chemicals will control lice but may not give adequate control of mange (see table).

**FLIES**—Houseflies, stable flies, and blowflies often become troublesome around swine-housing and feeding areas. For information on fly control see Extension Folder 192, "Fly Control for Livestock."

# Internal Parasites

## LARGE ROUNDWORMS



It is generally accepted among hog raisers that most hogs have roundworms. If you are in doubt, ask your veterinarian to take a sample of the hogs' droppings for a worm egg examination.

The large intestinal roundworm (*Ascaris suis*) is a thick worm, which, when full-grown, is

about the length and diameter of a pencil and is yellow to pink in color.

The adult worms live in the small intestine where they lay eggs. The eggs are passed out with the manure and become infective in about 2 to 3 weeks. The hogs eat these infective eggs and they hatch in the intestine. The larvae or immature worms penetrate the intestinal wall and are carried to the liver by the bloodstream. After growing a little in the liver, the circulating blood carries them to the lungs where they are coughed up and swallowed. The roundworms complete their life cycle by developing in the intestine where a single female worm lays thousands of eggs daily. In all, it usually takes 50 to 60 days for a new generation to develop from egg stage to egg stage.

Damage is caused mostly by the larvae when they migrate through the various organs and tissues. They cause "white spotted livers" which are condemned on meat inspection. They pave the way for pneumonia which may result in "thumps." Unthrifty hogs and permanently stunted pigs may result from such damage. The greatest harm is done to pigs up to 4-5 months old.

**There are a number of chemicals recommended for control of roundworms (see table), but careful management and rigid sanitary measures are also necessary.** If possible, confine pigs for a few days after treatment in a pen not intended for their permanent use.

Attempt to keep pigs on pastures and premises free of worm eggs. Keep all hogs other than sows away from young pigs.

1. Scrub farrowing crates, stalls, and pens at least a week before little pigs are expected. Use an effective agent like lye solution (1 lb. of lye to 30 gals. of boiling water).

2. Wash the sides and udders of the sow with warm, soapy water before she is put into the clean crate or pen.

3. Haul the sow and pigs from the hog house to clean ground, not pastured the previous year, or farrow in huts on clean pasture.

4. Remove manure frequently from cement floors, platforms, and aprons of farrowing, creep, growing, and finishing units.

**LUNGWORMS**—Signs of lungworm infection are severe coughing, difficult breathing, and loss of appetite. Parasitic pneumonia may develop, especially in young pigs. These conditions result from the irritation and obstruction of the air passages by the lungworms.

Like the large roundworm, swine lungworms (*Metastrongylus*) live in the pigs' lungs; however they remain there to maturity while the large roundworms do not. The lungworm varies from white to pinkish-red in color and grows up to 2 inches long. The adult worms live in the air passages of the lungs where they feed on the discharges of inflamed tissue. Their eggs are coughed up and swallowed by the pig and are finally passed in the manure. Earthworms are necessary for further development of the eggs, because the eggs hatch in the earthworms which in turn are eaten by the pigs.

The young lungworms or larvae become infective to pigs in about 3 or 4 weeks, and a single earthworm may harbor 2,000 of them. Pigs swallowing the earthworms quickly free the larvae which penetrate the intestinal wall and eventually find their way to the lung where they complete their development and mate. The female lungworms produce eggs 3 to 4 weeks after the pigs eat the earthworm.

If infection is severe, parasitic pneumonia may develop, especially in young pigs. The effect of lungworm parasitism on the growth and health of pigs is hard to evaluate on the farm, because it is often complicated by other disease-producing agents like bacteria, viruses, and other parasites. Lungworms have been proven to be a reservoir for swine influenza virus and are indirectly responsible for many outbreaks of influenza.

**Drugs cannot be relied upon to effectively kill or remove these worms from the lung tissue.** The infection is best controlled by better methods of sanitation and by preventing contact between young pigs and lungworm-infected earthworms. Once a pasture or lot has had many infected earthworms on it, it may remain contaminated for years. Infected pigs should be removed from the lots on which they picked up the worms and placed in a dry, clean pen with a concrete floor or placed on well drained, temporary pasture that has not been used for pigs for several years and that is free of trash, manure, litter, and excess humus.

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**CHEMICALS FREQUENTLY USED IN THE CONTROL OF PESTS AND PARASITES OF HOGS\***

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<i>Pest or Parasite</i>	<i>Chemical</i>	<i>Amount</i>	<i>When to Apply</i>	<i>Remarks</i>		
Sarcoptic Mange (mites)	Lindane 25% wettable powder	1½ lbs. per 100 gals. of water	Treat sows at least 40 days before farrowing. <b>Do not treat market hogs within 30 days of slaughter.</b>	Apply as forceful spray to all parts of all hogs in the herd.		
Hog Lice	Lindane (as for mange mites, above) or CoRal 25% wettable powder	16 lbs. per 100 gals.	<b>At least 45 days before slaughter.</b>			
	DDT 50% wettable powder or Malathion 25% wettable powder	8 lbs. per 100 gals.	As soon as lice are noticed		<b>At least 30 days before slaughter.</b>	
	Methoxychlor 50% wettable powder or Ronnel ("Korlan") 25% wettable powder	8 lbs. per 100 gals.			<b>At least 6 weeks before slaughter.</b>	
	Large Roundworms	Sodium fluoride	1 lb. per 100 lbs. feed for 1 day		When pigs are 7 to 8 weeks old. Second treatment 2 to 3 months later. (Do not treat and wean and/or vaccinate at the same time. One practice at a time is best.)	Self-feed dry as mixture—never as slop.
		Cadmium oxide (1.5%)	1 lb. per 100 lbs. feed. Feed for 72 hours as only feed		As above, but <b>do not use within 30 days of slaughter.</b>	Retreatment not recommended in hogs to be slaughtered.
Oil of chenopodium		Capsules as directed	As for sodium fluoride.	Do not feed hogs 24 hours before treatment. Give saline laxative 4-6 hours later.		
Large Roundworms or Nodular Worms†	Piperazines liquid or powder or tablet form	Follow directions on container (1 day) Follow directions on container (1 day)	As for sodium fluoride.	In water, wet feed, or slop. or In wet or dry feed or water.		
Large Roundworms, Nodular Worms† or Whipworms†	Hygromycin	Part of ration	5 or more weeks to growing pigs, beginning preferably at creep.	Feed within recommended time limits and dosage levels, as hearing may be reduced or impaired in some pigs.		
Lungworms	Cyanacethydrazide	Determined by weight (injection only, see remarks)	Used for temporary relief when symptoms of acute lungworm infection appear.	Not used routinely, consult veterinarian. Lungworms not killed but removed from lungs. Results variable. Retreatment frequently necessary. Used as part of preventive program.		

\* Formulations vary among chemical manufacturers. Follow directions and precautions found on containers!

† Not discussed in folder but are commonly found parasites of hogs.