

CONTROLLING INSECTS AND MITES ON SWINE

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The hog louse and mange mite are two major arthropod pests of swine. The life cycles of both pests are directly related to swine and both cause considerable irritation, weakening of animals, reduction in feed efficiency and slower growth and development. Recognition and control of these manageable pests are integral parts of effective swine management.

HOG LOUSE (Fig. 1)

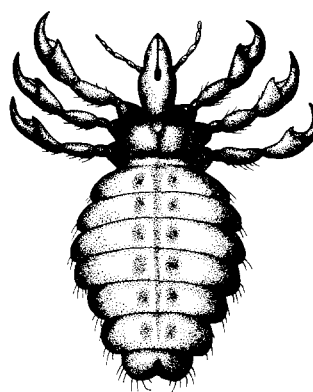
The hog louse is a large, wingless, bloodsucking insect that lives only on swine. They are easily visible to the naked eye and live mainly in and around the ears and in the folds of the legs of swine. Feeding is by piercing, sucking mouthparts which torment swine, causing continual rubbing and scratching to relieve the irritation. The affected areas result in a skin condition similar in appearance to measles. Hog lice are also capable of spreading swine pox virus.

Hog louse adults are $\frac{1}{4}$ inch long, dull gray-brown in color with the margins of their body almost black. Females begin laying eggs a few days after mating and attach these eggs to hairs close to the skin. Females lay from three to six eggs per day through the winter. Eggs hatch in two to three weeks and the immature insects begin feeding immediately, reaching maturity in 10-12 days.

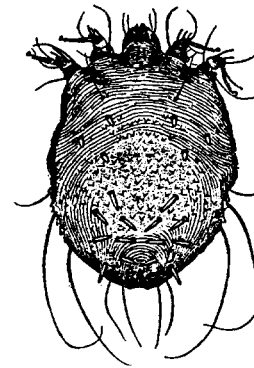
MANGE MITE (Fig. 2)

The eight-legged white or yellow mange mite spends its entire life cycle on the hog. The tiny microscopic ($\frac{1}{50}$ inch long) mite tunnels beneath the skin forming slender winding tunnels nearly 1 inch in length throughout the infested part of the body. The parasite dissolves the animal's tissue with strong digestive enzymes and then sucks up this liquid. The female mite deposits eggs in the feeding channels. Eggs hatch in three to 10 days and a generation can be completed in two weeks.

Areas around eyes, ears, back and neck are most often affected. The hide becomes thick, rough, red



Hog Louse (Fig. 1)



Mange or Itch Mites (Fig. 2)

and pimply. The hair stands erect and scabs may appear on the hide, especially in or near the ears. Secondary infection by bacteria may occur where the mites have burrowed. The hide of baby pigs becomes red and rough. If you see hogs scratching vigorously but cannot find lice on them, they are probably infested with mange mites. To make a positive identification, use a dull knife to scrape the infested skin surface until bleeding starts. Examine these scrapings under a magnifying glass on a dark surface. If the animal is infested, you will see the tiny mites scurrying.

Although some mange mites are present year around, cooler fall and winter weather appears to promote mite reproduction. Animals in enclosed, warm buildings during winter generally have fewer mange problems.

Packing companies report that a mange-infested animal must be skinned on the killing floor and the hide cannot be processed for leather. The carcass must be sold at a discount. The economic loss due to reduced weight gain and lowered feed efficiency associated with mange-infested hogs is very dif-

ficult to measure. Suckling pigs infested with mange often develop into runts.

Swine Pest Control

Lice and mange spread rapidly because swine have a natural tendency to sleep close together, especially during cool weather. If possible, mange-infested animals should be isolated from the herd. In some cases, infested animals might be slaughtered to remove them from the herd before they infest others.

Piglets are very susceptible to both lice and mange. Because some insecticides are more toxic to young animals than to older ones, parasite control efforts should be applied to the sow. Sows should be routinely sprayed about 45 days before farrowing and again 15 days later, especially if mange has been a serious problem. Repeat treatments before each subsequent farrowing to maintain control of mange.

Louse control is relatively simple with modern insecticides. Mange control is difficult because mites burrow deep into the skin and a scab covers the surface. Therefore, a high pressure spray (150-250 psi) is needed to force the insecticide into the tunnels. Complete wetting of the animal is important, especially around the head, neck and ears. Insecticide sprays provide more effective control of mange than dust or granular products, probably due

to better hair penetration and coverage. Hogs can be sprayed during cold weather if a warm draft-free building is available for drying. Don't forget to examine boars. Boars should also be kept parasite-free by repeated treatments when necessary.

Insecticide users should follow these safety precautions:

1. Follow product label directions for application rates and age of animals.
2. Avoid unnecessary personnel exposure to insecticides.
3. Put away or carefully cover all feed and utensils before spraying.
4. Do not smoke, eat or drink when using insecticides.
5. Wash hands, face and clothing thoroughly with soap and hot water after using insecticides.
6. Store insecticides where they cannot be mistaken for food, cleaning products, or medicinals and in a place secure from uniformed persons, children and animals.
7. Keep insecticides in their original labeled containers.
8. Dispose of containers in a suitable manner; do not leave where children or animals can come in contact with them.

INSECTICIDES REGISTERED FOR SWINE INSECT & MANGE CONTROL¹

Product	Formulation	Lice	Mange	Post-Treatment	
				Slaughter	Intervals (Days)
Co-Ral® (coumaphas)	25% WP	yes	no		0
	11.6% EC	yes	no		0
	1% D	yes	no		0
Rabon® (stirofos)	50% WP	yes	no		0
	3% D	yes	no		0
Ciovap®	10% EC	yes	no		0
Ciodrin® (crotoxyphos)	13.1% EC	yes	no		0
Lindane	20% EC	yes	yes		30
	12.4% EC	yes	yes		30
Malathion	57% EC	yes	yes		0
	4% D	yes	partial control		0
Atroban® ²	11% EC	yes	yes		0
Ectrin® ²	10% EC	yes	no		0
Ectiban®	5.7% EC	yes	yes		5
	0.25% D	yes	no		5

¹Consult the specific product label for rates, usage and precautions.

²Registered under state label (24c) in North Dakota.