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Some Common Internal Parasites (Worms) of Hogs and Their Treatment

Abstract
Next to hog cholera, probably no subject is of greater importance to swine raisers than that of worms in hogs. Intestinal worms in hogs is a common condition. An understanding of the mode of infestation and the methods of prevention and treating these common parasites will largely prevent losses from worms in swine herds.

In this bulletin the more common types of worms affecting hogs are described and suitable remedies are suggested. The reader is urged to make certain, it possible, the nature of the affection before applying; the treatment. Complicated or difficult diagnosis should be referred to competent veterinarians in order to secure the best results. The descriptive material on the following pages is too brief and incomplete to be of value except in ordinary affections, such as are too often overlooked, or subjected to home treatment, or perhaps escape treatment entirely.

Keywords
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Some Common Internal Parasites (Worms) of Hogs and Their Treatment

BY

DR. C. H. STANGE

Next to hog cholera, probably no subject is of greater importance to swine raisers than that of worms in hogs. Intestinal worms in hogs is a common condition. An understanding of the mode of infestation and the methods of prevention and treating these common parasites will largely prevent losses from worms in swine herds.

In this bulletin the more common types of worms affecting hogs are described and suitable remedies are suggested. The reader is urged to make certain, if possible, the nature of the affection before applying the treatment. Complicated or difficult diagnosis should be referred to competent veterinarians in order to secure the best results. The descriptive material on the following pages is too brief and incomplete to be of value except in ordinary affections, such as are too often overlooked, or subjected to home treatment, or perhaps escape treatment entirely.

Most of the worms for which the hog is host are more numerous some years than others, this being due to the fact that conditions are more favorable some seasons for the complete development (life history) of the parasite in its various stages. It may seem strange that the common intestinal worms of the hog pass a part of their life history outside of the body of the hog. Such, nevertheless, is the case. Whether or not these parasites perish during this time depends largely upon conditions, i. e., moisture, warmth, etc.
WORMS INFESTING THE INTESTINES

The most important worms of the hog are the large round worms infesting the intestine, and the small thread-like ones found in the lungs. The former are by far the most frequent and are most readily and effectively treated.

The Common Round or Lumbricoid Worm (Ascaris Suilla) prefers to live in the small intestine but has frequently been found in the stomach, bile ducts and in the gall bladder. It is a common parasite in young, unthrifty pigs and may be found in sufficiently large numbers to fill the intestine for several feet. It is a round worm, tapering at both ends, white or yellowish white in color. The female worm averages nine to ten inches in length, while the male is usually about three inches shorter. The eggs laid by the female pass out with the intestinal contents, and soon hatch if the ground is moist and warm. If not, they remain in the egg stage for some time. Hogs feeding on dirty floors or from the ground or drinking from dirty troughs or ponds, take in the newly hatched worm or eggs about to hatch, and from this time on growth and development in the hog's intestine into a fully matured worm are simply a matter of time.

Thorn Headed Worm (Echinorhynchus Gigas). This worm is somewhat larger than the common round worm, the female often reaching eleven inches in length. The male is much smaller and will average about three inches in length. The color of both male and female is a milky white, the body is somewhat wrinkled transversely and tapers to a blunt point at the posterior extremity. The anterior extremity (head) carries a hook which can be drawn back and which is covered by many small hooklets which curve backward. The worm attaches itself to the wall (inside) of the intestine by means of this hook.

The eggs pass out with the manure as with the common round worm. They are then taken up by the white grubs (larval form of May beetle) which are found about manure piles. It is possible that some forms of the snail may also take up these eggs, and unless they are taken up by the common grub or the snail their further development stops. Hogs become infested by eating the grubs and snails. Hogs pastured on clover seem to show the greatest infestation.

The Pin Worm (Desophagastoma Dentatum) is a small white or brownish white worm, pointed at both ends and often found in large numbers in the first portion of the large intestines. The male is one-half inch long, the female averaging a little longer. They rarely create much disturbance, but probably assist in aggravating the symptoms when other parasites are present. The animal becomes infested through the same source as with the common round worm.
The WHIP WORM (Trichocephalus Crenatus) is generally found in the same portion of the intestine as the pin worm. It is about one and one-half inches in length. The anterior two-thirds of the body is very thin (whip lash) while the posterior one-third expands suddenly at its juncture with the anterior portion and is cylindrical and quite thick (whip stock) as compared with the anterior portion, whence the name, whip worms. The eggs pass out, develop and are taken in as with the common round worm. The effect on the hog is about the same as with the pin worms.

SYMPTOMS OF WORMS IN HOGS.

The severity of the symptoms depends quite largely on the number of worms present. The presence of more kinds of worms usually aggravates the symptoms. A few worms may be present without producing appreciable symptoms.

Among the most common symptoms are those seen in chronic indigestion, i.e., irregular appetite, alternate diarrhoea and constipation, loss of condition, sometimes vomiting, rough coat and other symptoms of unthriftness. When thorn headed worms are present there is considerable irritation of the lining of the intestines and there are in addition to the above symptoms, restlessness, weakness, and in young pigs, convulsions. The most certain method of determining the presence of intestinal worms is to find worms or their eggs in the manure.

PREVENTION AND TREATMENT.

The prevention is very important and consists of methods having for their object the destruction of the eggs outside of the body so as to prevent further infestation. Inasmuch as moisture is an important element in assisting the eggs to hatch all pastures should be well drained, and wallow holes should not be allowed to form. The water supply should come from a deep well, and the feeding troughs and floors should be kept as clean as possible. When possible, a frequent change of pasture is recommended. When thorn headed worms are present, hogs should not be allowed to root about old straw stacks and manure piles. Plowing the hog lots will help to free them from the white grubs and the eggs of the round worm as well.

In selecting a medicinal treatment it is necessary to select such drugs as will destroy the worms and still not injure the hog to an appreciable degree. The following formula which was first used on the college herd by the Division of Veterinary Medicine and has since been recommended by the Animal Husbandry Department has given such satisfactory results that it is now considered advisable to publish it for the general use of hog raisers.

Santonin, eight grains; Calomel, one grain; Areca Nut, two drams; Sodium Bicarbonate, one dram.

The above quantities are for one hog weighing 100 pounds and the quantity should be increased or decreased according to the size of the hog and multiplied by the number of hogs. The most satisfactory results are secured when the hogs are divided into lots of twenty or less and food should always be withheld for twenty-four hours. Then mix the worm powder thoroughly with some moist ground feed and give it in such a way that each hog will get its share of the medicine in the feed. Not too much feed should be used as it dilutes the medicine. This treatment may be repeated in three weeks if the worms are not all removed by the first administration, but usually one treatment is sufficient.

LUNG WORM OF SWINE.

The LUNG WORM OF SWINE (Strongylus Paradoxus) is a delicate white egg passed out with the common round worm. The effect on the hog is about the same as with the pin worms.

Lung Worm

(Strongylus
Paradoxus)

Whip Worm

(Trichocephalus
Crenatus)
or brownish thread like worm, one-half to one and one-quarter inches long. The entire life history of this worm is not quite clear but is probably similar to one of the lung worms in sheep in which case the eggs are expelled into water or moist earth and may remain alive for months. When conditions are favorable (warmth and moisture) they undergo a moulting process and if dried up soon after this they can be preserved for a year or more without being killed. Therefore the worm is very resistant to drying and may enter the body with the dust by inhalation or with the food or drinking water. On cutting through the affected part of the lung the worms in the air passages are frequently sufficiently numerous to completely fill them.

SYMPTOMS.

The first symptom is a cough, noticed especially when the pig leaves the bed or following exercise or after eating. This cough is sometimes called whooping cough. In extreme cases there may be vomiting. Quite often the pig thrives and recovers, while in other cases there is unthriftiness, difficult breathing (thumps) which finally leads to death after a chronic course.

TREATMENT.

The most important part of the treatment is to keep the pigs in a growing healthy condition. New pastures and lots which do not receive drainage from the old ones should be provided and all possible precautions should be observed in keeping infested hogs from contaminating the new pastures. The hog houses should be thoroughly cleansed and disinfected, and the old pastures may be plowed and cultivated or used as a pasture for stock other than hogs. The medicinal treatment is as yet not satisfactory or practical.