

We frequently find minute thread worms in the bronchial tubes of pigs, and simultaneously in the intestines, the ova of which are taken into the stomach in such food as above described. The lung worms find the proper location for their development in the bronchial tubes, whence they are coughed up; other worms find a location in the stomach and intestines, whence the ova, escaping in the faeces, are again taken into the stomachs of other pigs; thus they pass from one to another, giving rise to the suspicion that the disease is hog cholera or swine plague, instead of verminous broncho pneumonia. This quite coincides with the observations of the Bureau of Animal Industry, report 1895 to 1906, page 174: "In many instances pigs die from disease brought on directly by improper feeding, and any disease germs found in one or more of such animals by bacteriological methods may have no direct relation to the disease."

"We may thus have, on the one hand, outbreaks due directly to pathogenic bacteria of a high grade of virulence; on the other, we may have outbreaks due to food unfit to nourish the animal, or containing toxic substances. We may also have death due to a combination of these two causes, the one or the other predominating, as the case may be. It is probable from our experience that outbreaks of swine diseases due to the virulence of bacteria alone are rare, and that therefore much prevailing disease may be prevented by attention to the physiological laws governing the body."

ERRORS IN FEEDING.

If swine feeders would but consider that the stomach and intestines of the pig resemble very closely their own, and imagine the household being forced to eat that which they give to the pigs, from a delicate little suckling pig to the fat hog, they might expect their families, young and old, to be attacked by severe gastric and intestinal derangement.

I would strongly urge that the agricultural boiler be brought more into use by the swine raiser and feeder. Boiling food would at least insure freedom from disease germs and worms.

Great improvements can be made in the manner of feeding corn to hogs. Too often the surplus corn is rooted out of the trough, if such is used, and trampled into the mire, where it undergoes fermentative changes and when afterwards eaten produces gastric and intestinal disturbance. This could be prevented by placing the trough on slatted platforms, made of such a size as would admit of their being moved easily, when necessary for sanitary or other reasons.

The management of hogs requires the application of common-sense in the housing and feeding, as does the management of the other domestic animals.

Buyers of pork would do well to refuse to purchase it unless they know that the pigs were fed on wholesome food, and kept in sanitary surroundings.

HOG CHOLERA AND SWINE PLAGUE ARE COMMUNICATED FROM ONE HERD TO ANOTHER.

1st.—By *direct communication*, by introducing infective pigs into herds, by sending sows to be bred from one farm to another, and from the infective intestinal discharges of so-called recovered sows or boars.

2nd.—By *mediate communication*, by people conveying the infection in their clothing, on their boots, on any utensils or implements, crates, wagons, lumber or fodder, by dogs, carrion birds and, among close neighbours, by rats or other vermin. By infective yards, platforms, railway cars, or anything with which diseased animals have come in contact.

During our investigations in western Ontario we have repeatedly observed that this disease spreads rapidly along the banks of a river, due, no doubt, to the practice of getting rid of carcasses by throwing them into the water. This, we have noticed, in large as well as small streams.