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POSTERIOR PARALYSIS IN SWINE

By H. L. MORENCY and B. W. FAIRBANKS



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Modern methods of swine production have brought about the appearance of many diseases little heard of until recent years. Prominent among the diseases of swine raised on the intensive plan is posterior paralysis.

The frequency with which posterior paralysis is met in swine in most parts of the state of Colorado has led to a study of its cause, distribution and prevention.

Cause.—The cause of posterior paralysis may be thought of as a failure in the metabolism of the animal to deposit calcium salts which are necessary for bone formation in the growing subject. Some investigators maintain that the disease may be caused by an infectious organism but this theory has not been sufficiently proved to give much light upon the matter. However, bad hygiene, as too close



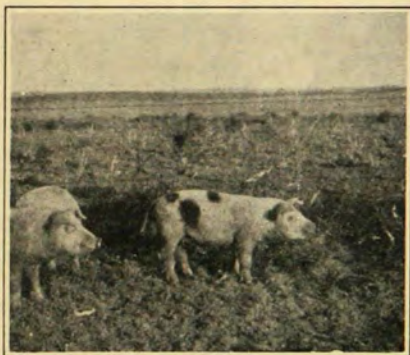
A Typical Case of Posterior Paralysis

confinement of the animals in dirty pens, absence of sufficient sunlight and damp, uncomfortable, shelter structures may intensify the disease.

More thoroly established than any other possible cause of posterior paralysis is a deficient and unbalanced diet. A deficiency of calcium in the feed was early suspected as a cause of this condition. Feeds low in calcium and phosphorus predispose to the disease and the relation between the amounts of calcium and phosphorus appears to be of importance. A deficiency of vitamin D which is a food accessory and has to do with the proper metabolism of calcium salts may also be a cause of posterior paralysis. Thus, it is evident that a lack of proper available mineral substances or the means and fac-

tors necessary to the proper utilization of such mineral substances may cause posterior paralysis.

Symptoms.—The first symptoms noticed in swine becoming affected with the disease is stiffness of the body, a disinclination to arise from the lying position which affected animals are wont to assume, a show of fear at being approached and pain on being touched. In most cases, altho not always, there are signs of malnutrition, such as a rough, stary coat of hair, and wrinkly, scurvatous skin.



Showing Rickets in Pigs—Note the Enlarged Joints and Pot-Belly.

This disease in advanced cases is characterized by weakness of the back, buckling over of the joints of the fore legs, wobbling of the hind parts and, in severe cases, dragging of the hind legs. Often the joints become enlarged and are sometimes very prominent.

Many names have been given the condition such as rheumatism, stiff sickness, stable deficiency, hinsch disease, and "down in the back." Injuries to the back may cause a paralysis of the hind parts but since not more than one or two animals are so affected there is little trouble in determining the cause. Where posterior paralysis is seen in a herd there is usually a number of animals showing unmistakable signs of the disease.

It appears to be established that young animals closely confined become affected sooner than others that receive the same rations but are allowed their liberty in pastures. Young animals are more frequently affected than older animals but sows after farrowing may sometimes become afflicted. This is especially true when a large litter has been nursed.



Total Loss of Hind Quarters

Distribution.—Many regions in the state of Colorado show a relatively higher incidence of the disease than other regions. However, the occurrence of the trouble cannot be limited to one or several certain regions since posterior paralysis is a deficiency disease and is preventable thru proper feeding and management. Much depends upon the lime content of the soil, water and feed and the quantity of green leafy vitamin-D-containing food available.

Prevention.—Since young pigs are more frequently affected with posterior paralysis, methods of prevention of the disease should begin immediately after weaning. Sows during the time they are with pig should also be supplied with the proper feed to insure normal function and to give a supposed reserve for the nursing period of the young. Thus, proper amounts of calcium, phosphorus and vitamin D are essential to the continued health and continued growth and functional development of both the young and older swine.

The disease can be prevented almost with certainty when the animals are kept and fed properly.

Care should be taken that the animals receive sufficient amounts of rock salt. In localities where the disease is frequent or where food stuffs poor in calcium are fed, it is advisable to supply bonemeal, alfalfa hay or alfalfa meal, and tankage in moderate amounts. As treatment for those that manifest the characteristic symptoms, regulation of the diet as indicated, combined with cod-liver oil, has proved quite effective.



An Advanced Stage of Posterior Paralysis
—The Hog is Clear Down.

From a nutritional consideration the causes of posterior paralysis are a deficiency in the mineral content of the ration or vitamin D is lacking. The problem of the feeder simply is to supply these necessary substances which are preventatives of the disease.

As the legumes, such as alfalfa and clover, are high in both calcium and phosphorus, their culture is of importance to the swine grower. It has been demonstrated that yellow-blossomed sweet clover can be successfully grown upon the non-irrigated ranches of Eastern Colorado, so the producers of that area now have a legume to be used for either pasture or hay. Other sources of mineral matter for swine feeding are the dairy by-products. Fortunately, the legumes are also a source of vitamin D.

Growing pigs during the winter months and brood sows not on pasture are most susceptible to posterior paralysis. Legume pasture for the hogs in summer and choice leafy legume hay in winter will prove the cheapest and best preventatives. In the winter, brood sows with any indications of posterior paralysis should receive from 15 to 25 percent of their ration as legume hay.

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