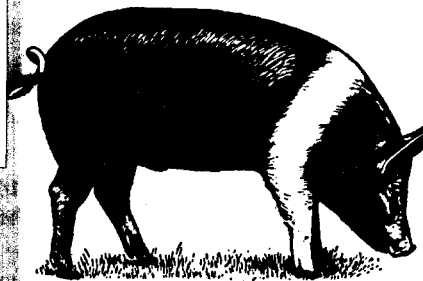


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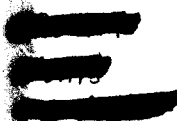
Gastroenteritis of Hogs

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GASTROENTERITIS OF HOGS

One of the most costly disease complexes of hogs is gastroenteritis. Many variations and symptoms may occur due to different microorganisms, natural resistance, variations in housing, variations in sanitation, presence of other swine diseases and poor nutrition.

This complex of digestive disturbances may be caused by any of many microorganisms or internal parasites. The descriptive terms used for this complex of diseases is often the result of symptoms observed, hence, the terms scours, white diarrhea, black diarrhea, bloody scours and enteritis.

The main symptoms are diarrhea (scours), weight loss, decreased appetite, vomiting and death. Other signs will be noticed, depending on the cause and the general management of the involved hogs.

Though gastroenteritis of swine is frequently an infectious and contagious disease, the predisposing causes include nutritional management and parasitic infections.

PREVENTING GASTROINTESTINAL INFECTIONS

HOUSING:

Keep the housing area strictly clean to control gastroenteritis. Remove all manure and other foreign materials from farrowing pens or stalls.

After cleaning, scrub the pens with a two per cent hot lye solution—one can of lye to five gallons of water (see Extension Folder A-319, Disinfection). Stalls should be dry and well bedded before the sow is placed in them.

Sows should be placed in the pen or stall long enough before farrowing for them to become used to the new surroundings. Thus, the sows will be more likely to be quiet and nurse the newborn pigs.

Extra heat, in addition to dry, draft-free quarters, is essential to prevent chilling. Wet or chilled pigs are highly susceptible to enteritis.

Fly and rodent control is important in preventing gastroenteritis and its spread from litter to litter. Screened windows and doors and complete ~~removal~~ aid in controlling fly production and in ~~venting~~ their contact with young swine.

THE SOW:

One method of preventing enteritis in baby pigs is to begin control measures before the pigs are born. A well-nourished healthy sow in clean surroundings is the first requirement for the prevention of gastroenteritis in baby pigs. Sows that have mastitis or have blind teats cannot supply the milk needed to the baby pig. Baby pigs that cannot obtain sufficient milk are most susceptible to enteritis and pneumonia.

Before the sow is placed in the farrowing pen or stall, wash her udder and teats with warm water and a mild soap. Washing helps to eliminate the microorganisms and parasites that cause digestive disturbances.

The colostrum (first milk) is highly nutritious, provides resistance to disease and is a mild laxative that helps to begin the function of the digestive system. It is urgent that the baby pigs receive the colostrum milk.

Observe the newborn pigs to make sure they can nurse and that the sow has milk and is letting the milk down. Baby pigs should be watched closely for any signs of digestive troubles. Veterinary medication should be obtained if digestive troubles develop.

Dip the navel of the newborn pigs into a tincture of iodine immediately following birth. Because the navel is connected directly to the organs of the digestive tract, navel infection often ends as an enteritis.

NUTRITION:

Litters from sows that are overfed during the first eight to ten days post-farrowing are highly susceptible to gastrointestinal disturbances. This is primarily caused by overproduction of milk and overeating by the baby pig, in combination with one of the bacteria that causes enterotoxemia. Following farrowing, increase the sow ration gradually to avoid overconsumption of milk by the baby pig.

Nutritional deficiencies may also serve as predisposing causes of gastroenteritis. One form of this is milk deficiency because of mastitis, metritis, or other diseases of the sow. The weaned pig may have enteritis because of vitamin and/or mineral deficiency. Vitamin deficiencies most frequently associated with enteric problems of swine include pyridoxine, nicotinic acid, or riboflavin.

INTERNAL PARASITES

The most frequent parasite enteric problem in nursing or weaned swine is coccidiosis. It is usually associated with contaminated surroundings and generally poor sanitation. This problem can readily be corrected by recognized sanitation procedures and oral medication. Sulfanomides have been useful in coccidiosis medication.

Most of the other internal parasites in swine (ascarids or round worms, stomach worms and intestinal worms) will cause gastrointestinal disturbances when infection is acute or serve as a predisposing factor in infectious gastroenteritis. This is predominately a problem of weaned swine and can readily be prevented by recognized sanitation and parasite control methods.

INFECTIOUS ENTERITIS

HOW GERMS ARE SPREAD:

A frequent source of disease in hogs is other hogs. Contact of susceptible animals with infected carriers is one way gastroenteritis germs may be spread. The disease organisms may also be spread from farm to farm by automobile, truck and tractor tires, manure spreaders, wagons and other machinery used in the hog yard. Footwear also may spread the germs within a herd as well as from farm to farm. Dogs, birds, and insects also are known to carry the enteritis-causing organisms from farm to farm.

TRANSMISSIBLE GASTROENTERITIS (TGE):

Transmissible gastroenteritis is caused by a virus. Symptoms appear about 18 hours after infection. The infection spreads to the entire herd within two or three days.

The virus of TGE will affect pigs of all ages. Usually the infection is more acute in pigs under two weeks of age. Entire litters may be infected but the sows show no symptoms.

Though the older pigs may be as readily infected, the death loss is much lower than with young pigs. The signs of this disease in the baby pigs include profuse diarrhea, with yellowish greenish feces. The pig may continue to nurse but loses weight rapidly and

exhibits extensive dehydration. Usually, appetite decreases and thirst increases. Vomiting usually is associated with TGE. Vomitus and feces often contain undigested milk.

Infected sows have a decrease in milk production and may show all the symptoms of TGE, including diarrhea and vomiting.

Infected sows that have lost litters generally have an immunity for approximately one year, and their next litters will be protected. In some instances the sow loses consecutive litters.

There is no treatment for TGE. Antibiotics and sulfonamides are useful only to counteract secondary infections. There is a vaccine for TGE.

First, separate all sick pigs from the well ones. If the hog management program is one of continuous farrowing, the program should be stopped for at least one month while the pens and housing area are cleaned thoroughly and disinfected.

Some operators feed the bowels of dead piglets to the sows to build an immunity. Though this may be beneficial, it is also a dangerous practice in that it may serve to spread such diseases as hog cholera and ersipelas.

SWINE DYSENTERY:

This enteric condition often is described as bloody diarrhea, bloody scours, black scours or enteric vibriosis. It is caused by a vibrio organism similar to that causing vibrio abortion in cattle and sheep.

Symptoms appear one to two weeks after the pig has been infected. The symptoms include bloody diarrhea, rapid weight loss, dehydration and usually a near normal body temperature. Pigs continue to eat and approximately 75 per cent recover between three days to three weeks following the first symptom.

In some instances, there is apparent recovery for three days and symptoms then re-occur. Blood passing through the digestive tract of the younger pigs may appear in the feces unchanged, hence, the term of bloody scours.

In the older pigs, the blood in the digestive tract will be partially digested and pass in the feces as a dark tarry substance (black scours). Recovered pigs

may be healthy carriers and continue to infect susceptible pigs over long periods.

Treatment of swine dysentery is not usually successful. The best control consists of disposing of all hogs, complete cleaning of the housing area and yards, followed by a complete disinfection of all facilities.

BACTERIAL ENTERITIS:

Numerous bacterial organisms may cause severe diarrhea in hogs of all ages. The symptoms include various degrees of diarrhea, weight loss and dehydration. Infection is usually less severe than those described for swine dysentery and there is a greater possibility of control by the use of medicine.

This form of gastroenteric infection may be spread by carrier hogs, unsanitary conditions, footwear and direct contact. Baby pigs become infected due to the stress of chilling, poor nutrition and other diseases.

Colibacillosis is a broad term used to describe infections caused by the *Escherchia coli* organisms. There are many strains of these organisms, all of which may be associated with enteric problems or are natural inhabitants of the intestinal tract. In addition to diarrhea, the organisms may cause navel infection and edema disease.

The *E. coli* organisms produce toxins which account for the disease symptoms associated with infection by the organism. Enteric problems caused by *E. coli* most frequently follow starvation of nursing pigs because of mastitis or absence of milk production for other reasons. Cold and/or wet housing is also conducive to the onset of colibacillosis.

If this condition is suspected, detailed laboratory examinations are most helpful in determining exact cause and the choice of antibiotic for medication. Piglets that are not subjected to stress of starvation, wet and/or cold floors and poor sanitation seldom have colibacillosis.

SALMONELLOSIS:

Salmonellosis is a bacterial infection usually observed in swine over three months of age. There are numerous strains of this organism, some of which are associated with diseases such as hog cholera, enteritis,

navel infection and respiratory problems. Closely related *Salmonella* organisms cause Pullorum disease of poultry.

Like colibacillosis, the predisposing causes of salmonellosis include stress, poor nutrition, crowding, and poor sanitation. On the basis of symptoms, salmonellosis may appear similar to colibacillosis.

Prevention and treatment procedures are very similar to those described for colibacillosis.

EARLY DIAGNOSIS AND TREATMENT IMPORTANT

Always be on the alert for enteric problems in swine. When the first signs of enteric problems are observed, veterinary aid can be invaluable. Determination of the susceptibility of the involved organisms to antibiotics and/or other chemotherapeutic compounds is most helpful in successful therapy. Good sanitation and management are valuable aids in the prevention and treatment of gastrointestinal disease of young swine.

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