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Disease Problems of Suckling Pigs, Their Handling and Treatment

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CURTAILING suckling pig losses is very often the key to profit or loss on a year's swine husbandry. This is easily seen when one considers that a still-born pig represents a loss of $5.30, and that each loss near weaning means up to 240 pounds of lost feed and up to 50 man hours of labor wasted.

Prevention and treatment of baby pig troubles remains a difficult problem because of the extreme complexity of the factors responsible for subnormalcy and losses. Often several of these factors may be present in a litter or even in a single pig. For example, it is quite possible to find suckling pigs suffering from a borderline anemia, a migration of ascarid larvae, and a touch of E. coli infection.

It is not possible to discuss here all the disease entities responsible for baby pig losses. However, these fall into four broad, interlocking classifications which are: 1) Hereditary and congenital factors. 2) Mineral and vitamin deficiencies. 3) Infectious and contagious agents. 4) Errors in husbandry.

Under hereditary and congenital factors important in baby pig losses are the effects of lethal genes which result in anomalies such as defective palates, imperforate anus and nonclosure of the belly wall. The formation of monsters is a factor in this area as is myoclonia congenita ("shaker" pigs).

Deficiencies of minerals and vitamins represent a very important source of pig losses to the farmer. In this area we see soft-bone stillbirths due to calcium and phosphorus deficiency in the sow, and the birth of hairless, goitrous pigs due to iodine deficiency. Manganese deficiencies cause tendinitis and lameness. Vitamin A deficiency in the sow is associated with increased fetal anomalies such as club feet, cyclopia and hair lip. In sucklings it causes blindness, incoordination and paraplegia. Vitamin B-complex deficiency is reflected in the baby pig pellagra syndrome with wet, greasy skin, rough hair coat, sore mouths, goose stepping and mild enteritis. Vitamin D deficiency is evidenced in its early stages by rachitic tetany. Vitamin B_{12} deficiency is especially important in increasing the percentage of runts.

Important errors of husbandry which contribute to losses in sucklings include dirty farrowing pens, overlaying, sharp baby teeth, infected umbilicus, feeding errors with brood sows, pulmonary ascariasis, and lice and mange.

Among the agents of infection and contagion which the farmer and veterinarian must overcome to reduce baby pig losses we find bacterial mastitis in sows, colon-paraatyphoid scours, transmissible gastro-enteritis, acute pasteurellosis, the influenza complex, atrophic rhinitis, cholera, brucellosis, erysipelas, pseudorabies and swine pox.

Let us consider now a few of these factors specifically. First, hypoglycemia and hypoproteinemia: Research at the University of Illinois has shown that the hypoglycemia syndrome is directly associated with chilling. Over twice as many cases occurred when new born pigs were subjected to environmental temperatures of...
50 degrees Fahrenheit or lower as compared to litters housed at a minimum of 70 degrees. Hypoglycemia usually appears two to five days after birth. It is characterized by marked somnolence, quick shrink, shivering, failure to nurse, and feeble squealing.

The best prophylaxis is to provide suitably placed 150 watt heat lamps under a hood in each farrowing pen. The best therapy is the intraperitoneal injection of 10 to 15 ml. of five percent saline-dextrose solution. This should be injected at 12 hour intervals over the 24 to 36 hour period of crisis. This operation is speeded by using a 40 ml. syringe fitted with a B-D automatic filler carrying a 19 gauge, three-quarter inch needle.

Supplementary hand feeding of the hypoglycemic pigs pays off for owners who will work at it. A suitable formula is:

1 quart whole milk
4 ounces cream
2 ounces Karo syrup.

Give each pig two ounces at four to six hour intervals. For administration use a small bulb enema syringe with a hard rubber nozzle such as is used on human babies. It is also important to tease the treated pigs back into natural nursing within the first 24 hours they are under treatment.

Recent studies have shown that hypo-proteinemia is a basic cause of so-called "sleeper" pigs. In valuable litters, intraperitoneal administration of Wintrop's Parenamine (a parenteral amino acid solution) in 15 ml. doses is worthy of trial. The response is immediate. When the amino acid solution is purchased in bulk bottles the cost per pig will come to about five cents.

Simple dietary scours in baby pigs is usually caused by overfeeding sows so that milk flow is too ample and rich. An accepted procedure is to eliminate the rich ration of the sow and substitute a slop of wheat bran and whole oats in equal parts. Also add one pound of sodium bicarbonate to each five gallons of drinking water, and give each sow a 60 gr. hexamethenamine tablet twice a day, either in the mash or with a balling gun. Hexamethenamine is preferred to two drams of formalin in milk as the latter frequently causes vomition.

Treatment of contagious white scours should proceed as with dietary scours. Get sows and sick litters out of the hog house and disinfect the pens with hot cresol solution. In virulent outbreaks it is a good investment to give all exposed but still healthy pigs a 5 ml. subcutaneous dose of anti-calf scour serum. Among other medicinal agents used is a teaspoonful dose of triple sulfonamides with kaolin and pectin twice a day. This is administered with a spring bottom oil can or a baby enema bulb syringe. Exceptionally good results have been reported with 100 to 150 mg. of dihydrostreptomycin administered intramuscularly twice a day. Where a large number of litters are involved, treatment with sulfquinodoxaline is economical and efficient. One pint of the commercial three percent solution is added to seven pints of water to make a gallon. This solution is administered in the following dosages: 10 ml. for pigs less than a week old; 15 ml. for pigs two to three weeks old; 20 ml. for pigs over three weeks. The initial dose is repeated at 24 hour intervals to a limit of three doses. The drug has a cumulative action and blood levels are sustained for as long as four days.

Transmissible gastro-enteritis in baby pigs is a virus disease which causes symptoms and a postmortem picture which is now well known to veterinarians. It is differentiated from virulent white scours by faster and heavier mortality. There is concurrent sickness in one or more brood sows characterized by vomition, scouring, inappetance and mild fever. As a rule, the younger the pigs, the higher the mortality. It will often hit 80 or 90 percent in pigs less than ten days old. The usual sulfa and antibiotic therapy has proven ineffective in treating "T.G.E.,” but some veterinarians report favorable results from administration of a 50 mg capsule of terramycin at eight hour intervals. In addition, a 15 ml. dose of dextrose-saline is given intraperitoneally.

When an attack of "T.G.E." is diagnosed early, the best procedure is to
leave sick sows and their litters in the central hog house and then scatter the healthy sows and their litters so they will be as widely scattered as possible. Get them into stalls in the horse barn, individual houses, corn crib runways, or any other decent shelter available that will keep space between the litters.

Experience has shown that sows can usually be bred back in the fall without recurrence of the disease. The workers at Purdue University suggest “breaking the breeding cycle” as a preventive measure. This involves skipping one or more heat periods with the gilts and sows so that the farrowing house will not be filled with litters of the same age.

Because of the phenomenally rapid spread of atrophic rhinitis, extreme vigilance is required to prevent its spread to clean herds. Suckling pigs are most susceptible, and this is the critical period for establishment of infection. Owners should be advised to earmark sows and their litters identically to facilitate isolation of infected pigs. Litters which show persistent sneezing and sniffling, nasal bleeding and red eyes, should be reported immediately and isolated.

Entire sneezing litters should be destroyed and the carrier sows sent to slaughter. In a purebred herd the disease may be blocked by a quick changeover to individual hog houses and exercise pens for sows freshly farrowed and yet to farrow.

If a purebred raiser insists on keeping sneezing litters, a suggested procedure is as follows:
1. Hold the pig’s mouth shut and dip the head with snout up in an open bucket of 1:5000 potassium permanganate solution and administer a 200 mg. dose of streptomycin Intramuscularly.
2. If the pigs are old enough to creep feed, take them off the sows and move the sows away to prevent reinfection of pigs.
3. Three days later give each pig 2 ml. of penicillin and streptomycin in oil deep into each of the posterior nares, using a two inch length of polyethylene tubing over a 12 gauge needle. Also administer another 200 mg. of streptomycin intramuscularly, and repeat again in one week.
4. Raise the treated, sneezing litter in absolute isolation from the healthy pigs on the farm.

Since herd treatment of ascariasis with sodium fluoride has come into the picture veterinarians have become inclined to overlook the gross damage done by migrating ascarid larvae in suckling pigs. Pulmonary ascariasis kills and stunts countless thousands of pigs even though preventative methods of husbandry are widely publicized. When the disease is identified in a drove of sucklings the following procedure will help curb losses:

1. Provide a creep feeder and determine exactly how much feed the pigs will consume in 24 hours.
2. Add one gram of phenothiazine per pig per day mixed into the creep ration.
3. Keep the pigs on this phenothiazine creep feed until they are weaned. Then treat the entire drove with sodium fluoride.

Nodular worms will sometimes cause anemia, poor gain and persistent scouring in young pigs on a clean pasture even though they continue to eat well. The parasites are identified on post mortem by holding a section of washed colon up to the light. It will appear to have been riddled with bird shot. Individual treatment of pigs in infected droves is indicated. A dose of phenothiazine suspension will clear up the trouble, though a second treatment following in two weeks may be necessary in heavy infections.

There are many indications, both in this country and in published reports from abroad, that leptospirosis may be a factor in causing losses both in sucklings and shotes. A recent British report cites an outbreak of L. icteroheemorrhagica infection in suckling pigs with such symptoms as “circle walking,” iritis, and incoordination. The only constant necropsy finding was confined to the marginal surfaces of the liver. Leptospirosis may account for some of the drove trouble in swine which is field diagnosed as encephalitis or listerellosis. It is important to obtain expert laboratory diagnosis in suspected outbreaks.

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