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Swine Herd Health Management During Gestation and Farrowing

Many diseases and environmental factors are known to cause serious losses of pigs during gestation and in early life. These losses may mean the difference between profit and financial loss from the swine herd. Research and practical experience have shown that the overall success of profitable swine rearing operations depends in large part upon sound management and strict adherence to a comprehensive herd health program covering the periods of gestation, farrowing and post farrowing up to weaning.

This publication summarizes herd health management procedures that have been successful in preventing and controlling certain diseases during gestation and farrowing and improving the survival rate of young pigs.

Gestation

Gilts that have been selected from a group of finishing hogs for breeding should be maintained during gestation in an area where other breeding stock have been kept. This allows these animals the opportunity to be exposed to the disease organisms common to the breeding herd and to develop a protective immunity for themselves and their newborn pigs.

Gestation Ration

The gestation ration should be a fully fortified and balanced grain-protein supplement diet that meets all the minimum daily requirements of protein, energy, minerals and vitamins for normal maintenance and for growth of the developing fetuses. During gestation, average total weight gains should be approximately 70 pounds for gilts and 40 pounds for sows depending on individual condition. Females that are thin when bred and that nurse their

pigs beyond 5 to 6 weeks should gain 10 to 15% more than this.

The gestation diet intake has no effect on the number of pigs farrowed or weaned but does have a direct effect on birth weights and 21-day weaning weights. The energy consumed by the pregnant female is the most important factor in determining maximum birth weights and weaning weights of litters. Consequently, bred sows and gilts should consume 4 to 5 pounds of feed per head per day.

Bred females may be self-fed or hand-fed depending on management. Self-feeding systems take less labor but require a more bulky ration to keep the animals from eating too much and becoming overweight. Often more feed is wasted. Hand-feeding systems require more labor but allow more efficient use of feed. The hand-fed animals can also be observed daily.

Feed intake and energy requirements for gestation will be greater during the winter months than during the summer. The daily consumption of gestation diet may be reduced by as much as 1 pound for animals maintained on good quality pasture. However, the quality of pasture forage is sometimes difficult to assess.

Testing for Atrophic Rhinitis

All animals in the breeding herd should be tested for atrophic rhinitis. The test involves taking nasal swabs and culturing them for *Bordetella bronchiseptica* organisms. All culture-positive animals should be separated from the remainder of the herd and treated for 4 weeks with sulfonamide drug mixed in the feed. All animals — including those previously treated — should pass 3 consecutive negative tests administered at

weekly intervals in order to be classified as noninfected.

Vaccination

All adult animals should have acquired protective immunity to the more common diseases in the herd, either by natural exposure or by vaccination, which can be transferred to the newborn piglets through the colostrum. Past experience and consultation with the herd veterinarian will determine which diseases are most threatening to the welfare of the young piglets in a herd. Many producers routinely have "booster" vaccinations given to the bred females approximately one month before farrowing to allow sufficient time for the development and eventual transfer of maximum immunity to the newborn through the colostrum. Examples of vaccinations used include erysipelas and *E. coli* bacterins. Consult your veterinarian for recommended dosage and injection schedules.

Parasite Control

Approximately one week before farrowing, all sows and gilts should be thoroughly washed and scrubbed with a hand brush or pressure cleaner, warm water and a mild antiseptic soap.

After they are dry the animals should be treated for external parasites (lice and mange) by application of an approved insecticide such as malathion, cioldrin, toxaphene or lindane mixed with water according to the labeled directions of the manufacturer. One convenient method is to crowd small groups of animals into a pen and then apply 2 to 4 quarts of insecticide mixture to each animal with a sprinkling can.

Farrowing House

The farrowing house should be thoroughly cleaned, washed and disinfected before the start of farrowing. All moveable farrowing stalls and panels should be washed and scraped clean and allowed to air dry in the direct sunlight after disinfection. Use commercially available disinfectants, a steam cleaner or fumigation methods. High pressure sprayers are especially helpful in removing dirt and debris. All stalls and pens should be cleaned and disinfected between farrowings, particularly when the farrowing house is too small to hold all the animals at once.

Place the sows and gilts in the farrowing house 5 to 6 days before farrowing to accustom them to the surroundings and location of the feeders and waterers. Especially important is to turn gilts into farrowing stalls several times to accustom them to confinement and avoid unnecessary panic and confusion later on during farrowing. Start feeding a bulky, somewhat laxative ration one week before farrowing and continue for 3 to 4 days after farrowing. As an example, a one ton mixture would include ground yellow corn (1,500 lb.), wheat bran or beet pulp (300 lb.) and 40% protein sow supplement (200 lb.). Do not feed the animals at the time of farrowing. After farrowing, feed them gradually increasing amounts until they are on full feed in 5 to 7 days.

Commercial or custom built crates or pens are satisfactory for farrowing although crates are usually preferred. Pens should have a minimum of 6 x 6 feet of clear floor area and should be equipped with an 8-inch guard rail located 8 inches above the floor on the side and back walls.

Farrowing

The farrowing period is one of the most critical times in the overall cycle of production. It requires a considerable amount of the producer's time and attention to the proper care of the dam and the newborn piglets. Approximately 25% of all pigs born alive will be dead by weaning age; most of these deaths occur during the first week of life. The first 72 hours of life are the most critical. Surveys have shown that the most common

factors leading to death of young piglets include pigs born weak, starvation, chill stress, crushing, disease, large litter size and exceedingly small birth weight.

The following procedures increase the chances of a trouble-free farrowing and improve the livability of the piglets:

1. **Always provide warm, dry and draft-free quarters for the pigs.** Maintain a constant temperature of 70 to 75° F above the floor level for the sows and 85 to 95° F at the floor level for the piglets. These temperatures are critical. Temperatures above 90° F for the sows may cause prolonged farrowings and an increased rate of stillbirths.

Cover the floor area with several inches of suitable bedding such as straw, wood shavings or rubber mats. Place a heat lamp or gas brooder 24 inches above the floor in a nearby corner to provide supplemental heat for each litter. Heated floors are also an excellent means of providing supplemental heat.

2. **Be present during farrowing whenever possible.** Avoid loud noises and unnecessary activity that may disturb the sow when she is farrowing. Never move a sow to another location once she has begun farrowing. Dry the piglets off with clean toweling and assist them in breathing when necessary. Make certain the piglets nurse as soon as possible. Avoid excessive dampness by cleaning away the afterbirth and fetal fluids from behind the sow and replacing with fresh dry bedding. Slotted floor farrowing units with heated floors will usually not require bedding.

Assist sows with difficult deliveries and when they take more than 30 minutes to deliver each pig. Clean the external genitalia with soap and warm water and use liberal amounts of lubricant. Examine the udder sections for presence of milk or unusual hardness and lack of milk. Transfer piglets between litters whenever litters are being farrowed at or near the same time. Inject nervous or aggressive sows with tranquilizer.

3. **Restrict the number of persons that have access to the farrowing house.** Near the entrance to the farrowing house, provide a foot-bath or water hose and hand

brush to clean and sanitize footwear. If possible, provide a change of clean outer clothing to be worn in the farrowing house.

Post Farrowing

The following procedures should be performed on the newborn piglets within 12 hours after birth:

1. Trim the needle teeth down to the approximate same length as the adjoining teeth. Do not cut to the gum line because infection may develop later on.
2. Dock the tails but leave a 1/2 to 3/4 inch stump.
3. Dip the tail stump and the navel (including the abdominal wall around the base) with tincture of iodine.

Gradually change the sows from the bulky, laxative ration to full feed of a lactation ration by the 5th day after farrowing. The lactation ration should be a well balanced diet containing 13% crude protein and may be fed up to a maximum of 15 pounds per head per day depending on animal size. Another method for determining the amount to feed daily is to give each animal 3 to 4 pounds plus 1 additional pound for each piglet she is maintaining. Continue feeding the lactation ration for about 30 days. If the pigs are not weaned at that time, decrease the amount fed by 1 pound daily down to 7 pounds per day.

If possible, sows in farrowing stalls should be let out daily to exercise. Inspect all animals at least twice daily for signs of injury or disease and administer appropriate treatment.

Provide a well insulated, dry, draft-free and heated creep feeding area. Offer the piglets free choice water at 3 to 4 days and prestarter creep feed pellets in small amounts beginning at approximately the same time. Clean out the uneaten portions and give fresh pellets daily. Provide supplemental iron by the oral method or by injections (100 mgm iron dextran) at 3 to 4 days and again at 15 days.

Male pigs not intended for breeding stock should be castrated between 5 days to a month of age. Ear notch all pigs intended for replacement. If erysipelas is a problem, vaccinate the pigs by injecting 2 cc of erysipelas bacterin subcutaneously and repeat at weaning time.