COOPERATIVE EXTENSION SERVICE
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Alaska Livestock Series

Recommended Practices for Raising Pigs from Birth to Weaning

LPM-00845

This publication discusses the basics of baby pig care. It is meant to serve as an outline for the various considerations important to nurturing newborn pigs until they are weaned. A much more thorough and highly recommended reference to this and all other subjects concerned with raising swine is Purdue University's *Pork Industry Handbook*, PIH-153 (www.ces.purdue.edu/porkindustryhandbook).

The most critical time in a pig's life is from birth to weaning. After leaving the warmth and safety of the sow's uterus and falling into a cold and alien world, the stresses begin to multiply. Like the old fable of the straw that broke the camel's back, each of these stresses adds to the effect of others. When enough stresses accumulate, they finally result in disease or death to the pig. Good management and attention to detail can prevent or minimize most stresses and help pigs get through this most important time. Following are some recommended practices which have proven helpful in getting baby pigs from birth to weaning.

Sows and Boars

Good sow and boar management is the key to getting large litters of strong, healthy pigs. Selection of sound, prolific breeding animals is where it starts. Then they must be provided adequate nutrition and health care. Correct handling of both the sows and boars at the time of actual breeding is important, and recording breeding dates is vital. Knowing when litters will be born gives you an opportunity to clean the facilities and the sow and prepare the pen or stall for the new litter.

Cleaning and Sanitizing

Physically remove as much of the dirt and organic matter from the pen and sow as possible. Use steam or a high pressure sprayer, or scrub the pen with a strong detergent and the sow with a nonirritating detergent. After the pen has been washed, it should be sanitized with a 2 percent chlorine solution. If any appreciable amount of organic material remains after washing, use a cresol/phenol-based product according to label instructions. It is usually not necessary to sanitize the sow beyond washing with a good soap.

Bedding

If bedding is used it should be kept clean and dry during the time the pigs are still with the sow. Several types of bedding are recommended, including straw, hay, shredded paper and wood shavings. Sawdust is not recommended since it wicks moisture from the floor to the top of the bedding, does not fold over the animals as they try to snuggle in it for warmth, and, most important, can wick blood from the navel cord of weak pigs, which do not immediately move from where they were dropped during the birthing process. Bedding is not required or even recommended in farrowing crates, where part or all of the floor is slotted for urine and manure to drop through. It is also not recommended when electrically heated mats are used.

Temperature

Newborn pigs require an ambient temperature of 95°F at their body level for the first week after birth. The temperature can then be lowered 5°F each week until weaning. Cold stress is the most common problem for baby pigs in Alaska. It weakens the animal's reserve and leads to problems such as scours, colds and pneumonia. Baby pigs have almost no insulation in the form of hair and fat, and their tiny gut cannot hold enough food to provide adequate heat from the energy they ingest. Except for the limited amount of warmth they get from laying next to their mothers and each other, they are entirely dependent on you to provide the heat they need.

Several types of supplemental heat can be used. These include gas or electric overhead heaters, electric heat lamps, electrically heated floor mats and heating pipes placed in the floor of the pen. Keep in mind that all of these are

potential fire hazards. Be sure wires are well insulated and cannot be accessed by animals. Locate the heaters well away from all combustible material.

Overhead heaters and mats should be inaccessible to the sow, but conveniently located for the baby pigs in a corner of a farrowing stall or crate that has been fenced off from the sow but allows the baby pigs to enter. Keeping the entire farrowing building at 95°F is not only expensive, it also results in the sow becoming too hot, which may cause her to have reduced milk production.

One of the most effective and economical pig warmers is an uninsulated box made from ½-inch plywood with a 100-watt (or smaller) light bulb inside. The box should be about 18 inches wide, 24 inches long and 24 inches high. Cut a 6- by 9-inch hole for the pigs to enter the front of the box and hinge the top for easy access to the space or the pigs. A slide gate can be used to cover the entrance hole and trap the pigs inside so they can be handled more conveniently and with a greater degree of safety. Place the box on one side of a farrowing crate or in a corner of a farrowing stall that has been fenced off from the sow but allows the baby pigs to enter.

Early Treatment of Pigs

Immediately after birth you should clip the navel cord back to not more than 2 inches long as soon as it quits bleeding and before it begins to dry up. After the cord is clipped, dip all of it in Betadine or other nonirritating iodine solution. This will greatly help avoid disease entry though the cord into the pig's body.

After all of the pigs are born and have made it through their first three days of life, there are a number of treatments which need to be administered to them. These are known as processing and may include castration, clipping needle teeth, iron supplementation, shortening the tail (docking) and ear notching. Processing should be done before the pigs are ten days old.

Before beginning the following procedures, be sure to separate the pigs from the sow so you can work on them without the distraction and danger of a mother trying to protect her babies. Also, be sure the treated pigs have a clean, dry place to lay in the pen with the sow after treatment.

Milk is devoid of iron, so pigs born in the wild or outside get most of the iron they need from rooting in the soil. Those born inside or outside when the ground is frozen do not have access to soil and thus need supplemental iron. This can be given by injection or orally. Most managers prefer injection as a means of regulating the dosage and ensuring that all the pigs get as much as they need. Iron shots are best given using a small gauge needle ½ inch long. Administer the shot slightly behind the ear in the muscle on one side of the neck. Shots given in the ham often result in the iron being placed in a fat seam or pocket from which it does not entirely disperse, leaving the pig short of iron and with a rust-colored stain that remains in the fatty tissue from then on. Iron-stained hams are of less value and cannot be economically detected until the ham is cut. Repeat the iron shot in about two weeks or as recommended on the label.

Needle teeth appear in the sides of both the upper and lower jaws. They are temporary and used to fight with other pigs for nipples during nursing. The results are scars, and often infections, on the noses of their litter mates and the sow's udder. Using a small set of side cutters dipped in alcohol or povidone-iodine (Betadine), clip all four needle teeth even with the surrounding teeth. This leaves a jagged edge, but it does not appear to harm the baby pig and greatly reduces injury to others in the pen. One tip that some managers use to help the smallest pigs catch up with their litter mates is to clip everyone's needle teeth but theirs. In just a few days the smaller pigs with their superior "weapons" will be as large as the others. *Caution*: Sometimes the pigs whose teeth you do not clip will become too aggressive, so after they are as large as their litter mates you should clip their needle teeth as well.

If tails are to be docked, it should also be done at this time. Using the sterilized side cutters, simply cut the tail off about two joints or ½ inch from the body. Dip the stub in the sterilizing solution used for navel cords. *Caution*: Clipping the tail too close to the body may damage the muscles supporting the vulva and anus.

If ears are to be notched, now is the time to do it. Use a sterilized ear notching tool and make the notches in the appropriate locations on the ears to identify the pigs. As with docked tails and navel cords, the injury to the ear should be bathed in the sterilizing solution.

Finally, this is the best time to castrate all males that are not to be kept as boars. Pigs castrated at this age seem to suffer very little trauma compared to older pigs. There are various tools used to restrain pigs for castration, or they can be held by a second person. The blade used is of little consequence as long as it is razor sharp and maneuverable.

Managing the Sow During Lactation

Sows often are constipated immediately before and after farrowing. Adding oil (up to 10 percent of the diet), wheat bran or water to the feed is a good way to increase intake of both feed and water, and it helps soften stools. It also aids in preventing a serious syndrome known as lactation failure in the sow. The results of this disorder range from slow growth to death of the pigs from starvation.

Sows need to be exercised during lactation to improve their health and vigor. Some managers turn sows out to a common feeding area for a period of 30 minutes or an hour twice each day and then return them to their pens or crates. This is all that is necessary, and it helps keep the sows calm and gives their joints a chance to flex and their muscles a chance to stretch. If this practice is followed, be sure the feeding area is clean so sows do not carry filth and disease back to their pigs. Sows that are suffering from a disease or disorder should be kept in their pen or crate and not exposed to the other sows.

Creep Feeding Nursing Pigs

Barring diseases and other problems related to milk production in the sow, nursing pigs get all the nourishment they need from their mothers for the first two to three weeks of their lives. As the pigs in larger litters grow and the sow's milk production begins to decline, supplemental feed is recommended. This is done by "creep" feeding the pigs while they are still nursing the sow. Not only does creep feeding supplement the baby pig's diet, it also gets them accustomed to eating solid food. The transition from milk to a solid food diet can be fairly dramatic to a newly weaned pig, especially when added to the stresses of being away from the sow and mixing with pigs from other litters in a totally new nursery environment.

To meet the high nutritional needs of the baby pig, creep, or starter, diets are fairly complex in their composition. They can be purchased from a feed dealer or prepared on the farm if it is equipped with the necessary grinding and mixing equipment. Refer to UAF Cooperative Extension Service publication LPM-00841, *Feeding Alaska Swine*, for specific diet recommendations.

The creep feed should be dispensed from a self-feeder rather than from an open pan or by simply throwing it on the floor. If the sow and litter are not in a farrowing crate, place the creep feeder in a corner of the farrowing stall or group pen that has been fenced off from the sows but allows the baby pigs to enter.

Baby pigs will begin to drink water at about three weeks of age and should have a clean, constant supply that is easily accessible. Adding water to the creep feed to make it a mash or slurry is a good way to increase consumption and supply part of the water they need in the process.

Communal Grouping of Sows and Litters

Some producers group two to four sows and their litters together from the time the pigs are two to three weeks of age until they are weaned. This practice maximizes the use of farrowing crates by shortening the time each sow is in them, thus enabling you to circulate more sows through the crates in a given time period. Grouping also allows more litters to be raised in less space because several sows and litters require less space together than if penned separately. In a grouped scenario, a creep area can serve a larger number of pigs, thereby reducing that overall space as well. Finally, grouping of sows and litters allows pigs to mix with others outside their litter mates, which reduces or eliminates that stress at weaning.

Grouping sows and litters is not possible or even desirable in every management scheme or swine operation, but can be a valuable and economic practice where it fits. It works best when the number of sows and litters is held to four or fewer per group. Litters with weak pigs or sows or pigs with health problems should not be grouped until the pigs are larger or the health problems are cleared up.

Grafting Pigs

Pigs from large litters can be grafted onto different sows if done within the first two weeks of age. Grafting allows litter sizes to be more uniform, thus reducing competition for the sow's milk and heated areas. Grafting pigs onto sows with small litters also maximizes each sow's milk potential.

When grafting pigs into new litters, select those that are approximately the same size as their new litter mates. Larger grafted pigs will be too strong for their new litter mates to compete with, while smaller grafted pigs will not be strong enough to compete.

Graft pigs soon after the recipient sow farrows to ensure each section of her udder continues to produce milk. In a matter of a few days, pigs in litters where there is little competition choose one teat and nurse from it only as long as their appetites are satisfied. The unused udder sections of sows with small litters dry up within a few days.

Common Diseases of Nursing Pigs

The natural immunity passed on to the pigs by the sow prevents a number of diseases, but it is temporary and does not cover every possibility. Including antibiotics in the creep feed helps prevent many infections. Even with these defenses, some diseases do occur. When they do, the affected animal can decline rapidly, usually from dehydration caused by diarrhea. The most common diseases of nursing pigs are colibacillosis, a type of scours caused by *E. coli* bacteria; transmissible gastroenteritis (TGE), a viral infection that causes severe scours and vomiting (this disease had not been diagnosed in Alaska as of January 1, 1997); rotaviral diarrhea, a viral infection that causes diarrhea; coccidiosis, a type of scours caused by coccidia bacteria; and *Salmonella choleraesuis*, a bacterial disease that causes acute septicemia (generalized infection of blood and organs) and/or diarrhea (septicemia without diarrhea is the most common scenario for this disease). Symptoms of these five diseases are very similar, and without lab tests, it is often difficult to determine which one may be

the cause. Each of the five usually causes diarrhea, which quickly dehydrates the baby pig's body, so it is important that treatment be initiated immediately. Your veterinarian is the best person to make the correct diagnosis and recommend treatment.

Weaning Pigs

There is much controversy about what age pigs should be when they are weaned. Weaning ages vary between 10 days in some operations to as long as eight weeks in others. Those who wean early (less than four weeks of age) do so primarily to breed the sows again as soon as possible, thereby increasing the number of litters a sow produces during her life time. That increase might amount to as much as one to three litters. Those who wean late (after four weeks of age) do so for a variety of reasons, none of which helps the pigs much and most of which reduce the productivity of the sow over her life time.

Early weaning places more stress on the pig and demands a higher level of management and better facilities in the nursery. There is evidence to show that weaning earlier than three weeks actually extends the time before the sow will rebreed. Unless you have appropriate facilities, high quality baby pig feed and considerable experience raising hogs, early weaning is not recommended.

By the same token, late weaning puts more stress on the sow to produce milk and thereby lengthens the time it takes to get her body condition back to the point at which she will rebreed. After four weeks of age, most pigs should be eating solid food and able to switch to it completely without any noticeable slowing of weight gain or health problems.

Baby pigs should weigh about 14 pounds at four weeks of age, and this is a good time to wean them, especially if they have been creep fed. Exceptions to this are undersized but healthy pigs or pigs that have a disease. These animals should be left with the sow long enough to grow to a weight and state of health that will allow them to make the conversion with no ill effects.

Some producers wean pigs by size rather than age. In every litter some pigs will gain weight more rapidly than others, and the argument is that when they reach 14 pounds they are strong enough to wean. This is not necessarily wrong, but it does not take into consideration how long they may have been on creep feed, nor does it consider the psychological maturity of a two-week-old pig versus one that is four weeks of age. A better recommendation is to wean the whole litter at four weeks, except as noted for overly small or unhealthy individuals.

Dealing with Runts

Not all litters include "runt" pigs, but a significant number do. Dealing with these individuals is never easy. A runt pig is different from one that is just undersized at birth. An undersized pig is usually just a smaller version of a normally developed, full-sized pig. Given a chance to receive adequate nutrition and care, small pigs usually grow as well as their litter mates. Runts, on the other hand, are usually very small, often stand with their backs humped and feet tucked well under their bodies, have a somewhat "bulbous" skull, are weak and make more of a small squeaking noise than the squeal of a normal pig.

As opposed to an undersized pig, runts do not grow well and many die within a few weeks of birth. Most producers cull runts out of the litter within the first day and sacrifice them right away. Others give them away or sell them as bottle babies. Seldom do runts raised on the bottle survive, and those that do grow extremely slowly and are often plagued with disease.

Summary

Getting baby pigs from birth to weaning requires good management and attention to detail. Many factors affect the pig's health and survivability. Management scenarios vary with each operation and must be tailored to each producer's ability, time and facilities. This publication has touched on the things one must deal with during the early stages of hog production and points you to those items that need further explanation.

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