

Split-Suckling: A Technique Designed to Reduce Preweaning Mortality

Preweaning mortality (PWM) is the single largest contributor of pig losses from birth to market, with more than half of the deaths occurring in the initial 1% of a pig's lifespan. Special care and attention given to pigs in the first few hours of life will have the largest impact on reducing PWM. Early colostrum intake by all pigs is key. Waiting to intervene until ≥ 12 hr after birth is too late, as colostrum quality is declining and pigs are already losing the ability to absorb immunoglobulins (IgG). Also, pigs that do not consume colostrum early become hypoglycemic (low blood glucose levels) and weaken rapidly. Early colostrum intake has implications both for short- and long-term disease protection, as consumption of colostrum IgG provides immunity to pigs.

The most vulnerable period of a pig's life is immediately after birth. Pigs tend to chill very quickly and may suffer a condition known as perinatal hypothermia. Pigs are also born with extremely low energy reserves, which compounds the problem. To avoid early losses post-farrowing, care of pigs soon after birth should include managing colostrum intake, maintenance of pig body temperature and energy reserves with proper comfort zone management, good sanitation practices to reduce exposure to pathogens, and proper cross-fostering techniques to increase pigs' chances of survival.

Management to enhance colostrum intake by all newborn pigs is practically nonexistent on most sow farms. This is surprising given that it is absolutely necessary for all pigs to consume 'early' colostrum as soon as possible after birth. Sows secrete colostrum when farrowing begins. Colostrum composition changes hourly after farrowing starts, with the highest quality colostrum (meaning that with the highest IgG levels) secreted early in the birth process. While quality of colostrum is important, so is the quantity consumed by pigs. Unless there is human intervention, firstborn pigs tend to consume the highest quantities of the best colostrum, leaving less colostrum of lower quality for pigs born later in the farrowing process, or for those pigs too small or weak to reach a functional teat for several hours after birth.

Sows should be observed during the farrowing process, which means sows should be induced to farrow when personnel are available. During farrowing and for several hours afterward, most sows lay so that only the top row of teats is exposed and available for suckling by pigs (Photo 1). Large sows may have their upper row of teats exposed but beyond the reach of some newborn pigs or blocked by a bar on the farrowing crate. A limited number of exposed, accessible teats is an impediment to colostrum intake, but it must be overcome in order to give pigs the best possible start in life. Pigs also vary in strength and size at birth, with some pigs having difficulty with the suckling response and learning to get sows to release milk. Couple these factors with rapid reductions in colostrum quality over time, and it is easy to understand why so many pigs do not achieve adequate, good quality colostrum intake soon after birth.

Human intervention via split-suckling is the best, most consistent way to control colostrum intake by all pigs. With human intervention, the time from birth to first colostrum intake is reduced, body heat

Photo 1. Teat Exposure



Photo 2. Belly Palpation



Photo 3. Example Box



loss by pigs is minimized, and the probability that all pigs will consume an adequate share of the best colostrum is enhanced.

Colostrum intake by pigs can be easily managed by implementing a split-suckling program. Pigs should be observed soon after birth. The focus should be on pigs and litters with no evidence of early colostrum intake. Palpating the pig's belly quickly takes the guesswork out of the decision-making process (Photo 2). A pig that has consumed colostrum will have a round, tight-feeling belly. If pigs have not consumed colostrum, split-suckle as soon as possible after birth to enhance colostrum intake.

Split-suckling is not a difficult technique. It requires some dedication from farm personnel, but is well worth the effort. Once a sow has farrowed, examine the pigs for colostrum intake. Any pig that has consumed colostrum (full belly) can be placed into a box (Photo 3) to segregate him from the sow. Boxes can be large (Photo 3) or small enough to fit into the creep area within a farrowing crate. Continue to examine other pigs, placing 'full' pigs in the box. Pigs in the box can be added back to the sow after 1 to 2 hours. In this way, pigs farrowed early do not get the lion's share of the colostrum, nor all the 'best' (early) colostrum. Distribution is much more equitable and effective. Most importantly, the weaker, less aggressive and (or) smaller pigs will be given the best chance possible to survive.

Colostrum intake may enhance healing of umbilical cords, clipped tails and teeth, notched ears, and castration incisions. It may also help reduce variability in health status of

pigs from wean to market, perhaps resulting in less antibiotic use downstream. Human intervention via split-suckling may be the best use of farrowing personnel's focus and time. It affords the best opportunity for the greatest influence in reducing PWM and producing more high quality weaned pigs.