TRENDS TOWARD OLDER WEANING AGE: HEALTH AND NUTRITIONAL IMPACTS

Hans Rotto
Innovative Agricultural Solutions LLC
Ames, Iowa 50010
E-mail: rotto.hans@gmail.com

ABSTRACT

Swine production systems that have moved to an older weaning age have found a myriad of advantages in the wean to finish phase of production. They have found that minor adjustments to vaccination and medication timing should be considered for strategic diseases such as Mycoplasma hyopneumoniae, Actinobacillus pleuropneumonia, or Porcine Circovirus. Consideration should also be given to what inputs can be adjusted to lower costs or stopped altogether due to the older wean pig. Great care must be given to sow/gilt conditioning and feeding to sustain them for the increase in lactation length. Other nutritional and supplemental adjustments for the pig should be examined to maximize the benefits of older, heavier pigs at weaning.

INTRODUCTION

It is important to evaluate health and nutritional management protocols for pigs and sows when farms move to older weaning age and longer lactation lengths. This paper will briefly review some basic considerations in health and management in the context of an increase in weaning age and lactation length.

HEALTH

Older weaning ages have generally been positive for swine production systems in many aspects of health. Most of these benefits have been realized in wean to finish barns. The older, bigger wean pigs start on feed better. There has been less enteric disease in the first weeks post weaning. Some have seen less disease in general. It is actually an opportunity to STOP doing vaccinations and medication regimes that you were before with younger, smaller wean pigs. Diets can be less expensive and less complex. Vaccinations can be adjusted due to a more mature immune system post weaning.

Before considering adjustments in health management protocols, there are epidemiologic disease considerations that are important to review. Many diseases are vertically spread from the sow to the piglets in farrowing. This is via exposure to the sow skin, underline, and excretions such as saliva, manure or urine. The longer in the farrowing crate, the more potential for exposure to diseases the sow may shed. There is also an increased dose of pathogen exposure to the piglets when they are with the sow longer. Diseases that need special consideration when increasing the

wean age are pathogens where the length and duration on the sow increases the exposure/dose to the piglets and there will be an increase in clinical disease. You may have to consider medication and/or vaccination timing changes. Medication to the sow can impact the shedding of disease to the piglets. Immunization through vaccination of the sow may also impact the shedding to piglets. Medication of the piglets at strategic times can also minimize the clinical signs and if and when they are seen post-weaning. The following are specific examples to consider:

- Mycoplasma hyopneumoniae
    - Intervention changes or considerations
        - Switch from one dose to two dose program.
        - Two dose program may be initially started at weaning and booster is a minimum of two weeks post weaning and often even later.
        - Medication of the lactation feed with some products such tetracycaline will impact the vertical spread of M. hyo.
        - Vaccination of sows with M. hyo vaccine four to six weeks prior to farrowing has been reported to be helpful in minimizing vertical shedding.
- Actinobacillus pleuropneumonia
    - Intervention changes or considerations
        - The use of antimicrobials can limit the passage from sows to piglets; however, will not eliminate the vertical spread unless piglets and sows are treated and pigs weaned earlier, not later.
- Porcine Circovirus
    - Intervention changes or considerations
        - The timing of the vaccination may change, especially if done post-weaning. If pigs are older at weaning the age of vaccination may change but protocols that say "3 weeks post weaning" are now vaccinating pigs that are 7 to 10 days older and it may be too late. It is important to work with a veterinarian to know when circulation of PCV is going on in your production flows.

Do not look past the many important health considerations which have greater impact on disease management than wean age. The relative impact of increased wean age on health should be viewed in the context of the stability of the sow/gilt herd for any of the respective diseases. The potential increase in disease exposure and disease dose risk to piglets in farrowing are influenced as much or greater by other factors involved with the vertical spread of disease. Poorly acclimated and vaccinated gilts tend to pass on more disease exposure than sows. A sow farm without even immunity through the sow herd tends to create post-weaning challenges with diseases. This will still happen with an increased wean age. Unstable herds will have pathogens or diseases that are passed in utero if the sow or gilt is undergoing infection at certain stages of gestation. The herd health status for a given disease and the immunity of the herd is important to any strategies for health management.

The difference in unstable herds with older wean age is the potential manifestation of these diseases while still on the sow in the farrowing house. Unstable farms for swine influenza or Porcine Reproductive and Respiratory Virus will occasionally see some piglets present with respiratory signs such as thumping, cough, sneezing and fever while still on the sows prior to

weaning. Piglets tend to experience and go through diseases better while on the sow versus post weaning. This is one of the advantages of an older wean age.

SOW / GILT MANAGEMENT CONSIDERATIONS

Gilt and sow conditioning prior to being loaded into farrowing becomes more important with the increased days of lactation. In farms where the lactation length has increased it is common to bring gilts into farrowing one-half to one body condition score higher. Some farms will also condition sows slightly heavier than previously. It is rare to find skinny sows late in gestation in farms that are weaning above 25 days. Breeding gilts too young and/or small risks many of them not making it to second parity. The body mass change in the first lactation for gilts is only magnified with the increased number of lactation days. Lactation intake must be consistent and steady for gilts and sows to maintain their body mass and be ready to wean. It is critical to know when gilts or sows are off-feed. Later in lactation, they can lose body mass rapidly if not eating as expected. Lastly, the condition of sows in lactation must be monitored daily with great care. Sows that are too thin must be kicked out to gestation.

OTHER MANAGEMENT CONSIDERATIONS

Nutritional changes should be reviewed and supplementation can be considered. This should be in consultation with your nutritionist.

With the increased wean age and lactation days, pigs are weaning up to two to four lbs. heavier on average than before. The pigs are flat out bigger and take up more space. The farrowing crates get tight for space and this should be considered in new builds where wean age is set higher. Split weaning some pigs can alleviate the space concerns and energy draw down on the sow if these concerns are seen.

Some systems have seen more anemic pigs in the oldest pigs in the farrowing house or post weaning. Consideration may be given to going from a one dose to a two dose iron program; 75 mg given 14 days apart or giving 150 mg one time but in a pig that is 5 to 6 days old vs. 1 to 3 days old pigs may be beneficial. A number of systems will search out the anemic pigs and re-inject them with iron prior to weaning. With an older pig in farrowing, some systems have implemented creep feeding to try and supplement the pigs and transition the pigs to feed. These feeds generally have iron and also may work to minimize anemic pigs from showing up.

CONCLUSIONS

The overall benefits of weaning an older, heavier pig are being adopted in many swine production systems. People are adding farrowing crates or changing their herd inventory to increase the days in lactation. The longer lactation increases the length of exposure and subsequent increase in dose of some pathogens. With this consideration, timing and vaccination of the piglet may be adjusted. Also consideration should be given to how you prepare the sow

for passage of maternal protection or minimization of shedding to piglets to try and decrease the dose from sow to piglets. Medications can be used on sows and piglets directed at specific diseases that may minimize their impact in wean to finish production. Sow and gilt conditioning are generally heavier and or bigger when farrowing. If building a system for an older wean age, you may want extra space in the farrowing crate.

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