Rensselaer Swine Services, P.C.™

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PRRS Recovery Considerations

The objective of this document is to provide guidelines for consideration following the introduction of field PRRS virus into a sow farm (breeding, gestation, farrowing).

The goals of these guidelines are to minimize losses following a PRRS outbreak and accelerate the recovery of the herd.

Upon the first evidence of clinical signs (abortions, inappetance in adults, low viability in newborns, diarrhea, rough haired piglets, increased pre-weaning mortality, etc) immediately implement the following:*

1) Segregate the site(s) if multiple sites are in the system:
   a) Implement necessary biosecurity practices to prevent virus "escape" from the affected farm.
   b) Enhance biosecurity at other sites in the system to prevent virus "entry".
   c) If possible, segregate transportation vehicles and service people.
   d) Consider diverting downstream flow to minimize exposure/risk.

   Communication will be very important to this process – keep farm staff and associated production, transport, feed, and maintenance staff informed of changing flows and risks.

   *It may be necessary to adjust the amount of feed offered (feed drops) to minimize feed waste.

As early as possible:

2) Achieve an accurate diagnosis:
   a) Estimate time of infection via ELISA and PCR tests results.
   b) Try to determine entry route.
   c) Sequence the virus for future reference.
   d) Check downstream flow for evidence (clinical or diagnostic) of active PRRS infection. This evidence may influence timeline and point/route of entry determination.

Once PRRS has been confirmed, prompt actions should address:

3) Pig flow
   a) Alert downstream customers and check the downstream flow.
   b) Consider diverting and segregating weaned pig flows from affected sow farms.
4) General husbandry practices – **needle management practice:**
   a) Strict needle management most be practiced as long as active field virus is present. It is necessary to change needles for every injection between every sow. One needle per litter of piglets is ok to practice.
5) General husbandry practices – **farrowing**:
   a) Restrict cross-fostering for a minimum of 2- 4 months. Fostering should occur only in the first 24 to 48 hours after birth. (See attached McRebel article)
   b) Inject piglets with a broad spectrum, long-acting antibiotic at processing, i.e. Excede, Draxxin, long acting oxytetracycline. Additional (given later) antibiotic therapy should also be considered.
   c) Consider increasing farrowing room temperatures (up to 74-75^{0}F) in the first week of life to improve neonatal viability and minimize drafts in the farrowing rooms.
   d) Use a drying agent, i.e. Mistral™, to keep farrowing environment dry.
   e) Euthanize poor-doing, non-responsive piglets early, especially those born at less than 111 days gestation.
   f) When processing or treating piglets, change gloves, needles, and blades between litters.

g) Review pre-farrowing vaccination program, in anticipation of greater risk of neonatal scours. It may be necessary to initiate a new or bolster an existing program.
h) If abortions cause the number of farrowings to drop significantly, and the flow allows, increase weaning age to maintain weaning weights. That said, maintain all in/ all out flows – do not allow fall-behind litters to further expose younger rooms to active PRRS virus.

6) General husbandry practices – **breeding herd:**
   a) Water and/or feed medication during the outbreak and before/following potential inoculations (see below) may be beneficial. Consider products that will reduce fever (such as aspirin or injectable Banamine™), minimize stress, enhance immunity, and fight secondary infections.
   b) Induce farrowing when gestation length is ≥116 days, particularly in gilts. An increase in mummies may prevent normal hormonal initiation of parturition.
   c) Heat-check aggressively, looking for irregular returns.
   d) Segregate all the aborted females to one row and give each female at least 21 days to recover before mating. Skip-mate or cull (record heat-no-service, HNS) all sows that re-cycle >6 weeks post-mating.
   e) After the initial abortion storm, confirm the pregnancy status of all bred females in gestation to better manage output and determine replacement needs. All bred females should be tested by ultra sound to determine a positive pregnancy to reduce non-productive sow days.
   f) Cull sows with severe discharge and those that re-cycle more than twice.
   g) Seriously consider culling older parity aborted sows (>P6). Calculate the long-term impact of such a move.

Planning long-term recovery:

7) To achieve herd immunity stabilization, three methods exist (consult your veterinarian):
   a) Natural progression of the virus through the herd.
   b) Commercial vaccine – attenuated modified live vaccine.
   c) Homologous (resident virus) inoculation via serum (called Live Virus Inoculation or serum therapy)
      (1) Ask for additional information regarding serum inoculation.
      (2) The goal of serum inoculation is to immunize all sows and gilts simultaneously.
      ✓ In addition, replacements (gilts and boars) for the next 5-6 months should be exposed during isolation by using the same method as in the resident population.
      ✓ Gilt exposure can be discontinued after negative pigs have been produced and confirmed on more than one test. As long as exposure of replacements continues, it should occur as early as possible, to maximize the "cool down" period which requires up to four weeks post inoculaiton.
8) Increase gilt replacements – add at least 50% more unbred replacement gilts to the flow for the next three months to account for increased mortality and additional culls due to reproduction problems.
   a) If gilt source is limited, it may be necessary to purchase additional replacements.
   b) It is important when using the attenuated modified live vaccine that the replacement gilts receive two doses given, four weeks apart. The second vaccination needs to be at least two weeks prior to placement into the sow herd.
9) Monitor production to determine PRRS status (monitoring for immune status or stabilization of the population):
   a) Nursing piglets:
      i) PCR testing of poor piglets
         (1) 10-20 per week or 30 per month depending on situation; sera placed into pools of 3-5.
         (2) Cross-fostering can resume when farrowing room PCR results are consistently negative.
   b) Downstream flow:
      i) If pig flow is all in/ all out, consider PRRS PCR (pools of 3-5) and ELISA on 30 pigs per group at ~10 weeks of age.

Each field PRRS virus outbreak is different. You and your staff will often feel very frustrated primarily because this virus "lingers" in a population and treatments do little to stop the viral infection.

In our experience, vaccinated herds usually have a shorter period of problems than when naïve herds break with field virus.