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PRRS virus-free production – The Pipestone System approach

Joel Nerem, DVM

The Pipestone System has decided to make an intentional transition to PRRS virus-free production. This goal was declared at the 2011 Pipestone System Shareholder/Producer meeting. PRRS virus-free production is defined by Pipestone Vet Clinic as: "operation of breeding herds that are free of PRRS virus, weaning PRRS negative pigs, and entering PRRS naïve replacement breeding stock that remain PRRS negative following introduction." Complete transition of the managed sow system to PRRS virus-free production will take place over an undetermined period of several years. This transition to a PRRS virus-free system, and maintenance of that negative status, will require tremendous focus and implementation of known science in preventing PRRS transmission.

Why PRRS Free?

- Cost of PRRS virus – competitive advantage of PRRS-free production
  - Reduced weaned pig production costs
  - Reduced cost of production for wean to market operations
- Impact of PRRS on animal well-being - disease and animal welfare impact
- Improved farm staff working conditions
- Our responsibility to shareholders/producers and their businesses
  - Delivering PRRS negative wean pigs to customers is always the best option, regardless of the destination
- Because it can be accomplished

How to achieve PRRS free status

- Establish/Stock PRRS negative (naïve) breeding herds
- Eliminate resident PRRS virus from infected breeding herds
  - Virus/vaccine exposure to breeding herd – "homogenize"
  - Load and close GDU
    - One time exposure of wild virus to gilt pool
    - Closure of farm to naïve gilt entries until PRRS virus has been eliminated
- Every farm is only 250 days away from PRRS-free production

How to maintain a PRRS free status: farm by farm

- To date, this is the biggest challenge regarding PRRS – how do we prevent the next PRRS virus introduction to the breeding herd?
- Biosecurity application
  - Application of proven science
  - Standardized protocols
  - System-wide implementation
- Biosecurity implementation
  - Identification of PRRS transmission risks
  - Application of transmission interventions
  - Establish appropriate protocols
  - Communication and training of all stakeholders on protocol execution
  - Random audits of biosecurity compliance
  - Testing and review with on-farm staff of correct biosecurity processes
- Transmission categories – distinct biosecurity focus
  - Standard industry protocols – mechanical transmission
    - Preventing disease introduction through incoming items/materials/people
    - Focus all inputs through "critical access points"
    - Standard practices for anyone/anything coming across the "clean/dirty line"
  - Air filtration - Aerosol PRRS transmission
    - Filter installation – "100%" filtration
    - Double door access to the farm
    - Backdrafting interventions

Joel Nerem

- Biosecurity beyond the sow farm
  - Controlling farm access - downtime
  - Genetic Inputs
    - Boar Stud/Semen biosecurity
    - Gilt source biosecurity
  - Outside contractors/vendors – communication and accountability
  - Supply sources
  - Pig transport
    - Truck washes
    - Trailer inspections
  - Feed delivery
  - Manure pumping/application – communication and accountability
  - Regional control/elimination projects
- Testing/monitoring
  - Verify health status of animals
    - Replacement gilts – verify PRRS negative genetic inputs
    - Semen – verify PRRS negative genetic inputs
    - Weaned pig testing – verify PRRS negative farm output, inform customers
  - Verify implementation of protocols
    - Visitors/personnel – drive individual accountability, epidemiological investigations
    - Outside contractors/Vendors – drive individual accountability, epidemiological investigations