

## **PRRS OUTBREAK INVESTIGATION PROTOCOL**

**Objective:** The purpose of this protocol is to assist the veterinarian and producer in building a comprehensive case history with the ultimate goal of discovering the source of a new PRRS infection.

**Name, Address, and Description of Outbreak Farm:**

**Owner and Farm Manager Contact Information:**

**Veterinarian(s):**

**Date/Description of Outbreak:**

**Diagnostic Details-PRRS ID and Sequencing:**

*Review routine disease monitoring records. Record test dates and results.  
Isolate, identify, and “fingerprint” the pathogen using genetic sequencing from diagnostic lab submissions.*

*Identify the geographic point of entry of the first clinical case observed and its proximity to doors, fans, feed lines, water sources, etc. PCR from serum or oral fluid sampling is helpful.*

*Construct a timeline of events to estimate the date of entry/exposure.  
Add historic meteorological data to the timeline.*

**Location and PRRS status of Nearest Pigs:**

*Conduct a “drive around” and “fly-over” inspection of a six- mile area surrounding the outbreak. Record all sources of pigs found.*

*Identify and sequence PRRS isolates from positive farms in the region.*

*Describe recent activity on nearby swine farms such as new pig introductions, recent mortality, or a new PRRS virus outbreak.*

**Investigate the source of pigs and semen to the outbreak farm. Identify dates of delivery, and route of transportation.**

*Examine farm logs of all transport vehicles to the farm.*

*What is the protocol for the driver and staff during delivery?*

*Evaluate the isolation/quarantine facility on the farm.*

*Are pigs tested prior to introduction to the herd? Review those records.*

*Review health assurance practices of the supplier specific to PRRS virus.*

*What quality control monitoring program is in place?*

*How and when would the farm be notified by the supplier if a problem occurs at the source herd?*

*Confirm that PRRS status of the source herd (replacement animals and semen) remains negative.*

*Evaluate the process for cleaning, disinfecting and drying trailers/ trucks. Review truck logs and all transport protocols.*

*Consider culture/swabs of transport vehicles and truck wash to determine possible involvement. Early collection is critical.*

*Are trucks/trailers dedicated to moving animals from this farm only?*

*Semen:*

*Review semen testing procedures with boar stud. Request recent tests and results. Were there any unexpected stops by the semen delivery person prior to presumed date of infection? What other sow farms received semen during that shipment and did any of them break?*

**Confirm Pig Inventories:**

*Review with production manager the pig inventory at the farm. Are there any pigs missing? Has there been any breach? Are the doors locked at night?*

*Examine transfer sheets, transport records and dead counts to reconcile inventory. Significant variation in inventory may suggest stolen pigs and unknown visitors*

**Pig Destinations with Dates of Movement Off Farm:**

*Identify truckers and individuals assisting in pig movement. Describe loading and unloading procedures.*

**Nursery pigs:**

**Market pigs:**

**Breeding animals:**

**Cull Sows:**

**Manure pumping:**

*Identify the last date of manure pumping, the party responsible, and the activities of the company prior to work done on the outbreak farm. If manure pumping was not accomplished on consecutive days, where else did the company work?*

*What is the PRRS status of those farms?*

**Identify entries of all individuals in the month prior to the presumed date of infection:**

*Examine farm log of visitors. Who, when, and where had they been before?*

*Interview farm staff and any visitors to the farm to identify biosecurity risks.*

*Is the staff aware of any flaws or mistakes in their biosecurity protocol?*

*Does the farm management practice regular biosecurity training?*

*Review downtime practices.*

*Is shower-in / shower-out practiced on the farm?*

*Are barn-specific coveralls used on the farm?*

*Describe the feed delivery system. Have the delivery trucks been to other farms?*

*Has there been any repair work done on the farm in the last month?*

*Are there concerns or evidence of sabotage?*

**Vaccination History:**

*Identify the vaccines used on the farm, including product name, company and serial numbers. When was the last time MLV PRRS vaccine was used on the farm? Are any herds within a six mile radius of the outbreak using a modified live vaccine? Is any killed vaccine being used that could interfere with diagnostic results?*

**Fomites:**

*Identify products or equipment that entered the unit in the month prior to the outbreak. Consider office supplies, semen, medications, repair parts, lunch pails, and cell phones.*

*What was source and process of entry?*

*Did anyone bring raw pork on the farm to cook for lunch or dinner?*

**Facilities:**

*Is rodent and insect control practiced routinely?*

*Is an air filtration system used? If so, is it in good repair?*

*Is recycled lagoon water used on the farm?*

*Where are carcasses disposed of? Do rendering trucks enter the farm?*

For detailed information on swine biosecurity, go to <http://www.padrap.org>, the AASV Production Animal Disease Risk Assessment Program.

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