

How To Develop a Biosecurity Plan

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What is Biosecurity and Why Should I Worry About It?

Many diseases that negatively affect a herd are carried into the farm through fomites (items that can carry a disease organism), introduction of infected pigs, contaminated supplies, trucking and even via aerosol spread (through the air). For example on the financial impact of a disease, the introduction of the Porcine Respiratory and Reproductive virus (PRRSv) costs producers upwards of \$560 million dollars due to disease related production losses. However, PRRSv is not the only disease that can cause significant production losses. Disease prevention can be achieved by having an effective biosecurity plan outlined for all aspects of farm operations.

Biosecurity can be defined as precautions taken to minimize the risk of introduction of an infectious disease into an animal population. It can also pertain to any of the policies and measures taken for protecting the nation's food supply and agricultural resources. Biosecurity is important for any size operation because disease organisms negatively affect both small and large producers. The ultimate goal of an effective biosecurity plan is the prevention of disease organisms from gaining entry to the farm, harming herd health and the negative impact to the producers' bottom line.

There are multiple areas of focus for the development of a biosecurity plan and it must contain a comprehensive evaluation of the entire farm system to include all inputs and outputs. The purpose of this fact sheet is to provide producers a basic guideline of how to create an effective biosecurity plan.



Where do I Start?

1. *Set aside time to critically look at all areas of your operation* – include key suppliers/partners like feed company, transportation, waste management, production flow, repair and maintenance etc.
2. *Start the process with a basic, but detailed, description of the scope of your operation:*
 - For a basic Risk Assessment format: can see either HACCP program for risk assessment or the AASV PRRS Risk Assessment program
www.padrap.org
www.fsis.usda.gov

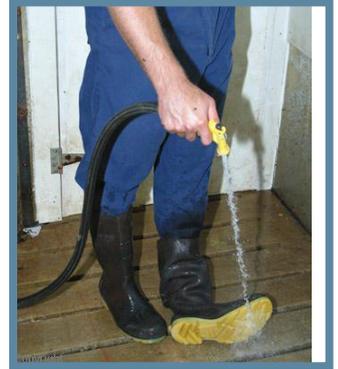
Example questions:

- Are you located in an open or wooded region? hills or flatland?
- Type of operation: farrow to wean; breed stock; finisher; combination?
- Do you produce your own feed?
- What is your water supply? (well, surface, rural?)
- Do you perform AI or natural service?; with bought semen or owned?
 - testing procedures on boars/semen?
 - delivery protocols for bought semen?
 - how do you bring supplies into you operation?
 - disinfect prior to entry?
 - carrier direct to the farm?
- Do you haul your own pigs; dead stock; feed?
 - do you have in-house sanitation facilities?
 - if contract, what are your sanitation expectations prior to entry?
- What other support services or non-farm vendors come onto the farm?

- What other hogs are within a mile, 5 mile, 10 mile radius?
 - what type of operation are they
 - What disease challenges are you trying to prevent
 - how often have they already occurred on your farm?
 - how much would an introduction costs to your operation?
 - For breedstock – how do you bring in replacement gilts?
 - is there isolation facility?
 - location and care of facility with existing work force?
 - time in isolation, vaccination and testing protocol?
3. *Create a small working group of production staff, key suppliers/partners like feed company, transportation, waste management, production flow, repair and maintenance etc. to help provide input on risk areas for your biosecurity plan.*
4. *Determine what the potential herd health risks are for you system:*
- For example:
- Dead haul – outside vendor vs. internal burying
 - Isolation space – no space allocated vs. segregated isolation
 - High swine density in <5 miles radius
 - Farm is currently negative but has broke once 2 years ago (PRRSv)

5. *Create potential actions/prevention measures*

- Enclose load out chutes
- Have all farm employees shower in/out
- Create a supply disinfection protocol
- Lock gates/entry to the farm



6. *Implementation Phase*

- Train employees on new protocols
- Work with vendors/suppliers on new requirements
- Set timeline for initiation
- Perform follow-up meetings for compliance and suggestions on improvements
- Continue to assess and adjust plan as needs and risks change over time

References

- Champion's Guide to Youth Swine Exhibition: Biosecurity and Your Pig Project
- AASV PRRS Risk Assessment: www.padrap.org
- Johnson et al: Economic Impact of PRRS on the Cost of Pork Production; JAVMA, Vol 227, 3, pp 378-473, Aug. 2005
- Guidelines for HACCP plan Formulation; www.fsis.usda.gov