

Inside: **Biosecurity tips** to help protect your herd's health.



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Russ Nugent,  
Fayetteville, Arkansas

## On-Farm Biosecurity Is Moving Target

*By Russ Nugent, chair of the Pork Checkoff Swine Health Committee*

Pork producers are an adaptive bunch, always on the lookout for new ideas and advancements, which is certainly the case when it comes on-farm biosecurity. Whether it's establishing visitor protocols or creating a line of separation, biosecurity continues to evolve.

Your veterinarian is key to helping you stay up to date with the latest biosecurity practices for your farm. Find someone you feel comfortable and confident with and allow them access to your facilities, records and business objectives. Not only will your veterinarian be essential in navigating the new feed-grade antibiotic process, your vet will help guide your herd's health and productivity.

On the farm, be sure biosecurity procedures are not only in place, but are well executed. Don't overlook the basics, such as well-maintained footbaths used correctly and clear clean/dirty farm entry lines. Yes, pathogens sometimes arrive in unexplained ways or are carried into a barn via wind. But often, people inadvertently drag pathogens to a site in a way that could have been prevented with simple, yet effective biosecurity procedures.

Pork producers have always done an excellent job of meeting on-farm challenges with their customers in mind. It's important that we continue to take the necessary steps to keep our animals healthy and to provide safe, healthy, high-quality and nutritious pork products to our customers.



This special-topic newsletter is sent periodically to you by the Pork Checkoff.

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# Biosecurity: Essential Piece of Today's Herd-Health Puzzle



**K**eeping pigs healthy and growing is priority No. 1 on hog farms, with biosecurity arguably playing the most critical part in good swine health management. Pig farmers have made tremendous progress in identifying effective biosecurity practices and in better understanding disease pathogens, but biosecurity remains an area of continuous learning.

“Swine diseases that we know about challenge biosecurity protocols every day,” said Lisa Becton, DVM, director of swine health information and research for the Pork Checkoff. “But it’s the diseases that we don’t yet know about or face that raise the stakes.”

Emerging diseases, such as porcine epidemic diarrhea virus (PEDV) and Seneca Valley virus, have provided valuable lessons. Not only have they tested the limits of tried-and-true biosecurity protocols, but they also have challenged the need to find new or additional ones.

“With recent federal rule changes for on-farm antibiotic use, biosecurity and other animal-health protocols are growing in importance,” Becton said. “Today, the biosecurity discussion needs to expand to include biocontainment and bioexclusion.”

She added, “Biocontainment would be especially important in relation to a market-limiting disease, such as foot-and-mouth disease. Put another way, biocontainment is

**Bioexclusion** – Preventing the introduction of disease pathogens into a herd, site or country from an outside source.

**Biocontainment** – Preventing a pathogen from escaping one herd or site and spreading to expose another herd or site. It is about limiting the number of farms infected by a disease.

about protecting the health of the broader industry.”

Effective biocontainment requires a few specific steps, such as contacting your veterinarian immediately if you see something new or different within your herd.

“An early diagnosis offers the best chance to minimize disease spread,” Becton noted. “It’s also important to determine the epidemiology of the disease and how it got to your farm.”

## Draw a Strict Line of Separation

“If you don’t have a ‘line of separation’ on your farm and maintain it, you don’t have biosecurity,” Becton said. “In fact, you may need to set up several lines within a site, because biosecurity is not just about exposure from the outside, but also the lateral spread of disease.”

At its most basic, a line of separation designates the outside (contaminated) area and the inside (clean) area. Think in terms of drawing a line in the sand – a point at which certain parties must not cross.

For example, identify a line where the animal transporter is not to cross and where farm or market personnel are to remain. If a barn worker does cross it, they cannot return to the clean side. The separation line must be clearly marked, with individuals made aware of where it exists in every situation.

Lines of separation for transporters might be at the cab of a truck, the back of a trailer or a loading chute. Within a production site, the shower or bench entry would be the ‘dirty’ side, while the shower exit would represent the clean line. Another line could be a designated driveway that feed trucks must use to control traffic flow and potential exposure.

The take-home message? Approach every contact with a site or market as if it could contaminate a truck, trailer or herd. The one time you don’t follow biosecurity rules could be the time when your herd will get sick.

# Build a Biosecurity Culture

The many layers of biosecurity can be overwhelming. While education and training are essential, protocols must be executed properly and consistently. To build a biosecurity culture on the farm, everyone on your farm must understand why certain procedures matter and the potential fallout if they aren't followed. Here are some actions to consider:

## Follow Biosecurity in Your Barns –

- Set up a bench-entry and shower system to clearly designate clean/dirty sides and to control the movement of people.
  - Provide instructions on proper showering, apparel removal and storage. Offer personal hygiene products and thoroughly clean the areas at least weekly.
  - Assign separate coveralls and boots to each building or site. Color-coding the apparel adds quick recognition if someone is out of place.
  - Promote frequent, thorough hand-washing throughout the day, which means having hot water and soap accessible within barns. If using gloves, provide for proper disposal.
  - Keep tools for facility repairs and animal treatment within each barn to minimize the need to carry tools into facilities.
  - Establish protocols for bringing products, such as boar semen, lunches and service providers' tools, onto the site. A double-bag or box system might suffice. Some units use UV-light scanners to "sterilize" packages.
  - Periodically drain water lines and run bleach or a disinfectant through them.
  - Replenish rodent-control baits.
- Between pig groups, remove organic matter from barns and use soap/detergent to clean rooms, as well as equipment that remains in place.
  - Once dry, inspect the barns, checking cracks and crevices. If feed, hair or manure is found, re-cleaning is required. Use sidewalk chalk to mark spots to ensure that they aren't missed.
  - Once a building is completely clean, disinfect and allow rooms to dry. For information on disinfectant options, go online to [cfsph.iastate.edu/Disinfection](https://cfsph.iastate.edu/Disinfection).
  - Maintain downtime as long as possible before reloading a barn.
  - Periodically clean offices, load-out and storage areas.
  - Clean and disinfect equipment that is removed from barns but will be brought back in again. Discard cracked plastic panels, sort boards or paddles because they can harbor pathogens.
  - Inspect and clean chutes and load-outs. As needed, repaint or reline chutes to ensure the wood is clean.
  - Work with your veterinarian and breeding stock suppliers when bringing in replacement animals. Establish the health status of the herd supplying the animals. Isolate replacements away from the production site. Test and ensure the animals are healthy before moving them into the herd. Ensure that boar semen tests negative before accepting it.

## Take Control of Non-Farm Personnel –

- Whether it involves pigs, people or vehicles, control traffic to minimize the risk of introducing pathogens into your herd.
- Instruct visitors about your biosecurity policies before they arrive at the site.



“The one universal truth is that disease control is a moving target. Pathogens will continue to evolve and new ones will surface, requiring biosecurity practices to follow suit.”

– Lisa Becton, DVM, Pork Checkoff

- For anyone going from one farm to another, downtime requirements between farm visits will vary, but at minimum require an overnight downtime period.
- Ask that vehicles be washed and the interiors cleaned before arriving at your farm and suggest that visitors do the same once they leave.
- Designate a parking space on a hard or gravel surface located away from the animals.
- Designate a visitor entrance to barns where everyone must sign in.
- Have visitors follow your farm’s showering and barn clothing protocols.

### Audit Your Biosecurity Program –

- Conduct a biosecurity audit to help identify whether procedures are being followed and to shed light on what works, what doesn’t and what needs to change.
- Meet with your veterinarian at least annually to review the health status of your herd, as well as within the surrounding area, and then compare the biosecurity measures in place.
- Ask your staff for new ideas and suggestions for actions that need improvement.

“Certainly every hog site should have biosecurity protocols in place,” said Russ Nugent, chair of Pork Checkoff’s Swine Health Committee. “But it’s even more important that they be executed and monitored.”

For more biosecurity tips, go to [pork.org/biosecurity](http://pork.org/biosecurity).



## Monitor Transport Practices

Organisms that cause disease in pigs, such as bacteria, viruses and parasites, can survive in a range of materials, so they can easily hitch a ride and spread disease. Organic matter (shavings, manure), feed, water, mud and snow can all transfer diseases from site to site.

“While we don’t have all the answers, research has already told us much about the risk of cross-contamination through transport practices,” said the Pork Checkoff’s Lisa Becton. “Contaminated boots, clothing, tires, undercarriages, trailers, shovels, sorting panels and people’s clothes are all potential risks.”

She added, “Applying a line of separation and other farm biosecurity steps that address cleanliness will go a long way in offering protection during transport activities. Other activities, such as walking into a contaminated barn or packing plant, can increase disease risk because boots and trailers can become contaminated.”

Other steps to take include designating a trailer to transport specific pig groups, such as one for weaned pigs and another for market hogs.

“If finished hogs are transported to market through a service, make sure the collection moves from the highest to lowest health-status sites,” Becton said. “Invest in a truck-wash facility or gain access to one.”

To clean trailers, the priorities are to scrape out all organic matter, wash, disinfect, dry (heat if possible) and allow downtime between pig shipments. Overall, design pig flow to reduce cross contamination.

For more ideas, check out the Transport Quality Assurance® program online at: [pork.org/tqacertification](http://pork.org/tqacertification).



Several lines of separation should be implemented, such as (top to bottom) at the cab of a truck, in the shower-in/shower-out area and between the back of the trailer and the loading chute.

### Create a Clean Crossing

If someone must cross over a line of separation within a farm, market or livestock transport equipment, follow these steps:

- Cover-up: Wear protective gear such as boots, coveralls and gloves.
- Contain: Dispose of or store the contaminated supplies in a trash bag or plastic, covered bin. Have a decontamination plan for supplies and a disposal plan for any garbage.
- Clean up: Change clothes and shoes and shower before leaving the facility or, at the very least, wash/disinfect your hands.