

## Tips for a Safe, Healthy and Productive Winter

**W**ith the cool, crisp days of autumn upon us and winter's colder temperatures not far behind, now's the perfect time to take steps to keep pigs healthy and your operation running smoothly.

"This transition period offers an opportunity to prepare your operation, staff and hogs to meet the changing demands successfully," said Lisa Becton, DVM, director of swine health information and research for Pork Checkoff.

"Walk through your operation and see what needs fine tuning, whether that involves building maintenance, manure management strategies, staff scheduling or vaccination protocols," Becton said. "It's better to address those issues now than during a severe temperature drop or in the middle of a snow storm."

"Sit down with workers to discuss how winter may change some on-farm procedures and review your action plans," Becton said. "It's also a good idea to run through some of the symptoms that could surface among pigs to assist with daily animal observations and a quick response."

She added, "Naturally, you can't anticipate every single thing that might occur, but some up-front planning can minimize surprises." 🍀



Start with a basic walk-through in and around your facilities. Here's a checklist to kick start the process:

- **Inspect curtains for rips and tears.** Make sure that curtains operate properly as cool evening temperatures become the norm.
- **Check the ventilation system.** Fans, louvers and cowlings should be cleaned to remove dust buildup. Also, make sure thermostat settings are accurate.
- **Brush air inlets.** such as gable and soffit vents, to prevent blockage.
- **Check pit fans** to ensure that they are operating properly.
- **Clean and inspect feeding equipment.** Also, establish a feed storage and delivery strategy to prevent out-of-feed events during inclement weather.
- **Inspect foundations and pit walls** for cracks and seepage. Make any necessary repairs.
- **Evaluate your winter rodent-control program.**
- **Check bird-proofing** of hog buildings and feed storage areas.
- **Conduct heater maintenance** and check/order propane supply.
- **Repair leaky waterers or pipes** and winterize the system to ensure pipes won't freeze.
- **Check the overall soundness and security of buildings.** Seal cracks to prevent leaks, check door jams and test security alarms.
- **If you have a back-up generator, check to see if it's in working order** and that it has fuel. Make sure that workers know how to operate it.

# Heighten Biosecurity to Minimize Cold-Weather Risks

**S**harpening your farm's biosecurity measures is critical at this time of year. Cooler, changeable weather may bring health challenges to your herd from porcine epidemic diarrhea virus (PEDV), porcine reproductive and respiratory syndrome (PRRS), swine influenza virus (SIV) or pneumonia.

"These diseases are more widespread in cooler, wetter conditions, so it's important to strictly enforce biosecurity

measures," said Lisa Becton, DVM, director of swine health information and research for Pork Checkoff. "Review your herd health program with your veterinarian to ensure that herd vaccinations and medication strategies are up to date and effective for conditions on your farm."

To keep both animals and people healthy and systems running smoothly, Becton offers these biosecurity priorities:



**Limit farm access to workers and essential personnel.** This may include state animal health authorities, PQA Plus® advisors, Extension specialists, state and environmental management staff, feed suppliers, maintenance personnel, veterinarians, nutritionists and utility providers. Have a biosecurity program in place for all farm visitors to follow.

**Establish and make a visible line of separation** to designate a separation from outside the facility to the inside area for people and pigs. This distinguishes where people coming into the facility need to change into farm-specific clothing and footwear. Tools and other products should be disinfected (if possible) before entering the facility. Several lines of separation may be needed for your farm.



**Clean the inside of all hog facilities.** Remove all visible organic material and then wash ceilings, walls, flooring and equipment with soap and hot water. Apply disinfectant and allow it to dry before restocking pigs.



**Also establish a line of separation for transport.** This designates a line that the transporter cannot cross into the farm or equipment, such as the loading chute. It reminds everyone that contact with any site or market could contaminate your truck, trailer or chute. Load-out crews should not re-enter buildings without washing and changing coveralls and boots.



**Clean trucks and trailers** by removing all manure and bedding. Soak with soap and/or degreaser, pressure-wash with hot water, disinfect with an appropriate disinfectant and dry thoroughly. Drying can be challenging during cold weather. Check the Transport Quality Assurance® (TQA®) information at [pork.org/tqa](http://pork.org/tqa) for more ideas and tips.

**Keep the cab clean and dry.** The transporter should wear duplicate sets of plastic boots and shed the outside pair before entering the cab. Also, after transporting pigs, isolate and wash coveralls at a non-production site.



**Stay informed about the swine health status and developments in surrounding areas.** Knowing issues other producers are dealing with can help in your decision-making process.

For more biosecurity recommendations, go to [pork.org](http://pork.org) to view and download the *Biosecurity Guide for Pork Producers*.

# Change Strategies for Cold-Weather Transport



**Follow manure-handling precautions**, which research has shown is needed to minimize PEDV and PRRS risks. Whether you work with an on-farm or commercial manure hauler, communication is critical. Know where the crew has been prior to entering a new site.

Establish a clearly defined entrance and exit strategy to minimize cross-contamination with other farm traffic. Maintain a distinct line of separation between haulers/their equipment and the animals/workers on the farm site. Don't let the manure crew enter barns, office areas or walk over areas used by farm personnel, and never allow them to have direct contact with pigs. More information is available at [pork.org/pedv](http://pork.org/pedv).



**Keep workers informed.** Spell out biosecurity measures and movement restrictions to all staff, including the farm's non-production staff. Make sure everybody understands the seriousness of herd health threats.

**W**hile snow- and ice-covered roads can make it tricky to get pigs to market, the microclimate inside the truck or trailer presents challenges, as well. Pork Checkoff-funded research has shed some light on ways to minimize stress, reduce transport losses and improve animal well-being.

The original, three-part study looked at many factors associated with transporting pigs in a range of weather conditions. But zeroing in on cold weather conditions, researchers at Texas Tech and Iowa State universities found that providing more bedding during winter did not improve in-transit losses of dead or non-ambulatory pigs.

The study showed that bedding moisture content increased from 5 percent to 26 percent after the first load of pigs. By the third load, bedding moisture approached 51 percent.

Combined with cold air, the accumulated moisture in the excess bedding increased frostbite potential and caused pigs to shiver more, which increased the number of fatigued (non-ambulatory) pigs. Also, wet bedding can freeze, making it more likely for pigs to slip on the ice, thereby creating more injured or downed pigs.

"The study clearly showed there is no advantage to using more bedding than is necessary at any given temperature," said John McGlone, Texas Tech University and principal researcher for the study. "In cold weather, there is

**"In cold weather, there is no added effect to using more than six bales of bedding per trailer. Meanwhile in warm or mild weather, three bales per trailer are sufficient."**

*John McGlone, DVM,  
Texas Tech University*

no added effect to using more than six bales of bedding per trailer. Meanwhile in warm or mild weather, three bales per trailer are sufficient."

Researchers also found that stocking density had no effect on pig losses at temperatures above 41° F, and that levels outlined in the TQA program for market hog transport are appropriate.

"Producers should evaluate their current bedding practices and work to implement the study's protocols," said Sherrie Webb, director of animal welfare for Pork Checkoff. "Not only will it enhance animal well-being during transport, but it will also reduce costs."

Webb recommends that transporters limit times when the truck/trailer sits idle when pigs are on board, as well as ensuring side panels are in place to prevent pigs from being chilled.

For more advice on transporting pigs, check out the TQA recommendations at [pork.org](http://pork.org).

To dig deeper into the study, go to <http://research.pork.org/11-181>.





## Be Ready: Do a Test Run for the Upcoming Antibiotic Changes

**T**his year, there's a new item to put on your fall preparation list – a review of your swine antibiotics use and a test run of acquiring a veterinary feed directive (VFD).

On Jan. 1, the U.S. Food and Drug Administration (FDA) will implement new regulations for antibiotic use on the farm. Specifically, medically important (to human health) antibiotics will no longer be available for growth promotion uses in food-animal production. They will be used only to treat, control or prevent specific diseases under veterinary guidance.

Both feed-grade and water-based treatments will be affected, and over-the-counter sales of medically important antibiotics will end.

"To access feed-grade antibiotics,

producers will need to obtain a VFD and a prescription for water medications for a specific group of pigs," said the Pork Checkoff's Dave Pyburn.

"To obtain a VFD, a valid veterinary-client-patient relationship will be needed," Pyburn said. "A pork producer must have a working relationship with a veterinarian, and the veterinarian must be familiar with the herd's production and health profile."

Pyburn advises producers to work with their veterinarian, feed mills and distributors.

"It's a good idea to do a VFD test run this fall to ensure that everyone is prepared," he said.

More details on the antibiotics use changes are available from the Pork Checkoff at [pork.org/antibiotics](http://pork.org/antibiotics).

## Implement an Influenza Program for Pigs and People

**I**f you haven't done so already, make sure that you, your family and all farm personnel get a flu vaccination to help protect human and pig health. The U.S. Department of Health and Human Services suggests that anyone over six months of age be immunized for influenza each year.

"Producers and swine farm workers can reduce the risk of getting sick and bringing influenza to the farm by getting a seasonal vaccine," said the Pork Checkoff's David Pyburn.

The flu season can start as early as October and last through May. Sick-leave policies should encourage workers to stay away from the farm if farm personnel are experiencing

influenza-like symptoms, such as acute respiratory infection.

"This can create scheduling challenges, but that's minor compared to your herd being infected," said Pyburn, noting that people may be contagious up to five to seven days after becoming sick."

Proper building ventilation and hygiene can help reduce influenza virus transmission at the farm level.

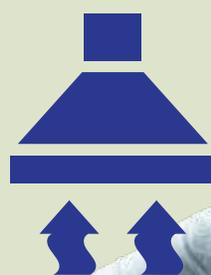
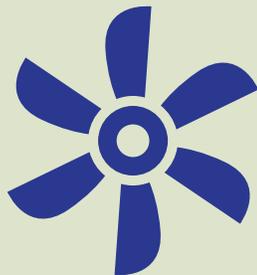
"Basics such as washing your hands often and using farm-specific clothing and footwear can go a long way to minimize the influenza risk to your animals and workers," Pyburn said.

"Also, vaccinate pigs against swine influenza virus and monitor

herd health daily," he said. "Contact your herd veterinarian immediately if influenza is suspected. Rapid detection can help manage sick pigs more effectively and prevent virus spread."

Other actions to prevent cross-exposure of influenza viruses between species include bird-proofing buildings and protecting feed from birds. The biosecurity measures outlined within these pages will help address influenza as well as other diseases.

For more influenza related information for your farm, go to [pork.org/flu](http://pork.org/flu) or [cdc.gov/flu](http://cdc.gov/flu).



# Safety First When Handling Manure

**F**or many producers, now is the time to empty manure storage and apply nutrients to the land. However, this is not a task to rush through, with safety always needed to be the focus.

“The greatest hazard exists just as soon as vigorous agitation of manure begins and may continue even when ventilation is in full force,” said Allan Stokes, director of environmental programs for the Pork Checkoff. “Anyone working around manure should be knowledgeable about the naturally occurring gases in stored manure and the associated risks. These include hydrogen sulfide, methane, carbon monoxide and ammonia.”

If possible, remove hogs from the room before pit agitation begins. If they can't be removed, begin agitating manure slowly and gradually increase pump speed while observing animals from outside the building. If signs of animal stress are noted, immediately discontinue agitating and pumping manure.

“If it's necessary to enter an area where hazardous levels of a toxic gas are suspected or a confined space such as a manure pit, protect yourself with a supplied-air respirator, either an air-line respirator or self-contained breathing apparatus,” Stokes said. “Make sure it's properly fitted and you've been trained in its use. Another person should be on site with emergency contact numbers.”

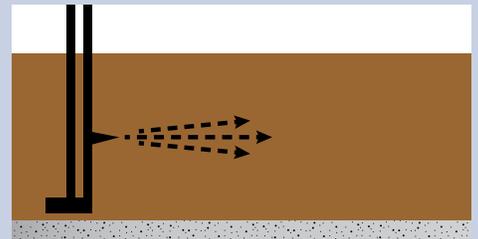
## Beware of Flash Fires and Explosion Risks

Although rare, explosions and flash-over fires from methane accumulation can occur. The risk is even greater if a layer of foam exists beneath the slats and is disturbed. This can occur when pumping manure pits, power washing or doing maintenance. Without adequate barn ventilation, methane concentrations can reach the lower explosive level of 5 percent or 50,000 parts per million.

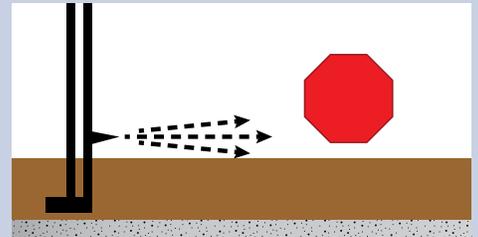
“An ignition source such as a pilot light, electric spark from a motor or cigarette can then trigger an explosion,” Stokes said. “Again, sufficient ventilation or air exchange in the barn is essential to keep the methane concentration below its explosive threshold.”

When pumping nearly full pits, pump without agitation until manure is 2 feet below the bottom of the floor slats. This will allow pit fans to perform properly during agitation and provide more dilution space for methane and other gases.

Additional precautions are offered on this page. Go to [pork.org](http://pork.org) for manure removal and other safety information, including the *Safe Manure Removal Practices* fact sheet from the Pork Checkoff.



Agitate the manure, keeping the jet of pressurized manure below the liquid surface. Don't let the jet of manure strike walls or columns in the pit.



Stop agitation when the manure level does not allow agitation below the liquid surface.



Fully open all ventilation curtains or ventilation pivot-doors, but leave walk-in doors locked to prevent human entry.



Review your emergency action plan with all workers and have emergency contact numbers available at the site.

Ensure that all people are out of the building and clearly tag all doors, noting that the building is unsafe for entry during agitation and pumping. Never enter a building or manure storage structure when liquid manure is being agitated or pumped. The tags are available from the Pork Store at [pork.org](http://pork.org) in both English and Spanish.



30:00  
Minutes

Continue maximum ventilation for 30 minutes after pumping has ended before anybody re-enters the building.



Prior to agitation or pumping, turn off electrical power to any non-ventilation equipment, and extinguish any pilot lights or other ignition sources in the building.

Inside: The Pork Checkoff offers tips to help put **safety first** this fall and winter.



📄 [pork.org](http://pork.org) or 📞 the **Pork Checkoff Service Center @ (800) 456-7675**

National Pork Board • P.O. Box 9114 • Des Moines, IA 50306



*"Biosecurity protocols not only need to be in place, but need to be top of mind for folks on the farm."*

Steve Rommereim,  
South Dakota

## Fall Preparation Starts with the Basics – Ventilation and Biosecurity

Checking the boxes on ventilation and biosecurity is important for pork producers as cold weather approaches, says Steve Rommereim, owner and manager of Highland Swine, a finishing farm, Alcester, South Dakota, and National Pork Board treasurer.

"My No. 1 priority this time of the year is to thoroughly check building ventilation systems because pigs thrive in fresh, clean air," Rommereim said. "Fans need to be clean and operating well. I check air inlets for obstructions and ease of operation."

As temperatures drop, Rommereim also turns up the dial on the farm's biosecurity.

"Biosecurity protocols not only need to be in place, but need to be top of mind for folks on the farm," Rommereim said. "Risk from diseases, such as porcine epidemic diarrhea virus (PEDV), increases in cold weather, so this is a good investment of my time."

Basics include controlling traffic in and around hogs, having clean, site-specific boots and clothes available and limiting entry points for truckers hauling hogs.

"We make sure everything is washed and disinfected, not just within the rooms, but also anything coming into barns," Rommereim said. "Producers who farrow need to be even more stringent to keep PEDV and other diseases from entering their herds."

Other tasks on his checklist include checking that all furnaces are in good working order, tightening up buildings and refreshing rodent-control programs.

"Don't forget about the flu vaccine," Rommereim added, "I require anyone working around the pigs to get one each fall."

The Pork Checkoff offers more items to include in your fall-preparation checklist, including manure pumping and application safety tips, transportation guidance and biosecurity at [pork.org](http://pork.org) under "resources."



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

Editor: Jan Jorgensen [JJorgensen@pork.org](mailto:JJorgensen@pork.org) • Contributing Editor: Marlys Miller • Art Director: Chris Oldt