



Swine Health Guide

Porcine Epidemic Diarrhea Virus (PEDV) – What Is It?

Background:

- PEDV is caused by a virus (Coronavirus) that is related to transmissible gastroenteritis (TGE) virus.
- PEDV only infects pigs (NOT humans or other livestock).
- This is a new virus to the U.S. and was first confirmed in the country on May 17, 2013.

Clinical signs:

- In previously naïve herds, PEDV is similar to TGE and includes:
 - » Severe diarrhea in pigs of all ages
 - » Vomiting
 - » High mortality - almost 100% in preweaned pigs

Diagnosis: Requires sample submissions to a diagnostic laboratory (contact your veterinarian).

Transmission: Oral contact with contaminated feces. The most common sources of infected feces are pigs, trucks, boots, clothing or other fomites.

Incubation period: (*time from exposure to clinical signs*) Only 12-24 hours.

Shedding: (*amount of time animals can infect others*) Up to 3 to 4 weeks.

Immunity/Protection:

- No cross-protection with between TGE and PEDV even though both are Coronaviruses.
- Maternal protection through colostrum from previously exposed sows can be quite effective.
- No protection is long lasting (herds can re-break).
- Vaccine studies are in progress.

Treatment: Supportive care through hydration. Provide clean, dry, draft free environment with access to high quality drinking water (electrolytes may be beneficial).

Prevention: Limit cross contamination with any suspected pigs's feces.

- **Clearly define and communicate a Line of Separation which marks the separation between your facility, transport vehicles or the outside / inside of your production site.**
- Contact your veterinarian and enhance biosecurity procedures.
- Biosecurity of transportation vehicles is important; they should be clean, disinfected and dry.
- Several disinfectants have been demonstrated to effectively inactivate PEDV, such as formalin, sodium carbonate, lipid solvents, and strong iodophors in phosphoric acid.
- Replacement breeding stock should originate from a negative herd.

Challenges to Industry: Infection with PED can create tremendous financial losses to a pork producer.

For more information on biosecurity and PED: pork.org or contact a veterinarian.



Diseases like to hitch a ride, separate yourself from cross-contamination!

The organisms that cause disease in pigs (bacteria, viruses and parasites) can survive in different types of materials. Organic matter (shavings, manure) or water, mud or snow can carry diseases on boots, clothing, tires, undercarriages, trailers, shovels, winter panels, sorting panels and people can infect healthy pigs. Other activities, such as walking into a contaminated barn or packing plant can increase risk for disease spread because boots and trailers can become contaminated with diseases the farms you serve are trying to keep out. Assume every site you touch is a risk. Do not be responsible for transferring this disease.

Swine Health Producer Guide

Swine Health Recommendations: Biosecurity for Organizers of Weigh-in or Tagging Events

Animals that are commingled at an exhibition, sale or another event pose a risk for spreading disease. Organizers and advisors scheduling commingled pig events should assess each situation and the associated risks to pig health. The recommendations listed may be applied to all swine commingling events at centralized locations and to other pigs that are physically on the premises. Before your event, have a plan in place to manage pigs from many different locations and to handle sick pigs properly. This planning will help reduce the chance of disease spread.

Basic Biosecurity: At the weigh-in

1. Owners should be the only persons going into a trailer to sort or restrain pigs.
2. At the time of the weigh-in, owners and advisors should wear clean clothes and footwear which can be cleaned (or disposable coveralls over clothing and plastic boots over one's shoes).
3. Have a garbage bag for disposing used plastic boots. Carry another for clothes that may be dirty. Dispose of disposable coverings before leaving weigh-in site.
4. Keep the health papers in a zip-lock bag (just in case you drop them on the ground).
5. Limit the exposure of your pigs to the facility and equipment as much as possible.
6. If an animal is suspect to be ill at the time of handling, manage that animal last.

Basic Biosecurity: At the weigh scale

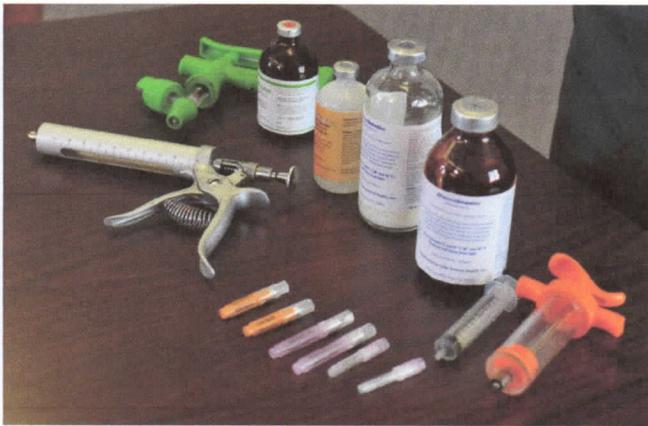
1. When using a stationary scale (one that does not move from site to site):
 - Have owners move pig to the scale but they should not enter the scale.
 - Sweep the scale free of manure and shavings between pigs and when finished. Remove manure from scale area.

- Thoroughly wash and disinfect the scale and area around it at the end of weigh-in. Allow to dry before re-use.
2. When using mobile scale (a scale that goes to more than one location):
 - Prior to use, make sure that the scale is fully clean and free of dirt/manure. Disinfect and allow to dry.
 - Have owners move pig to the scale but they should not enter the scale.
 - Sweep the scale free of manure and shavings between pigs and when finished. Remove manure from scale area.
 - Thoroughly wash and disinfect the scale and area around it at the end of weigh-in. Allow to dry before sending to another location.
 - The vehicle that moves the scale should also be cleaned and dried before going to another location. The interior of the vehicle should be free of any dirt and debris.
 - Contain any garbage that may accumulate at one site and dispose of before going to another location.

**Clean and dry equipment
will help to reduce the spread
of pathogens.**

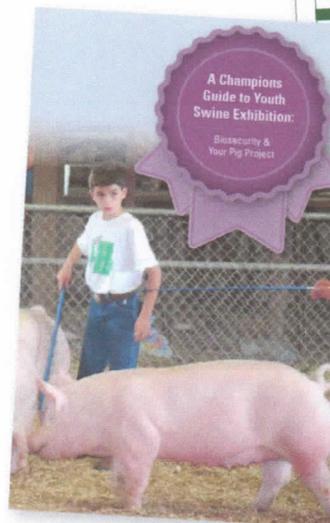
Basic Biosecurity: Tagging animals

1. Owners should be the only persons to enter a trailer and restrain the pig(s).
2. If tagging can be done at the back of the trailer:
 - Owners should sort pigs to the back gate and restrain the pigs.
 - Staff assisting in ear tagging should not enter the trailer.
3. Start with clean and disinfected taggers and have multiple taggers available that are clean and ready to use.
4. Disinfect/wipe down taggers between each pig (Examples: utilize bleach wipes or have pre-mixed disinfectant available for use).



Basic Biosecurity: Vaccinating pigs

1. Owners should be the only persons to enter a trailer and restrain the pig(s).
2. If vaccination can be done at the back of the trailer:
 - Owners should sort pigs to the back gate and restrain the pigs.
 - Staff assisting in vaccination should not enter the trailer.
3. Start with clean and disinfected syringes and needles. Have additional equipment available for use that are clean and ready to use.
4. Wipe down the exterior of the syringe in between each pig (Examples: utilize bleach wipes)
5. Use a new needle for each pig.
6. If using a multi-dose syringe:
 - Use a new needle each time a new dose or amount of vaccine is taken from the bottle
 - Use a new needle per pig
7. Keep proper records for each pig of vaccine given including the date, dose, product name, vaccine serial number and withdrawal time



Biosecurity recommendations for exhibitors are available at pork.org



Swine Health Guide

Swine Health Recommendations: Exhibitors of All Pigs Going to Exhibits or Sales

With the animals being commingled at an exhibition, show or sale, spreading disease is a risk. The recommendations listed apply to all swine at an exhibit or sale that are physically on the premise. Having a plan in place to identify and handle sick animals properly will help reduce the chance of disease spread.

In preparation for the exhibit or sale:

Consult a veterinarian to understand and implement applicable biosecurity and swine health practices; keep the veterinarian's phone number in your barn with your pig's papers and if possible, in your cell phone.

Have a premises identification number for your farm or where the pig(s) are housed (required for PQA Plus® certification or state equivalent)

Utilize an individual, readable identification method for each pig:

- Individual identification helps accurately and quickly identify a pig in the event of a health issue, validation of ownership or for other exhibit needs; papers can get lost or misplaced, but individual identification will remain with the pig
- Refer to the exhibit organizers and the State Veterinarian for specific requirements for individual animal identification

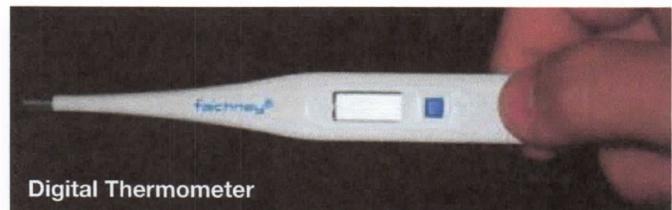
Become familiar with the clinical signs of a sick pig (such as fever, off-feed, lethargy, nasal discharge, cough, "thumping" or hard time breathing, and diarrhea).

- Normal rectal temperature of a pig = 101.5° - 102.5° F
- Pigs can't sweat, they need help staying cool on hot days.
 - › During hot weather a pig's temperature may be elevated.
 - › If its temperature is raised, allow the pig to cool off and re-take the temperature in 15 minutes.
- Work with your veterinarian if your pig becomes sick.

How do I take my pig's temperature?

1. Restrain your pig to avoid injury to you or the pig
2. Use a thermometer to measure temperature:
 - a. Digital – insert into the rectum; push the button and wait for the beep; read temperature
 - b. Mercury – shake down the thermometer so the red line is not showing; insert into the rectum of the pig and wait 30 seconds before reading the temperature
 - c. Laser: point the laser at the space on the skin behind the ear and read temperature

NOTE: Laser thermometer may not be as accurate as rectal thermometer



Digital Thermometer

Some diseases can transmit from humans to pigs and from pigs to humans, so it is important to not go to the exhibition or show if you or your pig is sick.

Make sure that you have all of your equipment, including your show box and its contents, clean, disinfected and ready to go prior to the exhibition. Do not share any equipment with other exhibitors once at the exhibit.

Fill out the appropriate paperwork for the exhibition including health certificates

For your pig's health certificate, you will need to provide the following information:

- Your name, contact information and farm address
- Individual pig identification and physical description for each animal going to the exhibit or sale
- If exhibiting in a state other than where you live, have your veterinarian check with the state you are exhibiting in for specific requirements
- Include information for exhibit-specific requirements
- If requested, list any current vaccines the pig has received (i.e. influenza or PRRS) and current disease testing (i.e. PRRS; PRV)

Animals like cats and dogs can carry pathogens that can make pigs sick. It is important to prevent the spread of pathogens to your pigs or to others. Keep pets at home, do not let them be in contact with your pigs and do not bring them to the exhibit.

At the exhibition or sale:

- Assess your pigs' health on a daily basis
- Report any swine health issues to the exhibit organizer (i.e. swine superintendent) or show veterinarian so they can assess the pig in question
- Ask the exhibition organizer about any specific actions that may be required if a pig becomes sick at the show.
- Keep your area clean and free of manure contamination
- Do not share equipment with other exhibitors
- Do not bring your pets (cats or dogs) at the exhibit

Once you get home:

When pigs from different farms are brought to an exhibit or sale and commingled with other pigs of a different health status, the risk of catching a disease can be high. Just like people can spread illness to each other when gathered in a group, pigs from many locations in an exhibit can also spread illness to each other. Therefore, when you bring your pig back home from an exhibit or sale, it is best to place them in isolation.

Isolate returning pigs from the other pigs at your farm.

- Work with your veterinarian for an isolation plan. The isolation/observation period before returning to contact with other pigs should be no fewer than 7-30 days in order to detect an illness.
- Consult a veterinarian if your pig becomes ill.
- Clean and disinfect equipment, clothing, shoes, show box and contents, and vehicles/trailers that were used at the exhibition.

Clean-up can be as simple as washing, disinfecting and allowing your equipment to dry out in the sun

Clean and dry equipment will help to prevent the spread of pathogens

Recommendations for isolation: (if you have other pigs at your farm)

- Isolation will allow for time for pigs to be observed for disease after they return from an exhibition or sale. When pigs are in isolation, additional testing can be complete to check for diseases before pigs are added back to the rest of the farm (e.g. PRRS). Check with your veterinarian for testing recommendations.
- Have a designated area away from other pigs that have not been to a show.
- Do chores for the pigs in the isolation area as the last task of the day after you have already worked with your other pigs.
- Have dedicated boots and coveralls for isolation only. Another option is to use disposable coveralls and plastic boots for use in isolation and then thrown away when done in isolation.
- Have a separate trash can for use in isolation only.
- Supplies such as buckets and feed pans should not be shared between pigs in isolation and other animals.
- All equipment should be thoroughly cleaned, disinfected and allowed to dry after use in the isolation area.

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Swine Health Recommendations: Organizers of Exhibitions and Sales

With the animals being commingled at an exhibition, show or sale, spreading disease is a risk. The recommendations listed apply to all swine at an exhibit or sale that are physically on the premise. Having a plan in place to identify and handle sick animals properly will help reduce the chance of disease spread.

Prior to the exhibition:

Identify a veterinarian being available for activities to assist the organizers with the show, including:

- Animal check-in
- Daily health evaluation during the show or exhibit
- Sample collection and submission
- Determining actions for sick pigs including: removal from the exhibit, isolation and/or treatment

Post the veterinarian's contact number at the exhibit office and within the barn.

Write up and discuss a plan to address potential animal health issues with the veterinarian and exhibit staff in order to coordinate all efforts including sample collection if needed.

Ensure that all exhibition staff assisting with the event become familiar with the clinical signs of a sick pig (such as fever, off-feed, lethargy, nasal discharge, cough, and diarrhea) and will relay that information to the veterinarian or primary organizer contact.

- Understand the risks to both humans and animals of having a sick pig at an exhibition.
- See link for fair information: www.usaha.org/Portals/6/news/Swine%20Exhibitions%202013.pdf
- Locate an isolation area away from the main exhibit to be used in the event sick pigs are identified:
 - › An off-site location is preferable
 - › If not possible, utilize an area blocked off from public and animal traffic
 - › Utilize staff personnel that do not have any contact with other pigs on the fairgrounds

Other animals, such as dogs and cats, can physically transfer pathogens. To prevent spread of diseases, request that pets be kept home and not brought to the exhibit.

At the exhibit:

At check-in, each pig should be evaluated and any sick pigs should not be unloaded. Options can include:

- Send the pig(s) immediately home
- Utilize isolation

Check-in recommendations to prevent potential disease spread:

- Exhibit officials should avoid entry into the trailers; Owners should provide health certificate for exhibit staff to review outside of the trailer
- If exhibit officials have to enter a trailer to examine an animal, use disposable coveralls and boots and dispose of after single use
- Use a hand-washing station between loads or have hand sanitizers or wipes available

All animals shall have an accompanying health certificate signed by an accredited veterinarian

- Include premises identification number (Required for PQA Plus® certification or other state equivalent)
- Record the official ID for each pig taken to the exhibition on the health certificate
- Refer to the State Veterinarian's office for specific animal identification requirements
- Health certificates are valid for 30 days

Observe swine daily for signs of illness, which may include fever, lethargy, lack of an appetite, nasal discharge, cough or diarrhea.

Report any illness to the primary veterinarian or the appropriate exhibition staff (i.e. swine superintendent) so the pig can be evaluated.

Swine deemed to be ill should be removed from the exhibition immediately.

Use precautions when caring for sick pigs to minimize the opportunity for disease transmission to other pigs or people:

- Do not re-stock the sick pigs' pen with other animals
- Halt or limit foot traffic around the pen
- Scoop or sweep manure back into the pen and then carry the shovel or broom to isolation
- Wash hands after handling sick pigs and change clothing and boots



Recommendations for isolation:

- The isolation area is an area away from general exhibit traffic and other animals. It can be a small room or an area of the barn where no other animals are housed.
- Only the individuals who care for the pig and the attending veterinarian should enter the area.
- Disposable coveralls and plastic boots should be worn when entering the area and removed and thrown away when leaving.
- A hand-wash station or hand sanitizer should be available at the entrance of the isolation.
- A trash can should be placed in a convenient location for use in isolation only.
- Supplies such as buckets and feed pans should not be shared between pigs in isolation and other animals.
- All equipment should be thoroughly cleaned, disinfected and allowed to dry after use in isolation.