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The exhibitor, parent, swine producer, employees of a swine unit or any individual who attends a fair must take responsibility to not transfer any disease(s) from the fair to a swine production site. This becomes an educational opportunity to highlight the importance of a farm's biosecurity plan. While a county fair can attempt to minimize the entry of sick pigs, it cannot eliminate the potential of a swine disease entering the fairgrounds.

The county fair is a gathering or collection point of pigs, similar to a buying station. All exhibitors' pigs coming from different growing sites may have different health statuses or disease history. To establish perspective, we suggest **viewing the fairgrounds as being potentially positive for swine diseases.** Diseases such as PEDV (porcine epidemic diarrhea virus), swine influenza, erysipelas, PRRS (porcine respiratory and reproduction syndrome), Senecavirus A (Seneca Valley Virus) and others may enter the fairgrounds.

Biosecurity is a combination of management practices designed to prevent the introduction and transmission of diseases and disease-causing agents into and between herds. **Each exhibitor and their family must decide on a biosecurity plan for their operation.**

Where to start with Biosecurity?

Establish lines of separation. The Line of Separation is defined as the line between a potentially dirty area where virus may be and a clean area where the virus isn't present.

Examples:

1. Line of Separation just inside barn door to designate where-work shoes stop and barn shoes start.
2. Draw the line for street shoes and work shoes in your house, garage or vehicle.

Where will you establish a Line of Separation for clothes and shoes worn to the county fair?

Before the fair

1. **Sick pigs (fever >104° F, nasal discharge, cough, diarrhea or vesicles) and pigs infected with Senecavirus A or PEDV within 6 weeks of fair entry should NOT be brought to the fairgrounds.**
2. Wash, disinfect and dry truck & trailer before taking pigs to fair. This reduces diseases hitching a ride to fairgrounds. After pigs are delivered, will make clean/wash/disinfecting the trailer easier.
3. Keep inside of vehicles clean. Have different shoes/boots for fair that are NOT worn in vehicle.
4. Plan and minimize show equipment and personal items that will go to the fair. How will you clean/disinfect?
5. Consider and plan people movement to/from the fairgrounds (exhibitors, children and parents).
 - a. How will you handle shoes and clothes worn to the fair? Wash at home, Grandma's, Laundry Center?
 - b. Which vehicle is used? Where does it park? Do you enter the vehicle "dirty" or "clean"?
 - c. Consider other people that may attend fair: friends (child or adults), family, employees or vendors. Communicate the importance of biosecurity to your farm.

- d. Consider allowing kids to sleep-over at grandma's, a relative or friend during the fair to minimize the number of vehicles and people go from fairgrounds then back to the pig farm.
6. Include in your plan how feeders, waterers, show equipment, etc. will be cleaned/washed/disinfected prior to returning to farm.
7. If your fair has a non-terminal show and you will be taking pigs home, **talk with your veterinarian to establish an isolation plan – location and number of days pigs should be isolated (testing may be used to shorten isolation periods)**. Plan an adequate isolation location and equipment to care for pigs and maintain a line of separation between the isolation and your pig farm.

At the fair

1. During the Fair

- a. Observe swine daily for signs of illness, which may include: loss of appetite (off feed or complete feed refusal), fever >104° F, nasal discharge, cough/"thump", diarrhea or vesicles.
- b. Wash hands often, especially prior to eating.
- c. Do not eat or sleep in pens next to the animals.
- d. Keep alley or common areas clean and dry. For many alley ways, it may be better to scrape/disperse barn lime/sweep clean. Barn lime will help dry alleyway surfaces and inactivate viruses.
- e. Clean, wash, disinfect and dry sorting boards, canes, other handling equipment.
- f. Fair veterinarian's make final determination for each pig. Including isolation or removal from fairgrounds, health status to show and health status for transport to market or to leave fairgrounds.

2. Pig Release

- a. Upon release from fair, record where each pig is being transported to (IDALS form).
- b. If pigs are going home (non-terminal shows), remind exhibitors that pigs should be isolated from

other pigs at the farm. **They should work with their veterinarian for an isolation plan.** Example PEDV, the isolation period should be at least 60 days. This is because a pig that becomes infected with PEDV can shed the virus for 42 days and virus can survive outside of the pig, in environment, several additional weeks. **A veterinarian may be able to utilize testing to confirm or shorten the isolation period.**

After the fair- clean/wash/disinfect/dry show equipment, clothing and shoes.

1. Select disinfectants with label claim for Coronaviruses (Synergize, Tek-Trol®, DC&R®, Accel® and Virkon®-S and others).
2. Standard washing/drying clothes will inactivate PEDV. Additional measures are to add bleach and allow dried clothes to sit an additional 24 hours before being worn in production areas.

Swine Diseases of Concern:

Swine diseases can have different routes of transmission, different incubation periods (time from exposure to clinical signs), different shedding periods (amount of time pigs can infect other pigs) and susceptibilities to specific disinfectants. Establish a "Vet-Client Patient Relationship" (VCPR) with a veterinarian for guidance of vaccinations, treatments and isolation planning. Disease characteristics are shared below for a few swine diseases of concern.

Porcine Epidemic Diarrhea Virus (PEDV)

The virus, a coronavirus, only infects pigs not humans or other livestock. The virus infects and destroys the intestinal lining which limits nutrient uptake and causes the "epidemic diarrhea". Mortality is almost 100% in piglets less than 14 days. Adult and growing pigs are affected, but both have enough body reserves to withstand the virus challenge until the intestinal lining is regenerated. PEDV does not affect pork or food safety, it is safe for consumption.

- **Transmission:** Oral contact with contaminated feces (fecal-oral)
- **Common source of infected feces:** Pigs, trucks, boot, clothing or other fomites
- **Incubation period (time from exposure to clinical signs):** Only 12 to 36 hours
- **Shedding (amount of time pigs can infect other pigs):** Up to 42 days but virus will remain in pig's environment 2-3 weeks
- **Amount of virus needed to infect a pig:** Microscopic/trace amounts of infected fecal particles

Porcine Reproductive and Respiratory Syndrome (PRRS)

Single stranded RNA virus that infects pigs (not humans or other livestock). This is a highly contagious disease. Many different strains exist. Most strains impact both reproduction and respiratory health, some specifically impact reproduction or respiratory health of pigs. Virus survives longer periods in cold, damp environments. PRRS does not affect pork or food safety, it is safe for consumption.

- **Transmission:** Direct contact with infected pigs, semen or contaminated clothing, equipment and vehicles. Aerosol is possible.
- **Incubation period (time from exposure to clinical signs):** Five to 21 days after direct contact.
- **Shedding (amount of time pigs can infect other pigs):** Saliva up to 42 days, semen up to 92 days, fecal up to 42 days.
- **Amount of virus needed to infect a pig:** Minute amounts intranasal, higher doses for oral, vaginal or eye.
- **Vaccine:** Commercially available.
- **Disinfectants:** Most common brands are effective.

Senecavirus A (Seneca Valley Virus)

A non-enveloped single-stranded RNA virus that infects pigs (not humans or other livestock). Clinical signs are blisters (vesicles) around the snout and above the hoof

wall, may or may not be associated with lameness in pigs. The ultimate concern is that clinical signs are clinically indistinguishable from other vesicular diseases which are foreign animal diseases (i.e. foot-and-mouth disease (FMD), vesicular stomatitis, swine vesicular disease and vesicular exanthema of swine). **Due to similarity of clinical signs, a foreign animal disease (FAD) investigation will be initiated to confirm it is not a foreign animal vesicular disease.**

Individual pigs need to be monitored to ensure pigs with active clinical signs are not shipped to the packing plant. If clinical signs are observed at a packing plant, an FAD investigation will be initiated at the packing plant. Animal agriculture is very concerned if FMD is confirmed in the US as it would impact swine, beef, dairy and sheep industries. **The disease poses no threat to humans via contact or consumption of pork. The virus only causes disease in pigs.**

- **Transmission vectors:** Unconfirmed. Potentials include rodents, insects, pigs, trucks, boots, clothing, other fomites.
- **Incubation period (time from exposure to clinical signs):** Unpublished studies, 3-4 days in experimental studies from infection to the discovery of lesions.
- **Shedding (amount of time pigs can infect other pigs):** Preliminary data, up to 14 to 21 days in individual pigs, 5-6 weeks at the population level.
- **Amount of virus needed to infect a pig:** Unconfirmed. Most likely small amounts are needed to infect pigs.
- **Disinfectants:** An ISU study found 5% household bleach at 1:20 dilution (6.5 ounces per gallon) and 10-15 minute contact time and Synergize at manufacture label (1:256 dilution) at 60 min contact time was effective at two temperatures and on a variety of surfaces.
- **Expected outcome of infected animals:** Most animals will spontaneously recover on their own within 7-10 days.

Resources

U.S. Swine Health Improvement Plan (US SHIP)

is a producer-driven national program that establishes consistent health standards that serve as a platform for control of foreign animal diseases (FAD) of high consequence like African swine fever (ASF) and classical swine fever (CSF).

The technical standards focus initially on the prevention, mitigation, and traceability of ASF and CSF, but will likely also impact domestic diseases.

Learn more at: **Iowa Department of Agriculture and Land Stewardship** <https://iowaagriculture.gov/ship> or **US SHIP** <https://usswinehealthimprovementplan.com>

Secure Pork Supply (SPS) Plan

SPS provides a workable business continuity plan for pork premises with no evidence of the FAD infection located in a regulatory Control Area that is credible to Responsible Regulatory Officials. Having the SPS Plan implemented prior to an FAD outbreak enhances coordination and communication between all stakeholders. Website provides video, factsheet, forms to aid preparation and implementation of enhanced biosecurity, animal movements, disease monitoring and FAD preparedness.

Learn more at: **Secure Pork Supply** <https://www.secure-pork.org/>

Why is this important?

Protect our local pork producers and pork industry, to the best of our ability.

Be aware of the factors and create a plan. This cannot eliminate the risk, but reduces the risk. Enjoy the fair!