



Biosecurity for Swine Producers

A. M. Stokes,¹ R. D. Willer,² and H.M. Zaleski¹

Biosecurity includes all the things producers do to exclude disease-causing organisms from the farm. External threats include new pigs, feral pigs, semen, people, animals and pests, garbage, vehicles, and other farms. Internal biosecurity can reduce transmission of disease-causing organisms within your herd.

External threats: keeping disease out

Introduction of new pigs

The greatest risk to a pig is another pig. Isolation of new animals for 30–90 days while observing for disease and allowing them to become used to the disease organisms of the farm is important in preventing the introduction of disease to the current stock. Testing for disease and vaccinating during this isolation period are also beneficial. Putting one or two market pigs with the new animals helps the newcomers develop resistance to the diseases on the farm. It also lets the producer observe whether the new animal introduces disease to the market pigs. If pigs leave the farm for any reason, they should not return to the farm without due precautions—any pig that has left the farm should be isolated and treated as a new addition to the farm.

Feral pigs

One of the biggest risks for swine producers in Hawai'i is the spread of disease by feral (wild) pigs. Feral pigs may be carriers of serious diseases including brucellosis, pseudorabies, and leptospirosis. Fencing or penning that does not permit nose-to-nose contact of feral pigs with farm pigs is the best way to prevent introduction of diseases carried by feral pigs.

Artificial insemination (AI)

AI is used by many farms of all sizes to improve herd genetics and decrease the risk of bringing in a new disease along with a new boar. AI also reduces disease spread between the boar and sows, whether the source of semen is on-farm or purchased.

The use of AI cannot prevent all disease transmission, because some diseases, such as porcine reproductive and respiratory syndrome (PRRS), can be spread through the semen. The use of semen from shedding boars can result in many sows being exposed to disease. To minimize risk, Hawai'i quarantine regulations require an import permit for semen. This permit is obtained by contacting the Hawai'i Department of Agriculture's Animal Industry Division at 808-483-7113 or 808-483-7109. Purchased semen must come from a herd that is free of brucellosis, pseudorabies, and PRRS.

During the AI procedure, clean the vulva of the sow and use a new catheter for each sow. The cover for the catheter should be removed just before placing it in the vulva to avoid contamination of the catheter. Following these precautions should help reduce the introduction of potential pathogens into the sow's reproductive tract.

People on the farm

Only farm personnel should be in contact with the animals. It is a good idea for them to have boots and clothing that are used only for farm work.

Keep visitors to a minimum. Pigs for sale should be kept in pens away from the rest of the herd, and customers

¹CTAHR Department of Human Nutrition, Food and Animal Sciences; ²Division of Animal Industry, Hawai'i Department of Agriculture. A. M. Stokes and R. D. Willer are veterinarians; H. M. Zaleski is a specialist in swine.

coming to buy pigs should be allowed only in the sales area. Provide clean clothing, use foot-baths, or use disposable coveralls and boot covers for those visitors that must enter the main piggery area. All visitors should be asked to wash their hands. Producers can ask visitors to have had no contact with other pigs for at least one day before coming onto the farm. Visitors should leave their vehicles off the farm or at the entrance to the farm.

Other animals on the farm (pets, birds, rats, mice, insects)

Exclude animals and pests with physical barriers and good pest-control practices. Cats and dogs can spread diseases, just like rats and flies can.

Rodents pose a problem when working to prevent the spread of disease. Either through building construction (very expensive and often impractical), baits and poisons, or proper feed storage, efforts should be made to reduce rodent access and introduction of potential diseases into and around the farm.

Feeding garbage

A permit is required for feeding garbage. To obtain a permit, call USDA APHIS at 808-861-8561. Garbage must be cooked at a full boil for at least ½ hour to destroy disease organisms. Garbage containers must be covered to prevent flies and other insects from spreading disease organisms from raw to cooked garbage.

Vehicles

Vehicles moving around the farm should be restricted, and farm personnel should be mindful of where vehicles have been before coming onto the farm. A truck that has visited another farm or a slaughterhouse may be carrying potential disease. Disease organisms can be carried by your own truck or by visitor's vehicles, feed trucks, pig-hauling trucks and trailers, or dead-animal haulers. Where possible, limit access and clean and disinfect vehicles that must enter the farm. At a minimum, cleaning and disinfecting a truck's tires is advised.

Visits to other farms

If possible, don't start a farm near another hog farm. Keep visits to other farms to a minimum. Clean and disinfect clothing and boots when returning from another farm. Clean and disinfect your vehicle.

Internal control of disease

Sick animals

Reduce disease spread from sick pigs by isolating sick pigs immediately. Sick or injured pigs should be evaluated in a timely manner, and if it is determined that the animal is not likely to recover, the animal should quickly be culled. The removal of dead pigs should take place within the first 24 hours after death, and post-mortem evaluations (necropsies) are important to identify conditions present on the farm that may need attention.

Cleaning and pen design

Regular cleaning and disinfecting of facilities, most easily accomplished when moving groups between pens or rooms, greatly reduces the spread of diseases. Even if all-in/all-out practices aren't followed, scheduled cleaning and disinfecting of facilities should occur. Disinfect pens and buildings after thorough cleaning.

Disease spread between age groups can be reduced by segregating different ages at different sites, buildings, rooms, or areas. Use good biosecurity between age groups (disinfect boots, clean overalls, wash hands or wear gloves). Solid panels between pens can reduce disease spread. Using cinderblock for the bottom foot of pen partitions can both reduce disease spread and extend the useful life of panels.

Waste handling

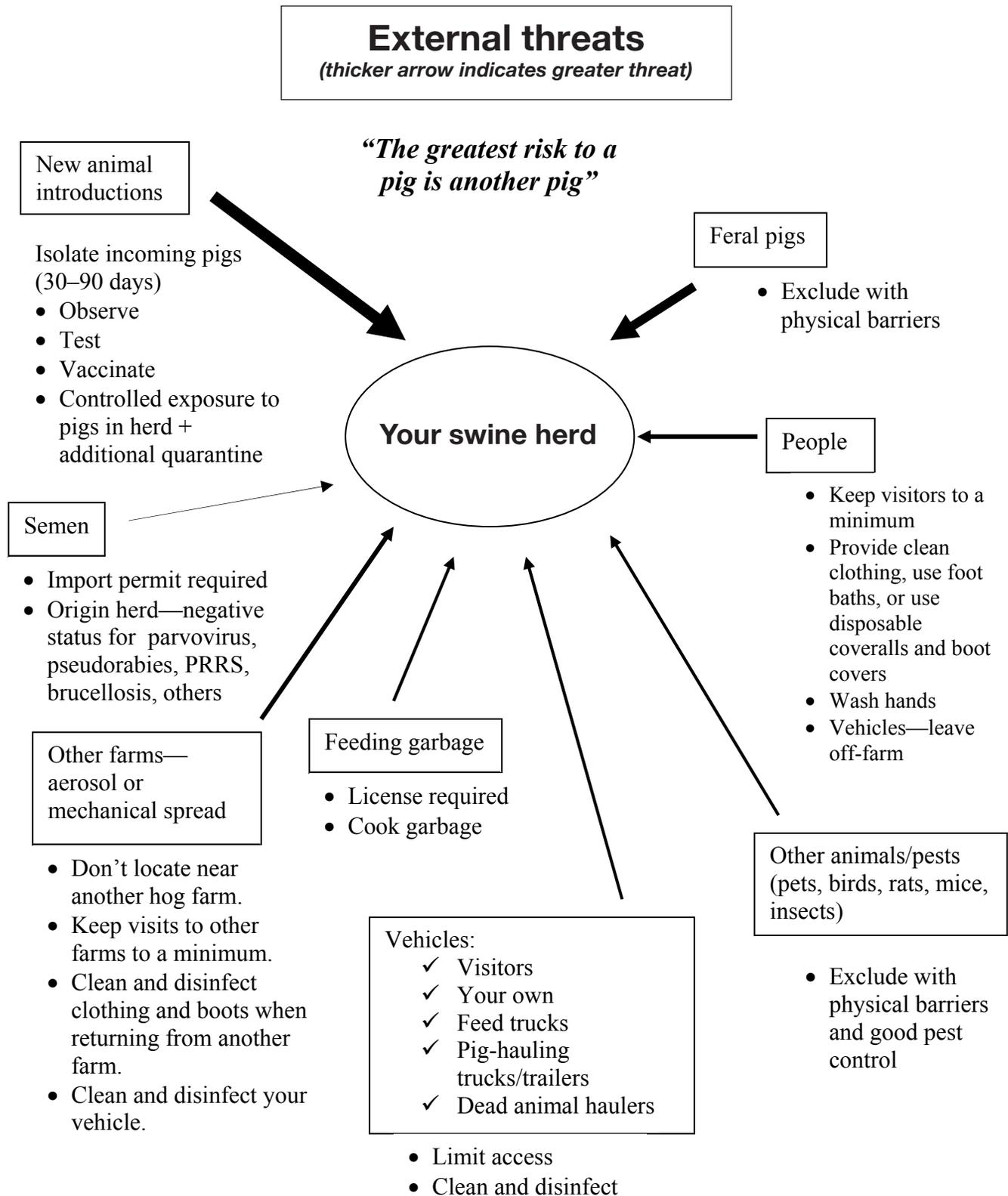
Reduce disease spread through manure—remove manure from pens daily. Waste removal should be done in a manner that does not spread manure around the farm, especially the manure from new additions.

Good hygiene is important. Reduce disease spread through equipment by cleaning and disinfecting equipment and tools. Use sterile needles, and store and handle medicine safely.

Resources

- National Pork Board. www.pork.org/filelibrary/Biosecurity/BiosecurityBook.pdf.
- USDA-APHIS. http://nahms.aphis.usda.gov/swine/swine2006/Swine2006_biosecurity.pdf.
- The Pig Site. www.thepigsite.com/articles/0//3128/basic-farm-biosecurity, www.thepigsite.com/articles/0//2957/a-review-of-biosecurity-methods.
- National Hog Farmer. <http://nationalhogfarmer.com>.
- California Department of Food and Agriculture. www.cdffa.ca.gov/ahfss/Animal_Health/Biosecurity.html.

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Internal threats

**Reduce transmission
of disease-causing organisms
within your herd**

Reduce spread . . .

- . . . *between age groups***—segregate different ages at different sites or in different buildings or rooms; use solid panels between pens; use good biosecurity between age groups (clean overalls, disinfect boots, wash hands or wear gloves).
- . . . *through manure***—remove manure from pens daily; disinfect pens and buildings after thorough cleaning.
- . . . *through equipment***—clean and disinfect equipment and tools.
- . . . *through poor hygiene***—use sterile needles, safe medicine storage and handling.
- . . . *from sick pigs***—isolate sick pigs immediately.