

Agricultural Animal Care and Use Program (AACUP)

Guidelines for Reducing Risks of Transfer of Disease in UIUC Swine Units

Introduction

The 3 swine herds (Imported Swine Research Laboratory, Swine Research Center and Veterinary Medicine Research Farm) owned by the University of Illinois at Urbana-Champaign (UIUC) provide resources for use in meeting the missions of research, teaching and outreach for the entire campus. These 3 missions present complex constraints upon the operational management of the units. In addition, most of the UIUC swine facilities were built more than 30 years ago and do not easily accommodate current best practices for maintaining biosecurity and biocontainment. The inherent challenges of obsolete facilities and high risk activities of a land grant institution are further complicated by the fact that many of the animals housed at these units are extremely valuable, either because of their current enrollments in externally funded research, or as a consequence of their irreplaceable genetic makeup.

The Institution is held accountable by the federal government through the Animal Welfare Act to provide authority to an Attending Veterinarian who will assure the provision of adequate veterinary care and oversee the adequacy of other aspects of animal care and use. The following guidelines have been developed by the Agricultural Animal Care and Use Program (AACUP), which reports to the Vice Chancellor for Research as Institutional Official for the campus's animal care program. These guidelines have been approved by the Attending Veterinarian for Agricultural Animals (AVAA) in the AACUP.

These guidelines are intended to form a foundation for practical procedures that address the greatest risks to the high health status of the 3 herds. Standard Operating Procedures (SOPs) of an individual unit should meet these guidelines but may vary to address detailed requirements of that facility. The Unit Manager has the authority to refuse entrance to any person until appropriate biosecurity precautions can be identified in consultation with the AVAA and implemented. The AVAA has authority over modifications in these guidelines and other related SOPs as necessary to control emerging pathogens and protect the health of the animals.

A. ACCESS

1. No person who has traveled outside of the continental United States may enter any of the UIUC live animal research and teaching facilities within one week of returning to the continental United States.
2. No person who has been on any commercial swine production unit outside of the University system may enter the UIUC swine facilities within 36 hours of their last exposure. When pigs from outside sources are housed at the Grein Swine Unit or at the Piglet Nutrition and Cognition Laboratory (PNCL), these units should be treated as if they were commercial swine facilities, i.e. minimal

avoidance periods following exposure to commercial units prior to entering the UIUC swine facilities is 36 hours.

3. No person who has been at any commercial slaughtering or processing plant may enter the UIUC swine facilities within 36 hours of their last exposure.
4. No person who has had contact with swine at any state, regional or county fair, swine expo, purebred swine show, swine unit of another university, sale barn, or other area where there are exposures to swine of unknown sources may enter the UIUC swine facilities within 36 hours of their last exposure.
5. Persons who have visited any of the swine units within the University system should not enter other University swine facilities on the same day. It is assumed that each of the UIUC swine facilities (ERML, VMRF, Grein and PNCL when UIUC pigs are present, ISRL and SRC) may continue to house pigs of differing health statuses and must all be treated as separate units unless information to the contrary has been specified by the AVAA.
6. Some areas within the UIUC system present risks of exposure to swine diseases in the absence of physical contact with live pigs. Exposures to these areas require additional hygiene practices prior to entry into any other UIUC swine area. Generally, such practices include appropriate disinfection of potentially infected people, clothing, materials and vehicles. Consult the unit managers for appropriate precautions for movement of people, animals or equipment between any of the following areas:
 - a. ERML Animal Care Facility,
 - b. Abattoir and lairage pens of the Meat Sciences Laboratory,
 - c. Grein Swine Unit,
 - d. Veterinary Medicine Large Animal Clinic Wards,
 - e. Veterinary Medicine Diagnostics Laboratory and Coolers,
 - f. Veterinary Medicine Research Farm,
 - g. Swine Research Center
 - h. Imported Swine Research Lab and PRL
 - i. Beckman Imaging Facility,
 - j. Veterinary Medicine Imaging Facility,
 - k. Piglet Nutrition and Cognition Laboratory,
 - l. UI Stock Pavilion.
7. Only the Unit Manager, the AVAA, or their direct designees may authorize entry of persons other than life safety personnel in the case of an emergency.

B. ACCESS BY AACUP VETERINARIANS

1. The AVAA and AACUP veterinarians as designated will have access to the animals at all times and will follow appropriate procedures for sanitation and biosecurity dependent upon their exposures.
2. AACUP veterinary staff members will use the AACUP van whenever possible to travel to the swine units. This vehicle does not travel to swine facilities outside of the UIUC system. The AACUP van will be washed and disinfected immediately following entry to any of the UIUC swine facilities.
3. Farm staff should call an AACUP veterinarian to discuss clinical cases and determine if a farm visit is justified, if staff can treat the animal, or if euthanasia should be conducted.
4. RAHMs veterinarians provide emergency and holiday veterinary care for the University's livestock herds as part of the UIUC Animal Care Program. RAHMS veterinarians are to contact the AACUP veterinarians for updates on the health status of the UIUC swine herds before they attend a clinical call at one of the UIUC swine units.
5. Routine treatments will be conducted by farm staff according to health SOPs approved by the AVAA.
6. Specific tasks such as ultra-sound assessment of pregnancy, euthanasia, or sampling of blood will be conducted by trained animal care or research staff as appropriate and approved by the AVAA.

C. PROCEDURES FOR ENTRY TO SWINE UNIT PREMISES

1. If you have completed the appropriate avoidance period stated above, you may enter UIUC swine units only through the following procedures:
 - a. Adjust personnel work schedules and assignments in order to extend avoidance periods for as long as possible if you have a known exposure to PEDv, PRRS, FMD, influenza or any other disease contagious to swine.
 - b. Take at least 2 showers, which include washing of your hair, while at home during the avoidance period. Personal hygiene is critical for the removal of organic material that transfers pathogens from people to pigs. Extended avoidance periods by themselves do not prevent transfer of disease but rather provide additional opportunities for thorough showering, cleaning and drying of contaminated surfaces. Research indicates that appropriate hygiene can negate the need for extended avoidance periods but cleansing must be thorough.
 - c. Wear ONLY clean clothing and shoes to the swine units. These clothes and street shoes must have NEVER been on another swine unit, at a slaughter house, or at any of the other risk areas listed above.

- d. If a vehicle was used to travel to an outside location where there were pigs, pig transporters, or pig producers, and that same vehicle will be used to travel to UIUC swine units, the vehicle must be washed and sprayed with disinfectant before entering the parking lots at the swine units. Special attention should be paid to cleaning and disinfecting of the tires and wheels, on both the inside and outside of the wheel rims.
 - e. Standard Operating Procedures specific to the individual swine units address detailed requirements for that facility. The Unit Manager must be consulted for instructions specific to their unit. The unit manager has the authority to deny access to any individual except veterinary staff having completed the appropriate biosecurity procedures.
2. Movement of “off-farm” vehicles will adhere to the following:
- a. “Off-farm” vehicles are not routinely allowed past the gates. All “off-farm” vehicles must have specific permission from the Unit Manager to pass beyond the gates.
 - b. Gates should be closed at all times as practical and posted or locked after hours.
 - c. Entry of approved vehicles will occur only through the gate designated for this activity and with specific approval by the Unit Manager.
 - d. F&S personnel and companies doing repairs will be called directly to the swine units on an emergency basis only. Routine repairs will be conducted by animal care or farm staff to the extent possible and appropriate.
 - e. Vehicles and personnel involved in construction or maintenance projects at the units will be screened by the Unit Manager and given specific instructions regarding traffic patterns for entry to the areas where they must do their work.
 - f. Lawn mowing crews will disinfect the undercarriages and wheels of the machinery prior to entry beyond the unit gates.
 - g. Commercial service providers such as employees of pest control companies or utility technicians must check in with the Unit Manager and follow established procedures. Unit Managers should screen non-farm personnel to identify risks of disease exposures. Traffic patterns and information regarding restricted areas will be provided by the Unit Manager. The Unit Manager has the authority to deny access to any person other than the veterinary staff having completed the appropriate biosecurity procedures.
3. Exposures of researchers and swine unit staff to high risk areas will be minimized as follows:

- a. Whenever possible, research or clinical samples from the swine units that need to be delivered to the Veterinary Medicine Diagnostics Laboratory (VMDL) will be transported by someone who does not have routine duties within the animal housing areas.
- b. Mortalities will be delivered to the VMDL rendering or diagnostic cooler as follows:
 1. Deliveries will be made at the end of the work day whenever possible.
 2. When necessary, deliveries may be made at other times during the work day. Staff should follow these procedures for deliveries during the day;
 - a. Call the VMDL Receiving Office and alert them to the details of the expected delivery (#244-7630; expected time of arrival at the VMDL loading dock, # and size of animals).
 - b. Upon arrival at the VMDL loading dock, call the VMDL Receiving Office to announce arrival.
 - c. Swine staff should stay in the cab of the truck or put on protective footwear and step only into the truck bed or trailer.
 - d. VMDL personnel will meet the delivery vehicle and take the carcasses as they are removed from the swine unit vehicle.
 - e. Protective footwear should be removed and discarded prior to swine unit personnel re-entering the cab of the delivery vehicle.
 3. If possible, these deliveries should be made by personnel who do not work within the swine housing facilities.
 4. Deliveries should use the dedicated truck or trailer that does not pass through the gates of the unit whenever possible.
 5. When possible, procedures for delivery during the day should be followed but if VMDL personnel are not available at the end of the day, appropriate PPE must be worn. Delivery personnel must don Tyvek coveralls and plastic boot covers before they exit the farm truck at the loading dock of the VMDL.
 6. After the carcasses are delivered to the cooler, the PPE is removed in an inside-out manner and discarded during the process of reentering the truck such that unprotected clothing and footwear do not contact the ground at the loading dock. PPE should be placed in a plastic bag and secured closed, then discarded at the first available location.
 7. Although personnel may need to reenter the office buildings upon their return to the swine units, they should not proceed beyond the locker rooms.

D. SHIPPING OF ANIMALS

1. Trucks picking up pigs will park in a designated area away from the main traffic flow. Truck drivers will cover boots before exiting the truck cabin and will stay on the truck bed during the delivery of pigs.
2. Animals that need to be shipped will be loaded on the farm trailer and transported or will be moved through the load-out ramps to the parked truck.

3. Unit animal care personnel will deliver the animals to the truck but will avoid setting foot inside the truck bed (which should be considered contaminated).
4. At the end of deliveries of pigs to the transport vehicle, the farm trailer and tractor wheels are typically washed and disinfected and the load out ramps washed and disinfected. However, washing of vehicles and equipment may be impractical during winter weather. Unit Managers should consult with AACUP veterinary staff to devise methods for disinfection to the extent possible.
5. Delivery of pigs to the Meats Laboratory lairage pens presents high risks as the load out facility is shared with an outside rendering contractor who travels to unknown livestock facilities. Delivery of UIUC pigs to the Meats Lab should be done near the end of the day whenever possible and farm staff should avoid exiting their trucks and trailers in the loading dock area. When pigs must be delivered during the day, Meats Lab personnel should pre-arrange the pens for the pigs, accept the animals from the delivery vehicles and move them into lairage. When farm staff must exit the vehicles they must don Tyvek coveralls and plastic boot covers before they exit the farm truck. After the pigs are delivered to the lairage pens, the PPE is removed inside-out and discarded before reentering the truck and returning to the unit. Trucks and trailers used to deliver pigs to the Meats Lab should be washed and disinfected prior to reentry to the swine units.

E. INTRODUCTION OF FEED AND SUPPLIES

1. Feed trucks from the U of I feed mill that need to enter the premises will use designated gates and will disinfect tires before passing through the gates. Designated traffic patterns for the UI feed truck will be established by the Unit Manager and must be followed.
2. Personnel on the feed truck, if they need to leave the truck, will put on plastic boot coverings before stepping on the ground at the swine units.
3. Outside feed trucks delivering other feeds or feed ingredients for research purposes will deliver the product to the Feed Mill on St. Mary's Road. Shipment to the swine units will be conducted using the UI Feed Mill's vehicle.
4. Feed will be delivered to the Animal Sciences Units using the new feed truck. The truck tires will be disinfected prior to entry to the units and after leaving the units prior to returning to the Feed Mill.
5. Feed will be delivered to the Veterinary Medicine facilities at the end of the week and will use the old feed truck. The truck will be disinfected prior to being returned to the Feed Mill.

F. INTRODUCTION OF ANIMALS TO UIUC SWINE UNITS

1. Importation of animals from outside sources presents a major risk of introducing diseases to the units. It is important that this risk be minimized as much as possible. All introductions of animals must adhere to import and quarantine requirements established by the AVAA in the AACUP.
2. The Unit Manager may request additional testing for disease at any time during the quarantine period and prior to release of the animals into the resident herd.
3. Management practices will minimize the number of animals and importation events that must occur.

References

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