SWINE TRANSPORT BIOSECURITY
PRRS IS COSTLY

• $350 Per Sow-Acute Infection
  – Over $175,000 per outbreak on 500 sow unit

• $7 to $15 Per Growing Pig

• $640 Million Annually in U.S.
TRANSPORT BIOSECURITY HELPS PREVENT PRRS!

Identifying and managing pig movement critical to control
Biosecurity in the “Old Days”
Not good enough anymore
Small Residue = Big Problem
"Danish Entry"

**Biosecurity and Minimal Disease Herds (Danish SPF Entry)**

- **Street clothes and footwear should be removed in "unclean area."**
- **Footwear must be disinfected before entering hog barn.**
- **Footbath**
- **Water-tap with hose.**
- **Clean Area**
- **Unclean Area**
- **Hands must be washed and disinfected.**
- **Wooden-grate passage should be entered only in stocking feet (never in boots).**
- **Protective clothing and boots should be kept here.**
Biosecurity of vehicles is as important as biosecurity of people
This is not a clean trailer
PRRS virus is highly infectious
Washing and disinfecting are important.
But **DRYING** is critical to inactivate the PRRS virus.
# PRRS SURVIVABILITY STUDIES

<table>
<thead>
<tr>
<th>Condition</th>
<th>Length of Survival</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frozen</td>
<td>Years</td>
</tr>
<tr>
<td>Moist, Cold, Wet</td>
<td>11 days</td>
</tr>
<tr>
<td>$70^\circ F (21^\circ C)$</td>
<td>6 days</td>
</tr>
<tr>
<td>$98.6^\circ F (37^\circ C)$</td>
<td>24 hours</td>
</tr>
<tr>
<td>$132^\circ F (56^\circ C)$</td>
<td>20 minutes</td>
</tr>
</tbody>
</table>

Pitkin, Otake, Dee, “Biosecurity protocols for the prevention of spread of PRRSv”, Swine Disease Eradication Center, University of Minnesota
One Conventional Drying System

Eco-Dri
System Overview

- (2) Fifty ft. Radiant Tube Heaters
- (4) 36” Circulation Fans
- 14” Exhaust Fan
- Air Inlet Shutter
Thermo-Assisted Drying and Decontamination
TADD

• “The principle of TADD is to raise the interior temperature of trailers to 71°C for 30 min to promote drying and degradation of PRRSV.”

• “Under the conditions of this study, the efficacy of the TADD system was equal to that of the overnight drying treatment, and it required a shorter period of time to complete its objective.” Dr. Scott Dee

Lowest effective time and temperature after application of Synergize:

120 Degrees F for 20 minutes

Robert Thompson, DVM, MS - PIC

2011 AASV Annual Meeting
List of truck washes in Minnesota

www.biosecuritycenter.org
Transport Biosecurity Protocol

- Step by Step Protocol

- Found at: www.prrs.org

- PRRS Regional Elimination /Education Materials
SWINE DELIVERY DIAGRAM

Office

Cab

Trailer

Swine Cargo Space

Chute

Pig Holding Or Delivery Area
GOAL OF SWINE TRANSPORT

Deliver Pigs and Nothing Else!
The Cab is Sacred Territory.
Prepare With:

• Clean coveralls
• Disposable gloves
• Disposable plastic boots
• Hand sanitizer
• New garbage bags
ESTABLISH “CLEAN/DIRTY LINE”

Discuss the location of the line with manager of the collection point
SWINE DELIVERY DIAGRAM

- Office
- Clean/Dirty Line
- Pig Holding Area
- Chute
- Swine Cargo Space
- Cab
SWINE DELIVERY STEPS

• Step into clean coveralls prior to leaving cab
• Put on a pair of disposable gloves
• Apply one pair of disposable boots each time leaving cab
• Then step out of the truck
Open rear gate for pigs without crossing clean/dirty line
Enter Cargo Area Alone
Apply second pair of disposable boots without touching ground
Spread fresh, clean bedding prior to loading.
Loading chute is on one side of the clean-dirty line
Cargo area is on the other side of clean-dirty line
Direct pigs into or out of cargo area in a one-way flow
Driver should not cross “clean/dirty line” to enter collection point

Collection point personnel should not cross “clean/dirty line” to enter the cargo area
AFTER TRANSFERRING LOAD

- Remove one pair of disposable boots
- Leave those boots in cargo area
- Leave on the other pair of boots if an office visit is required to complete paper work and to return to the cab
Disinfect any equipment used in moving pigs
PRIOR TO ENTERING CAB
Remove second pair of boots, coveralls and disposable gloves
Place soiled laundry and disposable supplies in plastic bag or dirty supply box.
Complete paper work without entering office if possible
In cab, disinfect hands and steering wheel
Re-fuel prior to washing truck

Proceed to nearest truck wash to wash, disinfect and dry truck and trailer
Collection points and packing plants that require drivers to exit and re-enter the cab multiple times make transport biosecurity difficult.
Apply clean pair of disposable boots each time driver leaves cab.
REMEMBER

THE GOAL OF SWINE TRANSPORT

Deliver Pigs and Nothing Else!
Transport Biosecurity Challenges

• Educating transport personnel
• Communicating expectations at site
• Establishing “Clean/Dirty” line at each collection point
• Designing or re-designing collection points that enable this type of biosecurity to take place
Thanks to Genetiporc for transport biosecurity pictures
Other Contributors

• Dave Wright, DVM
  Wright Veterinary Services, Buffalo, MN

• Scott Dee, DVM, MS, PhD, Dip ACVM, Montse Torremorell, DVM, PhD, Bob Morrison, DVM, PhD, MBA
  University of Minnesota

• Bob Thompson, PIC

• Angie Supple, DVM
  Suidae Health & Production, Algona, IA

• Nate Winkelman, DVM
  Swine Services Unlimited, Rice, MN