

# Responding to PEDV – Lessons Learned

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# Responding to PEDV.... Mistakes we made

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# Overview of PEDV outbreak response

1. Wean all healthy, at-risk piglets (wean down)
2. Load the farm with replacement stock
3. Homogenize herd immunity / feedback
4. Eliminate virus from farm environment (cleanup)
5. Stay clean.

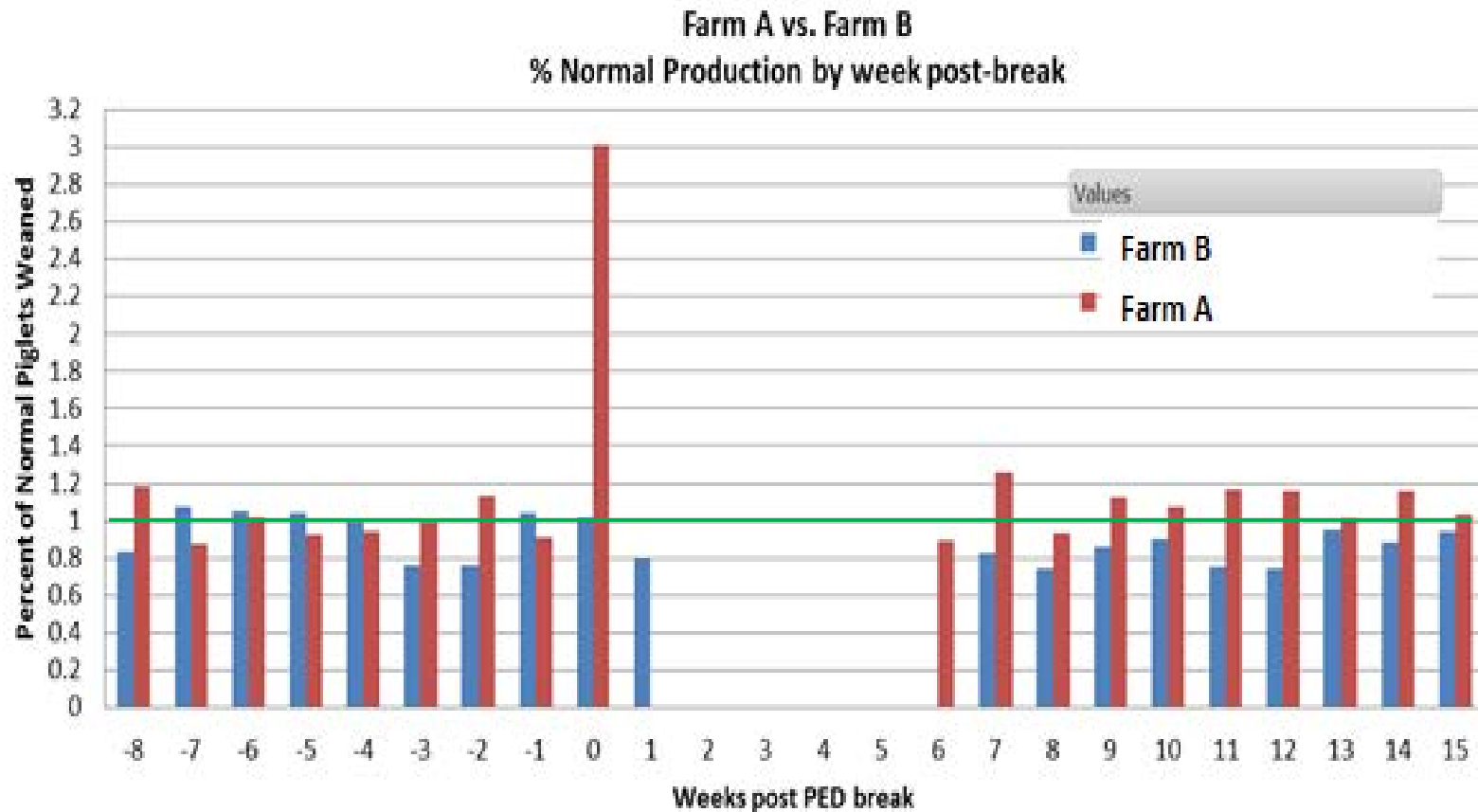
# 1. Wean down

- All animals on the farm are naïve to PEDV and susceptible to infection.
  - Any piglet that remains on the farm will become infected and will die.
- Early wean all piglets down to 8 - 10 days of age (normal wean age is 21 days)
- Must have space to take these animals
- Must provide special care
  - Mortality is low (1-3%)

# Rapid, organized response

- Rapid action is necessary
  - Within a few days of initial clinical signs all piglets will become infected
- Organization is necessary to make early wean possible.
  - Must have **clean** trailers and drivers ready to go
  - Must have facilities / space ready to take the animals
  - Dietary needs of younger piglets are different

# Differences in response time



## 2. Load the farm with replacement stock

- Replacement gilts are often raised off site from the sow farm.
- The farm will be “closed” to introduction of new animals during the time of clinical PED
  - New naïve gilts = fodder for viral replication
- We will need a supply of replacement females to continue with farm activities during recovery phase

# Rapid, organized response

- Goal is to bring healthy gilts in as soon as possible, then close the herd
- Under normal health circumstances gilt introductions require assurance of PRRSV-negative status
  - Testing takes 24 hours
- Risk of PRRSV transmission hasn't changed simply because PEDV is at the top of your mind



### 3. Homogenize herd immunity / feedback

- Immediate “feedback” of the whole herd should occur following herd closure
  - Use intestinal contents from piglets
  - Feedback material should be obtained from acutely infected animals. What is the correct piglet:sow ratio?
  - Exposing the whole herd will get all animals sick and over the disease at the same time
  - Expect colostral / lactogenic immunity ~3+ weeks after feedback begins
    - Piglets will continue get infected and die until then

# Feedback is critical to rapid recovery

- Ensure **every** sow is fed material
  - Individual scoop on every sow's feed
- Monitor **every** sow for clinical signs of illness
  - Diarrhea, vomiting, lethargy, off-feed
  - Mark sows once they display clinical signs
- Repeat feedback to sows that do not show clinical signs
- Discontinue feedback once all sows have shown clinical signs of PED

## 4. Eliminate virus from farm environment (cleanup)

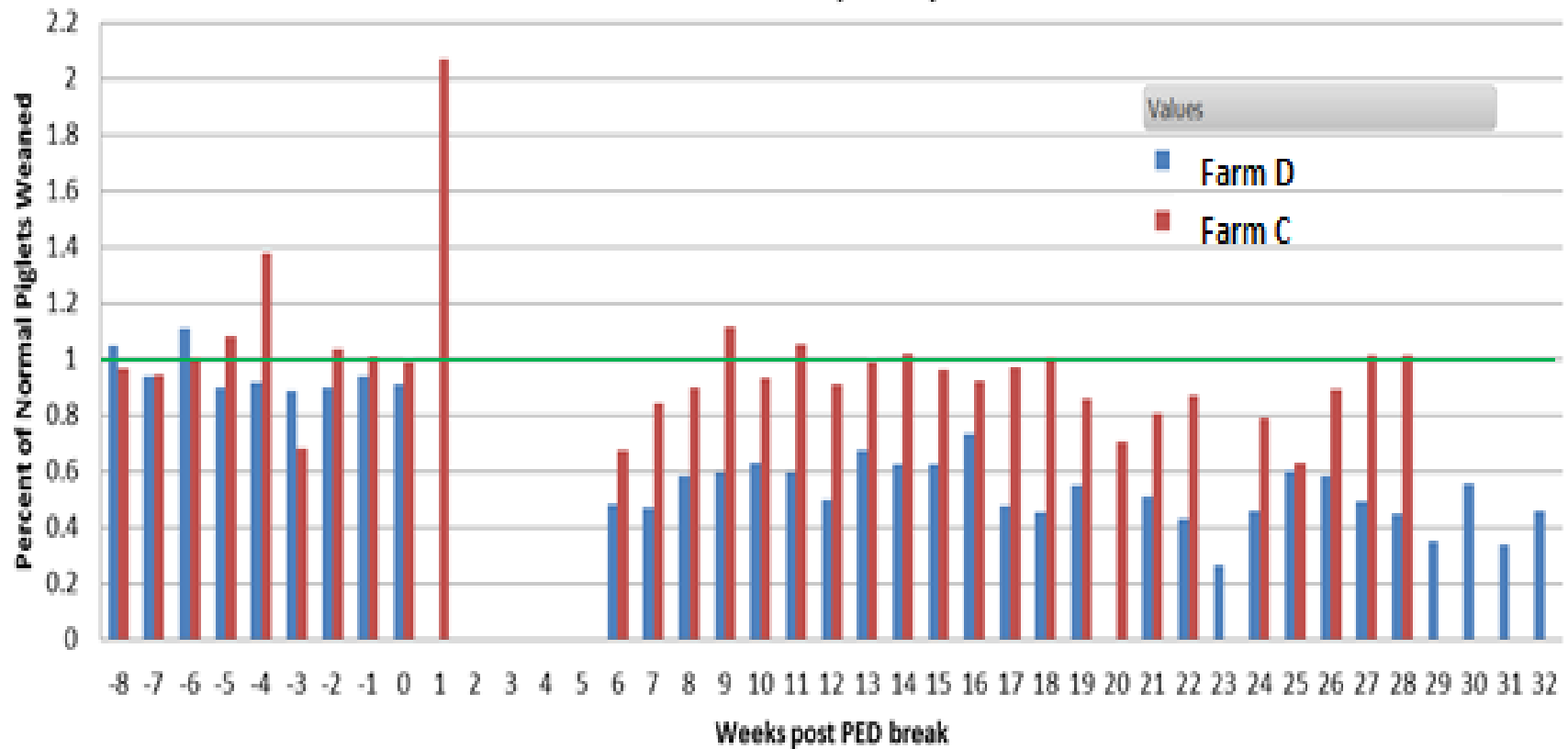
- Entire sow farm should be thoroughly cleaned and disinfected
  - Farrowing rooms should especially be sanitized
  - Wash sows before entering farrowing
  - Wash and disinfect hallways every time an animal is moved
  - Stop all movements between litters
  - Process piglets at 24 hours of age
    - Viral shedding occurs at 36- 48 hours post-exposure

# Creating a culture of cleanliness

- Do not only make a list of requirements or practices
  - If it's not on the list, it won't happen
- Instead, outline cleanliness concepts
  - Identify sources of contamination
  - Identify methods of spread
  - Teach proper principles of cleaning and disinfection
- You will achieve better buy-in and employees will address areas of risk that you may fail to identify

# This is what poor cleanliness looks like

Farm C vs. Farm D  
% Normal Production by week post-break



## 5. Stay clean

- Some animals will continue to shed virus for an extended period even after they appear to be completely recovered
  - This means that after everything seems to be back to normal, piglets look good, scouring has stopped, and weaning numbers are back to normal --- PEDV is still on the farm
    - **The minute you forget this and get lax with cleaning and sanitation, PED will flare back up.**
  - To give sow and piglet immunity the best chance to be successful, we must minimize their challenge from the environment

# 100% compliance of all protocols

- To speed recovery or prevent introduction of PEDV you must have 100% compliance of all farm protocols
  - Feedback procedures
  - Cleaning procedures
  - Piglet care practices
  - Biosecurity



















# We may have caught a break

- PED seems pretty bad, but...
- Estimated costs of FAD introduction into the US:
- CSF
  - **>\$51 billion over 10 years to US pork industry alone**
- FMD
  - **\$12.9 billion per year**
  - **>58,000 full time jobs**
  - **10 years = \$57 billion to swine industry**
  - **\$71 billion to cattle industry**





# Thank you!



## Questions or Comments?