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 sows
• **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
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?