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CAHFS

Porcine Reproductive and Respiratory Syndrome (PRRS)



The California Animal Health and Food Safety Laboratory System is a cooperative effort involving:

School of Veterinary Medicine

California Department of Food and Agriculture

California's Animal Agriculture Industries

Mission Statement

To provide the citizens of California with the highest quality diagnostic laboratory support service for:

- ✓ Livestock and poultry disease control
- ✓ Enhancement of livestock and poultry health management
- ✓ Ensuring the safety of foods of animal origin
- ✓ Equine health and performance
- ✓ Protection from diseases common to animals and humans
- ✓ Recognition and dissemination of new knowledge

Porcine Reproductive and Respiratory Syndrome (PRRS)

STATUS

Recognized in U.S. since 1987, also in Europe and Canada

CAUSE

Contagious viral disease

Severity of disease varies with viral strain

DISEASE

Reproductive

Signs in sows infected after 75 days gestation:

- ✓ Sows off feed (~2-3 weeks before premature births)
- ✓ Premature births (107-112 days)
- ✓ Stillbirths in more than 50% of litter
- ✓ Increased mummies
- ✓ Weak pigs, increased neonatal losses, pneumonia

Signs in sows infected at 31-70 days gestation:

- ✓ Term, live births
- ✓ Rare piglets infected with virus or titer positive
- ✓ Virus does not usually cross placenta before 75 days gestation

Boars may shed in semen up to 100 days



PRRS abortions

Respiratory

- ✓ May precede or follow reproductive problems
- ✓ All ages can be affected

Endemic Respiratory

- ✓ Most common in nursery pigs
- ✓ Nursery pigs infected at 3-8 weeks
- ✓ Virus present in blood for as long as 6 weeks
- ✓ Positive ELISA titer occurs 14 days after onset
- ✓ Titers drop by 4-6 months after infection
- ✓ Secondary infections contribute to death rate
- ✓ Sows and nursing pigs may not be affected

DIAGNOSIS

Serology

Collect Serum sample from:

- ✓ Sows at time of premature delivery
- ✓ Sows with low live birth rates
- ✓ Pigs with pneumonia 14 days after onset

Virus Isolation

Collect serum sample from:

- ✓ Sows off feed in 3rd trimester
- ✓ Live weak piglets
- ✓ Fresh stillborn piglets
- ✓ Pigs with pneumonia

Or collect:

- ✓ Lung from dead pigs with pneumonia

Semen testing:

- ✓ PCR on 3 samples, each taken 1 week apart

Necropsy

Submit:

- ✓ Weak baby pigs
- ✓ Pigs with pneumonia

CONTROL & PREVENTION

Quarantine and test new pigs on farm

Vaccines are available

Use all-in, all-out management