USDA RESPONSE TO SENECAVIRUS A

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Senecavirus A (SVA), also referred to as Seneca Valley virus, belongs to the same family as FMD (Picornaviridae).

SVA has been identified in U.S. swine since the 1980s.

Recently, SVA has been associated with clinical disease in swine that includes vesicular lesions indistinguishable from FMD.
Background

- *LOOKS* Like FMD
- *ACTS* Like FMD
- Cannot be differentiated from FMD without laboratory testing
- USDA role is to rule out FMD

- SVA (+) ≠ FMD (-)
What has been reported to USDA?

Vesicular FADs in Swine FY 2014 - FY 2017 YTD
EMRS Data 10.12.2016
Vesicular FAD Investigations in Swine by FY and Incident Site
EMRS Data FY 2014-2016
FAD Investigation survey

1. FAD investigation required, survey voluntary
2. Very Preliminary results:
   - 81 surveys (between 10.2014 and 9.2016)
     - Most common production types: Feeder (46%) Finishers (33%)
     - Most report pigs are not withheld or condemned at slaughter due to lesions
     - Many premises have written biosecurity plans
     - No biosecurity factor appears to be linked to SVA test results
     - Pigs are being moved after clinical signs are observed
Farm and Ranch: Swine vesicular investigation accessions compared to SVA positive results occurring between October 13, 2014 and October 1, 2016*  

- As recorded in USDA APHIS EMRS and NVSL databases
Slaughter and Processing Plants: Swine vesicular investigation accessions compared to SVA positive results, occurring between October 13, 2014 and October 1, 2016*

* As recorded in USDA APHIS EMRS and NVSL laboratory databases
Field observations during FAD investigations

1. Increasing number of cases identified at slaughter facilities
2. Swine in market channels with prolonged transit-to-final slaughter times later exhibiting vesicles
3. Vesicle-exposed swine in slaughter lairage are sent back into market channels to mingle with animals from farms with no vesicles
4. ID of reshipped market swine in US slaughter channels often not adequate for trace back to farm of origin
5. Once market swine / sows in market channels for 48+ hours, trace back to farm of origin of little SVA epi value due to multiple chances for infection & a short incubation period for SVA

Issues are serious for SVA...but could be disastrous for a true FAD diagnosis
USDA Guidance Document (7406.2)

- Official USDA guidance on swine with vesicular lesions
- Treated as an FAD until ruled out - must be reported to State or Federal animal health officials
- FAD investigation will be performed when vesicular diseases are observed
- FADDL determines if FMD can be ruled out
Vesicular lesions

SAHO / AD
VS Guidance 1200.2

FADD
• Investigate
• Collect & ship samples
• Enter into EMRS

Samples to FADDL
Determination of FMD rule out

- Assign RCN
- Assign an FADD
- Assign a Priority
- Contact FADDL via email
What about FADD investigations where SVA is suspected based on epidemiologic data?
Vesicular lesions

SAHO / AD
VS Guidance 1200.2

- Assign RCN
- Assign an FADD
- Assign Priority
- Contact FADDL via email

FADD
- Investigate
- Collect & send samples
- Enter into EMRS

Samples to FADDL
Determination of FMD rule out

SAHO/AD decision +/- NAHLN Lab
2nd set of samples

FADD Investigations with SVA Suspected Based on Epidemiological Data

- **NAHLN- Positive FMD screening tests:**
  - NAHLN labs will call SAHO and AD in the State where animals are located
  - Investigation priority level elevated, FADDL must confirm
  - Response activities per VS Guidance docs

- **NAHLN- Negative FMD screening tests:**
  - Results reported via routine electronic messaging or as requested by the SAHO or AD

- **AD or SAHO make initial decisions about disposition and animal movement**
What happens when a NAHLN lab receives vesicular samples without an FAD investigation number?
Vesicular lesions

SAHO / AD VS Guidance 1200.2

NAHLN Lab receives samples, no RCN

+/− FADD
• Investigate
• Collect & send samples
• Enter into EMRS

Assess sample quantity

+/− Test for FMD
+/− Test for SVA

Samples to FADDL
Determination of FMD rule out

- Assign RCN
- Talk to Submitting Vet
+− Assign an FADD
- Assign a Priority
- Contact FADDL via email

What about swine production systems that have been previously investigated and tested FAD negative?
Vesicular lesions at epi linked site Originating site FADD investigation in Last 14 days w/ FADDL (-) FMD

**SAHO / AD**
VS Guidance 1200.2

**FADD/ Accred Vet**
- Investigate
- Collect & send samples
- Enter into EMRS

**Samples to FADDL**
Determination of FMD rule out

- Assign new RCN
- Assign an FADD or approve Accredited vet to collect samples
- Assign a Priority
- Contact FADDL via email

**SAHO/AD decision +/- NAHLN Lab**
2nd set of samples
FAD samples by accredited veterinarians

- Unexpected change in morbidity, mortality or clinical findings of vesicular disease within an epi linked production system
  - Must be immediately reported by accredited veterinarians
  - A new FAD investigation may be initiated
What do producers and accredited veterinarians need to know during and after an FAD investigation?
Critical information

1. Follow strict biosecurity practices
2. Notify the AD or SAHO with unanticipated or unexpected change in morbidity/mortality associated with the vesicular lesions
3. Communicate!
   - Established policies provided in VS guidance 12001.2 and the Ready Reference Guide
Critical information

4. Swine moving interstate commerce must meet all State and Federal requirements including 9 CFR 71.19 (g) and 161.4

5. If non-slaughter swine from an investigated premises are to move interstate within 30 days following an FAD investigation:
   - Accredited veterinarian contacts the SAHO of the receiving state
   - The receiving SAHO will provide requirements for any additional documentation necessary for CVI or interstate movement
What communications are needed regarding animals headed to slaughter with a negative FAD investigation and healed vesicular lesions?
Communications: destined for slaughter

1. Accredited veterinarians
   - Contact the SAHO or AD (in State of premises) and provide detailed information on when/where slaughter

2. SAHO or AD
   - Provide official correspondence to USDA FSIS overseeing the destination slaughter establishment.
     • FAD investigation, lab reports = FMD negative, w/in last 30d
     • Detailed information about animal arrival

3. Accredited veterinarians/Producers
   - Communicate with slaughter facility procurement personnel
   - Resolved FAD investigations for the loads of animals being sent to the slaughter facility
What about swine with vesicular lesions observed at slaughter by FSIS?
Vesicular lesion in slaughter channels

1. FSIS Policy
   - Requires immediate notification of AD or SAHO

2. SAHO / AD
   - If FADD assigned - follow FAD Investigation Manual Section 8-5
   - Assess slaughter operations capabilities to hold product
   - Communicate with FSIS on how to further process affected animals eligible for slaughter.
Vesicular lesion in slaughter channels

3. SAHO / AD options
   - Quarantine / hold the lot of animals until test results received (or at the discretion of the AD/SAHO)
   - Allow eligible animals to be slaughtered after sample collection for FAD testing
     - Must pass AM /PM inspection; all FSIS PM regulations apply
     - Hold carcasses, processed product, blood and offal from the lot until test results received
   - Allow routine slaughter w/o restrictions or testing based on FADD findings
   - Animals with vesicular lesions not to leave the facility for another facility until testing is completed by a NAHLN lab
If you have questions about this guidance ....

Contact the VS Assistant Director that oversees the State where you are located
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