Risk Based Comprehensive and Integrated Swine Surveillance

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Current Surveillance Challenges

• Current funding tied to regulatory disease programs
  – Does not allow flexibility for surveillance in response to changing priorities
  – Makes it a challenge to justify surveillance dollars for current program diseases
    • e.g. PRV
  – Redundancies mean added costs
“VS [USDA-APHIS-Veterinary Services] will design and direct comprehensive national animal health surveillance systems capable of finding foreign, emerging and program diseases and of supporting international reporting and trade verification requirements.
Comprehensive and Integrated Swine Surveillance

A system that incorporates:

• Collaborative prioritization
• Defined disease surveillance objectives
• Planned collection and coordinated testing of appropriate surveillance samples
• An infrastructure for collection of surveillance data at multiple risk-based points or “surveillance streams”
• An agreed upon Response Plan
• An IT infrastructure to record and analyze data for appropriate action
• A regular analysis of surveillance needs and tools (planning and evaluation)
• Adequate funding

NOT just a collection of surveillance plans- PRV, Swine Brucellosis, Classical Swine Fever, Vesicular Disease Surveillance, etc.

Adapted from Dr. John Korslund, USDA
Surveillance Begins Locally but Looks Nationally for the Appropriate Streams

• Sentinel Veterinary Clinics
  – Provides local intelligence and observations
• FSIS condemnation data
  – Broadens the perspective
• Diagnostic lab submissions
  – Focus on clinical disease
• Down the Road
  – Oral fluids vs. serum
National Pork Board Swine Surveillance Working Group

- Collaboration of industry, subject matter experts, USDA-NSU, USDA-SHP
- Working Group ranked 27 diseases
Swine Surveillance Working Group

Disease surveillance priorities:

1. FMD – proof of freedom
   • 95% confidence in the detection of 1 case in 1 million pigs in 2 weeks

2. PRV – detection
   • 95% confidence in the detection of 1 case in 1 million pigs in 4 weeks

3. CSF – proof of freedom
   • 95% confidence in the detection of 1 case in 1 million pigs in 6 weeks

4. Swine Brucellosis - detection
   • 95% confidence in the detection of 1 case in 1 million pigs in 4 weeks

5. SIV – detection

6. Trichinae – detection

7. Toxoplasma – detection
Comprehensive Integrated Swine Surveillance 2012 Pilot Project

1. Breeding swine with standard PIN tags
   Breeding swine with state PIN tags
   Plants

2. Tags and blood collected and shipped to Federal Labs

3. Federal Labs prepare samples and hold with standard PIN or state PIN

4. Federal labs report sample IDs to NSU

5. State Premises Repository
   State ID
   Address and ZIP

6. National Premises Repository
   PIN

7. Premises Repositories update active breeding sites

8. Sort PINs according to SCWDS and wildlife services data for proximity to feral swine

9. List of targeted PINs delivered to Federal Lab

10. Federal Labs test targeted samples for PRV and Brucella

11. Federal labs report results (with ID) to NSU

12. NSU analysis and reporting to industry and states
Industry Support

National Pork Board and National Pork Producers Council

- The National Pork Producers Council / National Pork Board supports the development and implementation of a comprehensive and integrated swine disease surveillance system that addresses animal and public health needs.

- The National Pork Producers Council / National Pork Board calls on all producers to work with their veterinarians and submit appropriate SIV surveillance samples into the USDA SIV surveillance program.

American Veterinary Medical Association

- Submitted by the American Association of Swine Veterinarians during the Winter 2010 House of Delegates meeting

- “Resolved, that the American Veterinary Medical Association (AVMA) supports the development of comprehensive and integrated swine disease surveillance of the US swine herd.”
Adequate Funding

Funding started with:

- APHIS-VS 2009 Congressional SIV supplemental appropriations through Health and Human Services ($27 million)

Funding continues with FY2013:

- APHIS has been working . . . to increase the efficiency of animal health surveillance without sacrificing confidence of industry and trading partners . . . targeted surveillance . . . combining surveillance streams . . . one sample is tested for multiple diseases . . .

- Decrease Swine Health Program from $23 million in 2012 to $20.3 million in 2013
  - -$2.6 million (-11%)
  - Modify swine surveillance efforts (-$2.515 million)
CISS Stakeholders

- USDA
  - National Surveillance Unit
  - APHIS – Veterinary Services
  - APHIS – Emergency Programs
  - Wildlife Services
  - National Veterinary Services Laboratory
  - National Animal Health Laboratory Network
  - Agricultural Research Service

- HHS
  - Centers for Disease Control

- States
  - State Pork Producer Associations / Pork Producers
  - State Animal Health Officials
  - State Diagnostic Labs

- Packers

- American Association of Swine Veterinarians