

# National Institute of Agriculture Swine Disease Committee



## Swine Health Programs Updates

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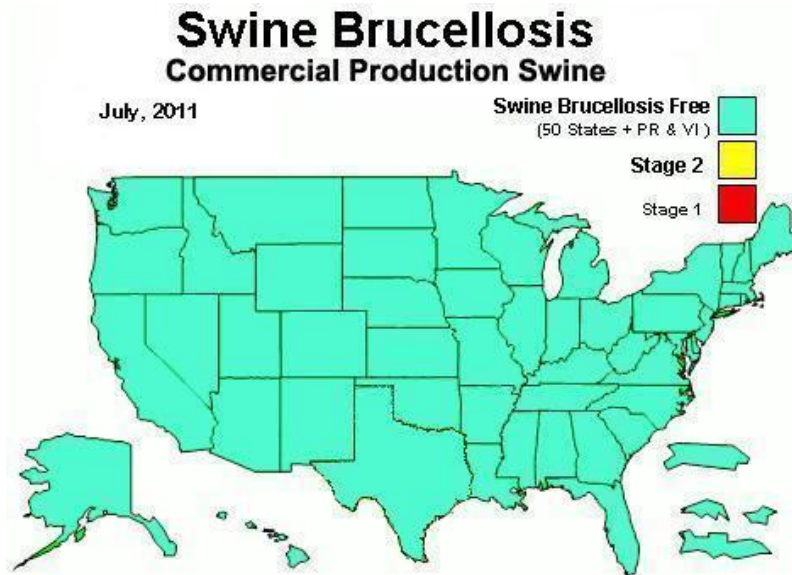


# Swine Surveillance and Regulatory Programs Updates

- Pseudorabies (PRV)
- Swine Brucellosis (SB)
- Classical Swine Fever (CSF)
- Swine Health Protection
- Trichinae Certification
- Swine Influenza Virus (SIV)



# Swine Brucellosis FREE



2012 SB High risk herd infections identified and indemnified

- HI- Dually infected herd (45 animals)
- TX- One animal
- GA- One dually infected herd (38) animals

# PRV Surveillance: The Numbers

- FY 2011 PRV data

	FY 2010	FY 2011
Diagnostic laboratory serologic submissions (total)	14,567	27,994
Sick pig submissions	19	1,889
Routine Serology/herd profiling	13,967	24,891
High risk swine population	501	966
Swine with known feral swine exposure	8	153
Epidemiological traceback	58	95
Sow boar testing (SB too)	278,022	290,304
Meat juice	13,318	13,831

# Pseudorabies Surveillance

- All States remain Stage V “Free” for PRV
- FY 2012 PRV high risk herd infections identified and indemnified
  - HI- one dually infected herd (45 animals)
  - GA- one dually infected herd (38) animals



# Pseudorabies Surveillance

- PRV is a Federal/State/industry regulatory program
  - All samples have a chance for surveillance including slaughter, practitioner submitted or other sampling
- Testing feral swine for PRV is monitoring
  - PRV gB ELISA
- PRV surveillance program targets to protect the commercial industry



# Coming Soon to the *Federal Register*

## **A New Approach to Managing Pseudorabies and Swine Brucellosis: A Proposed Framework**



# The Concept Paper

- Similar to TB/Brucellosis Concept Paper
- Proposes
  - Modernizes the regulatory framework to create a comprehensive risk-based, flexible regulatory program
  - Prescribes results vs. actions
  - Reduces the introduction of disease by using science and surveillance methods as necessary to provide assurances that animals in commerce are low-risk for disease





# The Concept Paper

- What it proposes (continued)
  - Changes the reporting mechanisms to reduce the burden of annual reports
  - Increases options for managing infected herds and creates a consistent program for indemnity for swine
  - Enhances PRV and swine brucellosis surveillance
  - Eliminates the State classification system and moves to a science-based approach



# Change in Pseudorabies and Swine Brucellosis

- Issues needing correction
  - Indemnity
  - PRV and SB
    - ❖ Disease eradicated in commercial swine, but program does not take into account changing risk factors
    - ❖ All States are considered disease free, therefore all swine in States are “free.”
    - ❖ Disease still exists in wild/feral swine/swine allowing feral exposure
    - ❖ The regulations pertain to movement of diseased animals
    - ❖ Surveillance needs modification to allow for targeted surveillance



# The Concept Paper

- Combines SB and PRV into one program
- Establishes interstate movement parameters for swine neither infected or exposed to PRV or SB
- Provides conditions for interstate movement of infected or exposed swine



# The Concept Paper

- Transparency
  - The concept proposed is open and transparent
    - ❖ Information will be able to be reviewed by all through *Federal Register* notices.
  
- Laboratories
  - The concept paper proposes
    - ❖ To address laboratory concerns
    - ❖ Create consistency between programs and laboratories to ensure reliable results.



# The Concept Paper

- The concept paper contains details on current issues the PRV/SB program faces and possible solutions for the future.
- We welcome comments.
  - Remember:
    - ❖ We have to change our way of doing business to provide the best service possible to all stakeholders.
    - ❖ Provide the best program to address risks.
- PRV and SB is eradicated from commercial herds.
  - Is it not time to evolve from an eradication phase to the next step?



# Classical Swine Fever

- Surveillance Streams
  - Swine highly suspicious for CSF
  - Sick pigs submitted to veterinary diagnostic labs
  - High-risk slaughter swine
  - Feral swine
  - Swine from waste feeding operations in high-risk States



# CSF Surveillance: The Numbers

## FY2011

- Sick pigs submitted to diagnostic labs: 2,840
- Slaughter swine sampled with high probability of exposure: 2,489
- Feral swine sampled: 3155
- Swine with a high probability of exposure (garbage feeders and high-risk FL, TX, and PR herds): 3,834
- Swine sampled in lower risk states: 63
- **All negative for CSF**



# Swine Health Protection Act

## FY2011

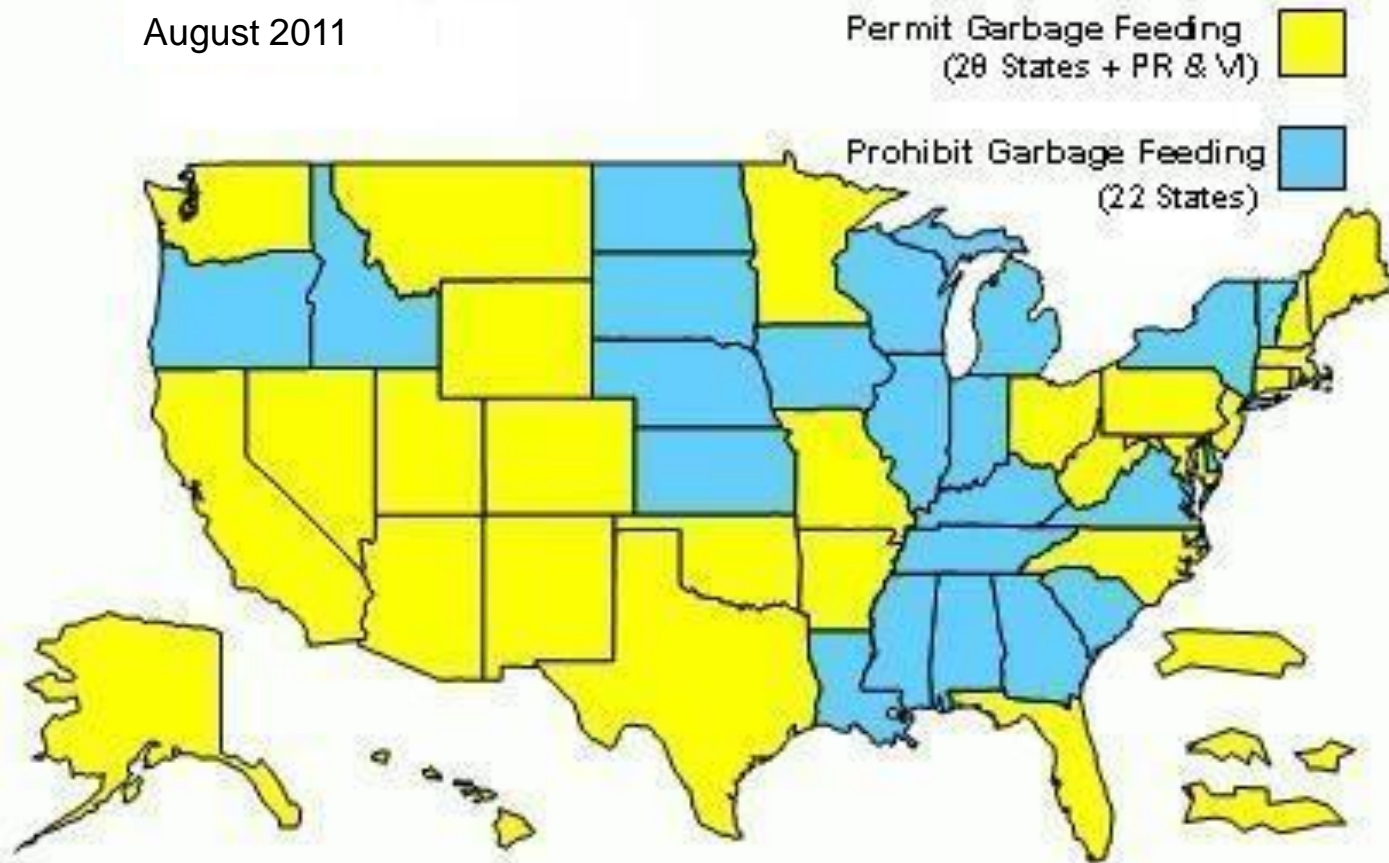
- 1,394 licensed premises
  - 653 in PR
- Inspections of licensed premises
  - 6,445 premise inspections
  - 956 temperature checks
  - 69 violations
- 33,452 searches for non-licensed feeders
- 75 non-licensed feeders found





# Swine Health Protection

August 2011



# Swine Influenza Virus Surveillance

- Swine are susceptible to influenza viruses from swine, avian, and humans.
- Influenza viruses are constantly changing and it's possible for two viruses to swap genes if a "host" is infected with more than one influenza virus at the same time.
- This increasing genetic diversity has complicated diagnosis and control in swine populations.
- The flu viruses found in swine do **not** normally infect humans. However, sporadic human infections with variant influenza viruses have occurred.



# Swine Influenza Virus Surveillance

- Objectives
  - Monitor genetic evolution and ecology
  - Provide isolates for research activities
  - Provide isolates for progressive development of
    - ❖ Diagnostic reagents
    - ❖ Diagnostic assays
    - ❖ Vaccine products

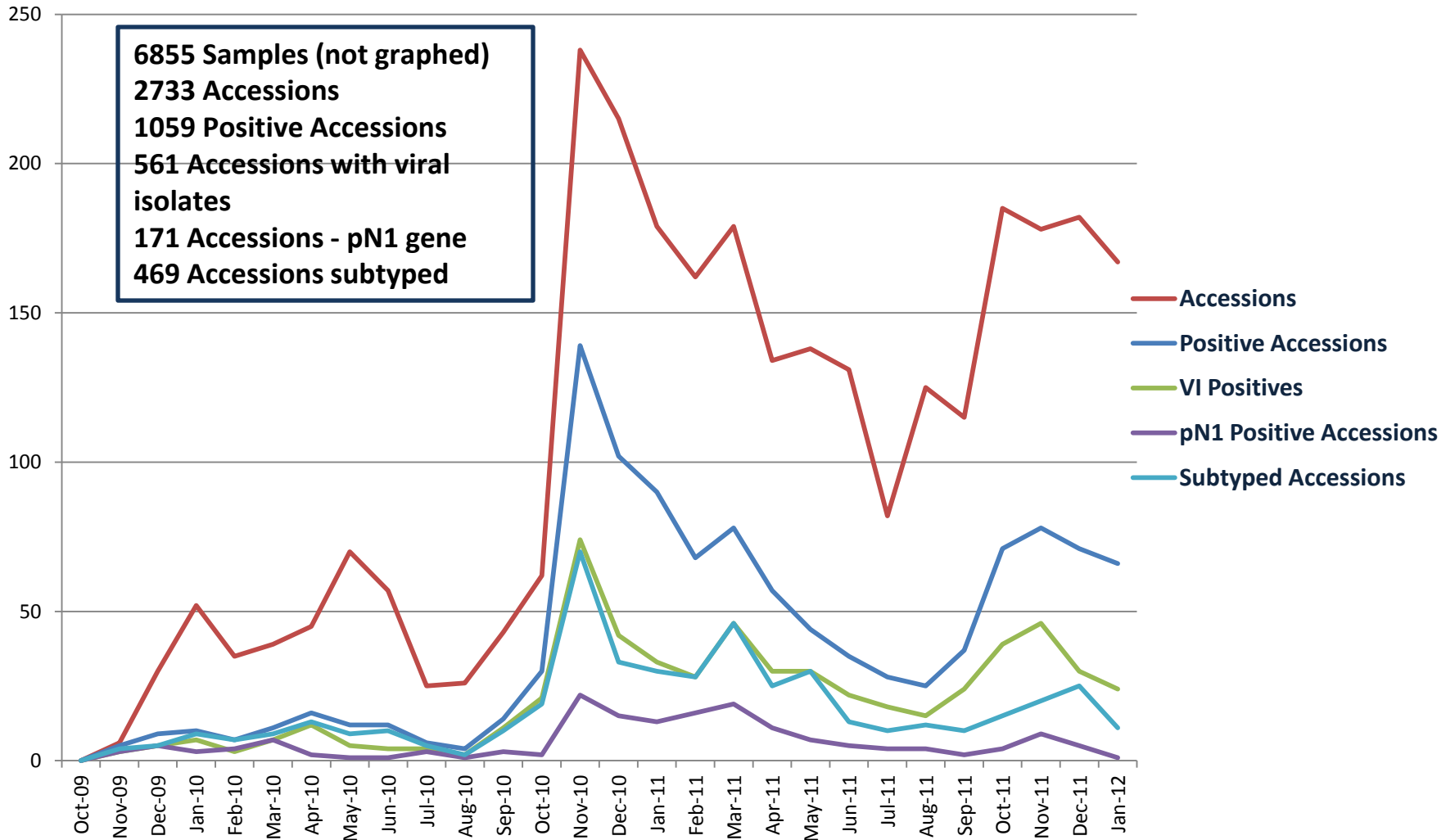


# Swine Influenza Virus Surveillance

- Surveillance streams
  - Case compatible accessions to diagnostic laboratories
  - First point of contact or commingling events
  - Swine linked to a human case of variant influenza

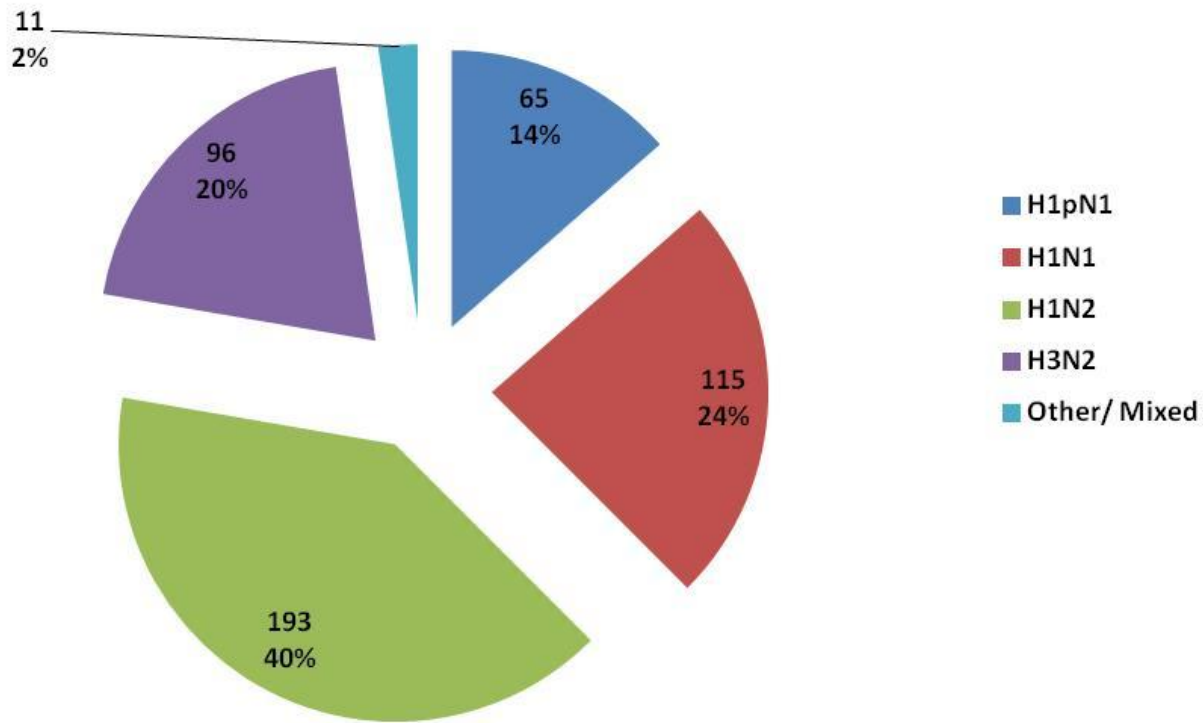


## USDA SIV Surveillance Program Isolation and Characterization Activities - 10/1/2009-1/31/2012



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USDA SIV Surveillance Program Subtype Percentages - 10/1/2009 - 01/31/2012



# SIV Sequencing through 12/31/2011

Sequencing necessary to meet epidemiology, vaccine decision-making, and diagnostic objectives, due to large variations in SIV genomes within subtypes.

- 8 genes sequenced (full genome): 12 isolates
- 3 genes sequenced (H,N,M): 160 isolates
- <3 genes sequenced: 75 isolates
- Sequenced, not yet reported: 382 isolates



# Conclusion

- Change
  - Surveillance is changing to focus on surveillance stream vs. disease
  - PRV/SB concept paper will soon be available for comment
- Surveillance activities will continue to evolve and become more comprehensive





# Questions?

