



Veterinary Services

USDA Swine Program Initiatives and Updates: Collaborations to Achieve Results

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Veterinary Services Swine Health Programs

Overview

- Update on CIS activities
- SECD and collaborations
- Business plans



Swine activities FY 2014 and FY15

- Comprehensive integrated surveillance activities
 - PRV / swine brucellosis surveillance
 - Classical swine fever surveillance
 - ASF / FMD surveillance pilot
 - Influenza A virus in swine surveillance
 - Enhanced passive surveillance
 - Swine health protection
- SECD
- Trichinae

CIS Swine Surveillance

- Pseudorabies/ Swine Brucellosis Activities
 - Surveillance streams
 - Diagnostic Laboratory
 - High risk swine
 - Slaughter stream
 - 99.9 percent of domestic swine samples were negative
 - Slaughter samples remain negative
 - Occasional finding of positive from high risk herds with high probability of feral swine contact
 - Feral swine remain a risk- Monitoring activities indicated 21 percent of feral swine tested positive for PRV (FY13 convenience samples)
 - Pilot swine brucellosis testing in select NAHLN labs this FY.

CIS Swine Surveillance

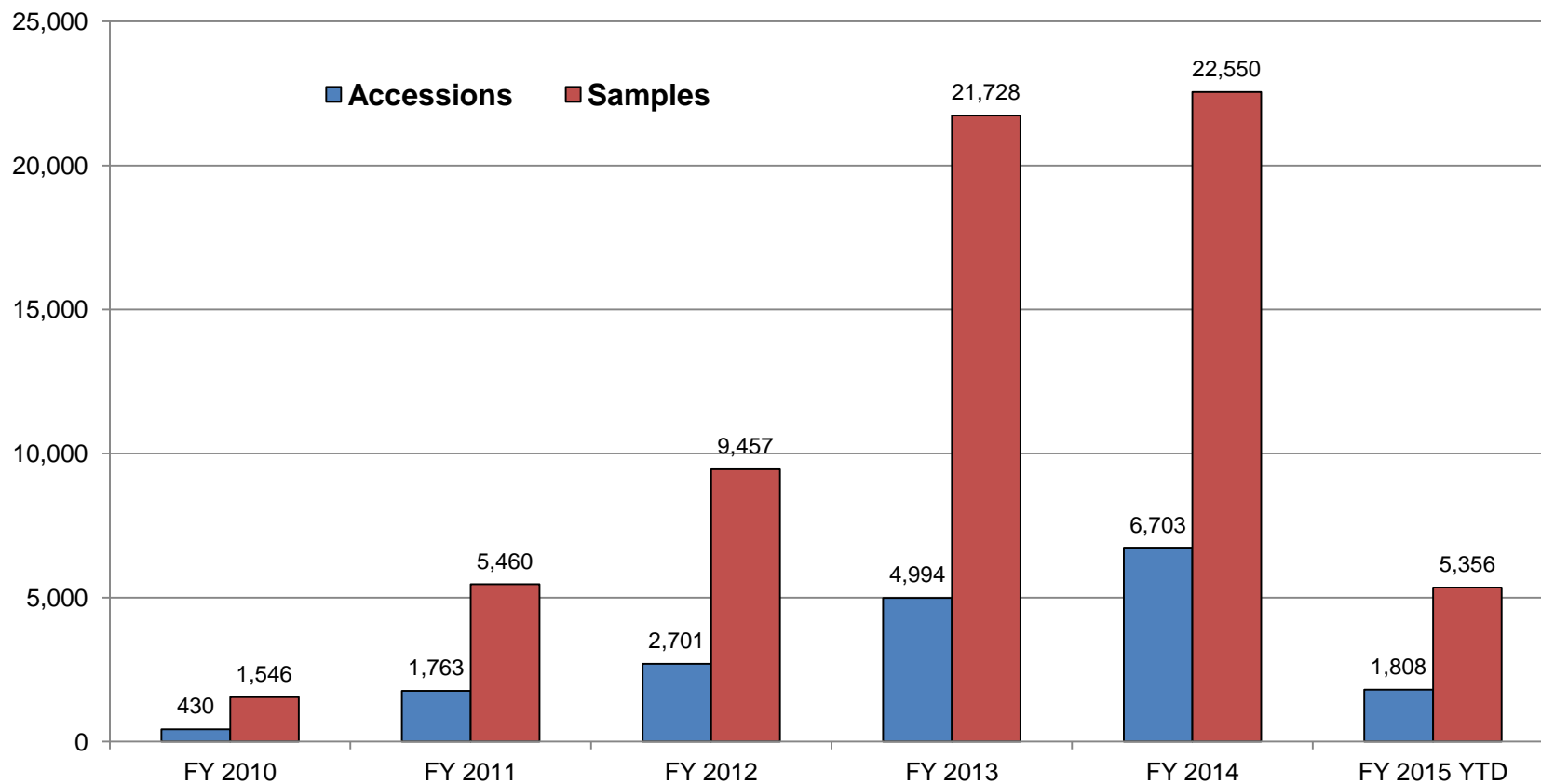
- Classical Swine Fever
 - Goal of rapid disease detection
 - Targets 5 areas
 - Waste feeder/backyard (high priority)
 - Sick pig specimens to VDL
 - High risk slaughter swine
 - Feral swine
 - FAD investigations

CIS Swine Surveillance (CSF)

Surveillance Stream	FY 2013 Specimens	FY 2014 Specimens
Sick Pigs Specimens submitted to VDL	2285	2,838
Slaughter Swine meeting collection definition	2285	2,198
Swine with high probability of exposure	3,991	4,941
Other tested samples (low risk)	-	-
Feral Swine	2,383	2,789
FAD Submission	3 animals	4 animals

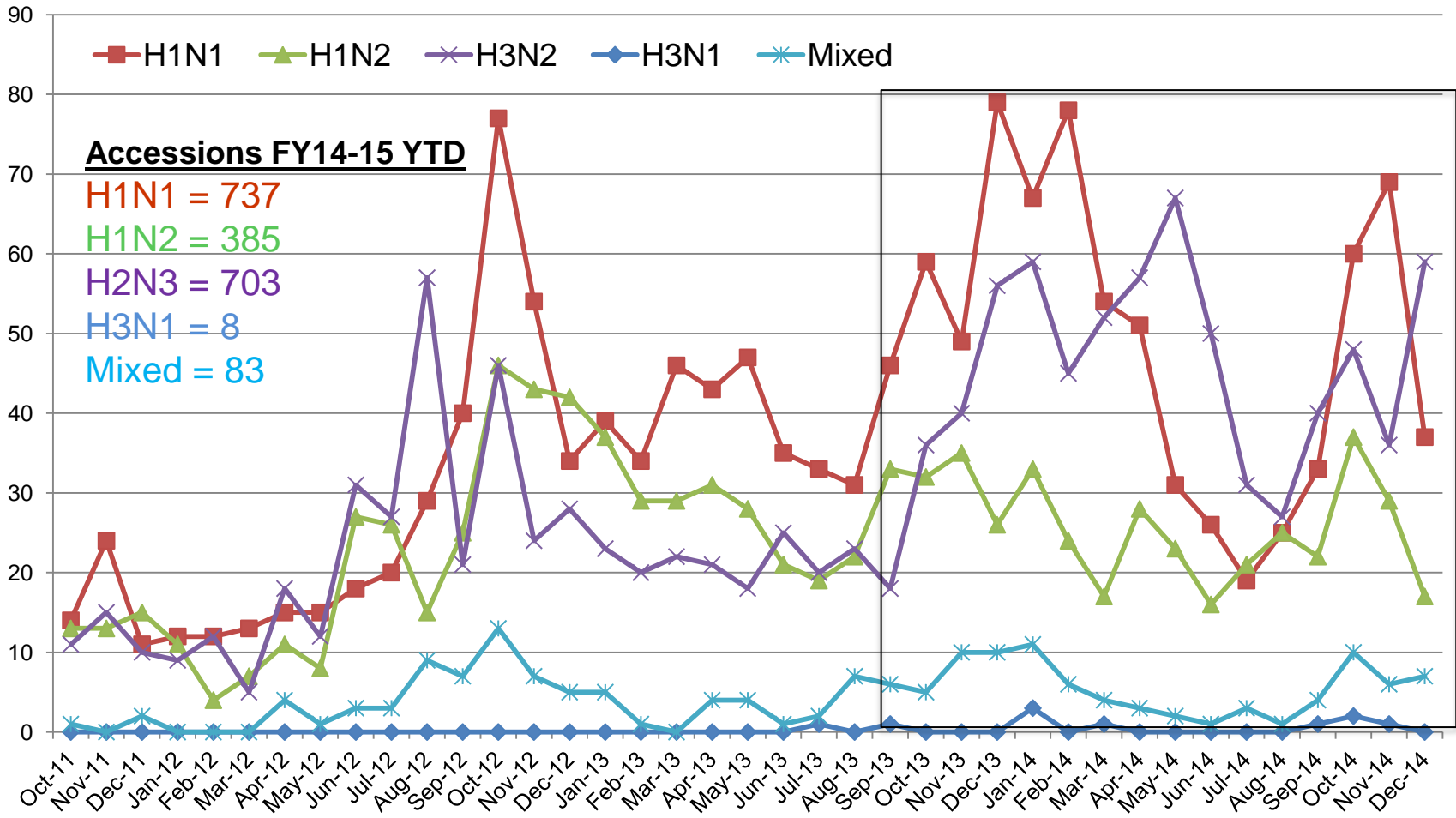
CIS Swine Surveillance

Influenza A Virus in Swine



**USDA IAV in swine surveillance: Number of accessions and samples tested
FY 2010 through FY 2015 mid feb**

CIS Swine Surveillance (IAV)



Number of accessions with each IAV-S virus subtype present by month (FY12 through FY15 YTD)

Recent efficiencies in IAV-S program

1. Changes in the testing algorithm implemented June 2014:
 - To gain efficiency at obtaining viruses from submitted samples
 - Result: the average % of VI (+) samples has increased from ~31% to ~46%
2. Changes in the repository implemented February 2015
 - On receipt of samples, only grow out viruses chosen to go into full genomic sequencing (“random” sampling”, 16/month)
 - And viruses identified as “viruses of interest” by NADC
 - Result: May be a 2-4 week delay in getting a virus that is not already grown out

IAV-S :

Program analysis & review underway:

APHIS PPD Internal analysis

- Analyze program, achievements, outcomes generated
- Collect cooperator /key stakeholder views on current and desired future of IAV-S surveillance in the U.S.
- Identify / analyze IAV-S surveillance cost factors & develop forward projections

Contracted external technical epidemiologic review

- Evaluate the overall surveillance design, sampling efficiency, sample selection and submission process, sampled populations, representativeness of data
- Provide recommendations for process improvement and system efficiencies

CIS Swine Surveillance ASF and FMD Surveillance Pilot

- Objectives:
 1. **Enhance awareness** for the reporting /collection of samples from cases compatible with ASF and FMD.
 2. **Implement active diagnostic testing for ASF and FMD and messaging results:** surveillance in eight authorized NAHLN laboratories.
 3. **Collect baseline surveillance information** from surveillance streams that could be used to substantiate ASF and FMD disease freedom and to monitor for early detection of disease.
 4. **Exercise a communication plan** for potential suspect cases of ASF and FMD and ensure that all parties involved understand the communication process and implement it in an effective and timely manner.
 5. **Increase diagnostics preparedness** and provide the laboratory testing network with an exercise for a potential outbreak.

CIS Swine Surveillance ASF and FMD Surveillance Pilot

- 12 month pilot / 8 approved NAHLN labs
- Notification plan = handled same as CSF
- ASF or FMD suspected → FAD investigation
- Surveillance streams = CSF and high value PRV
- Test: rRT-PCR
- Sample types
 - ASF = whole blood (EDTA)
 - FMD= oral swabs
 - FADDL validation of additional tests and tissues
- Runs through August 2015



EPS: Slaughter condemnation

- Monitored weekly
- Three classes of swine
 - Sow/boar, Roasters, Market
- Ante-mortem condemnations
 - CNS, DOA and Pyrexia
- Postmortem condemnations
 - Septicemia, Erysipelas, Pneumonia
- *Signals* verified through FSIS
- Verified signals are communicated to industry for field observations
- Recent info shared on TB findings



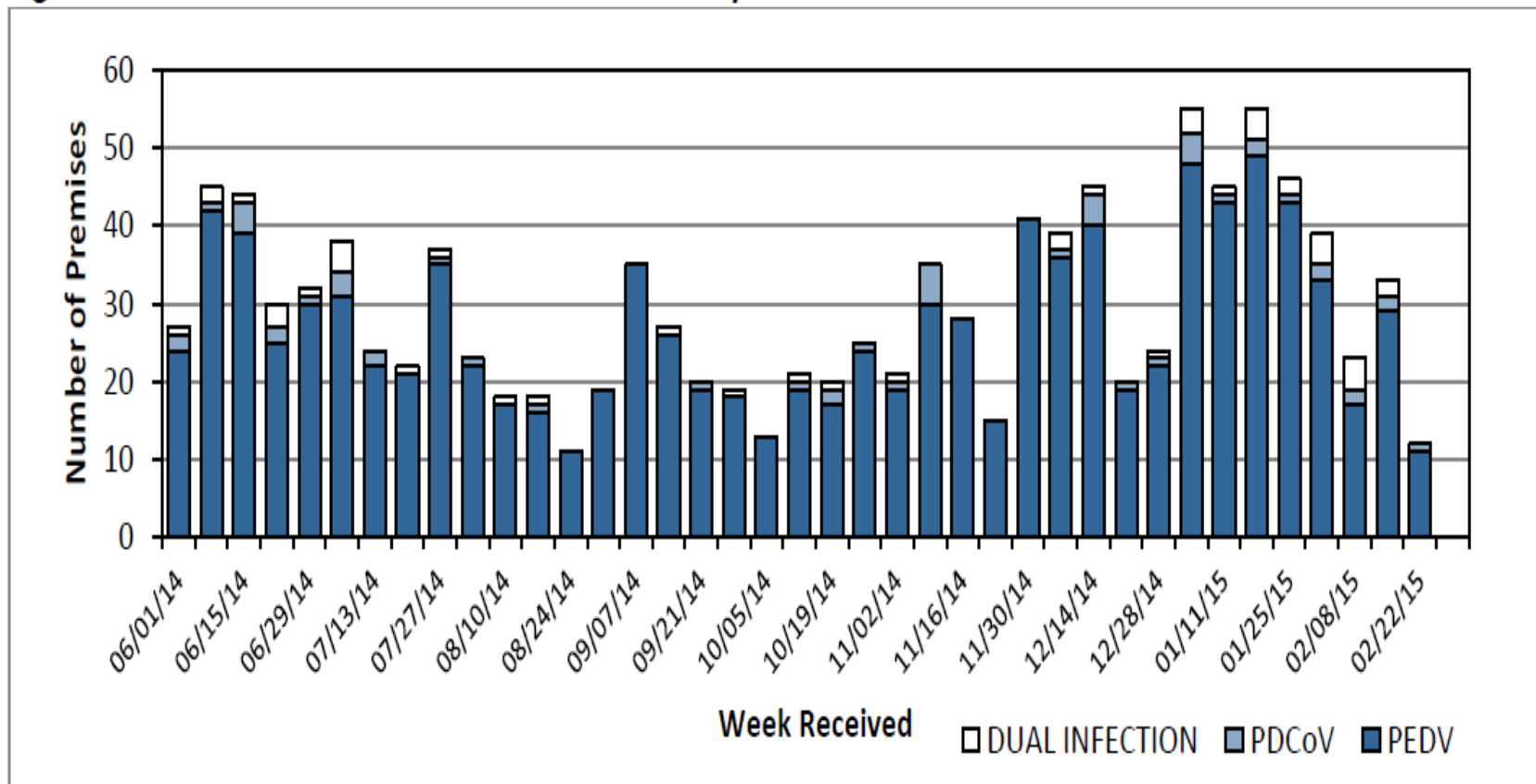
SECD Federal Order (FO)

- June 5, 2014
- Federal Order- *Reporting, Herd Monitoring and Management of Novel Swine Enteric Coronavirus Disease*
 - Establishes mandatory disease reporting
 - Establishes requirements for development of herd monitoring and management plans



SECD Reporting Findings

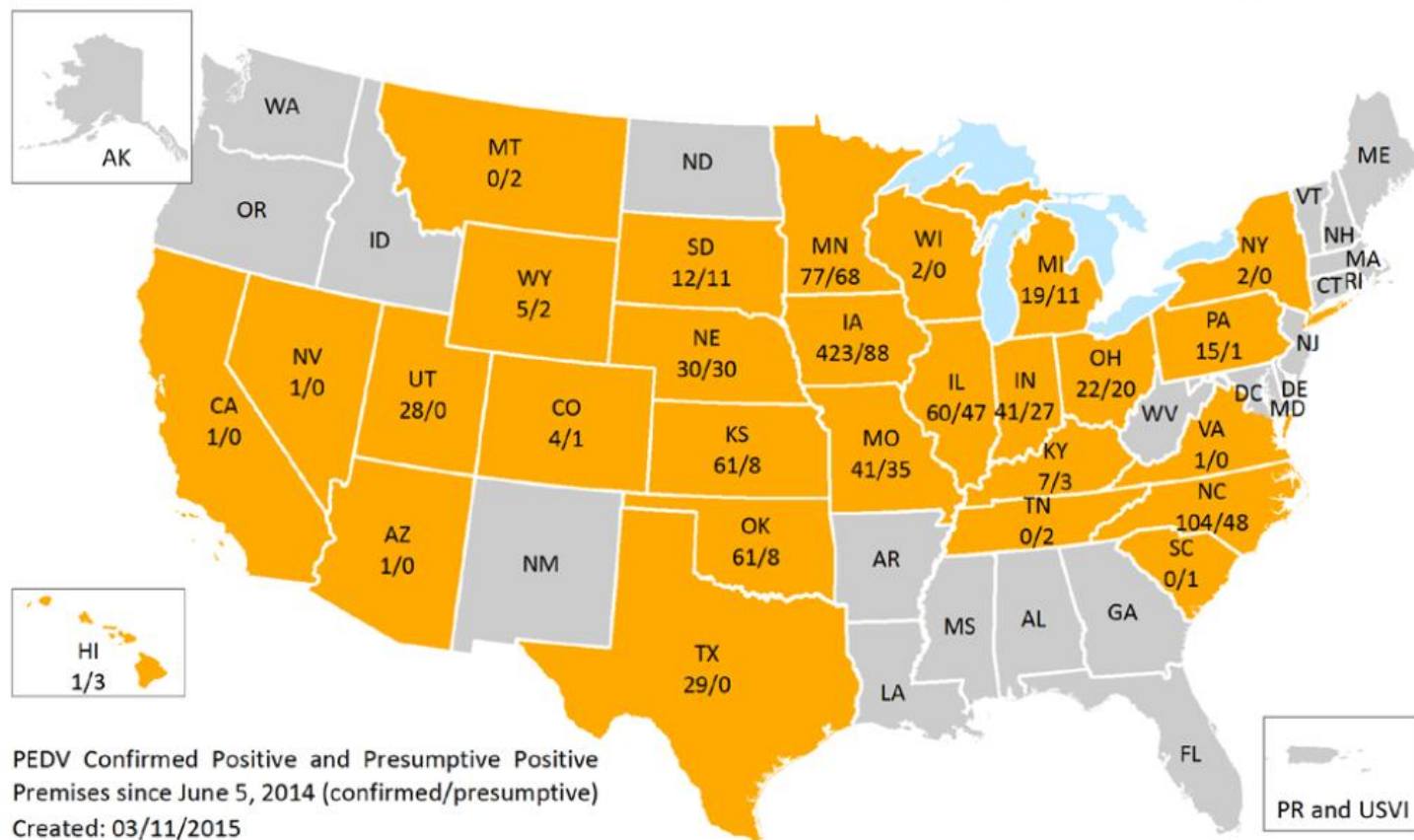
Figure 1. Number of Confirmed Positive Premises by Week ^a



^aWeek the sample was received at the laboratory for testing

Map of States with Positive PEDV Biological Accessions

Map 1. PEDV: Cumulative Confirmed and Presumptive PEDV Positive Premises since June 5, 2014



SECD and the Federal Order

- Reports issued weekly
- Reporting continues
- Discussions on next steps with stakeholders
- Program successes include
 - premises ID usage
 - development of accounting protocols
 - Industry/State engagement



Swine Health Business Plan

- Developed to outline priorities, objectives, strategies and field activities
- Tool for guiding spending plans for congressional appropriations
- Encompasses
 - One health
 - Comprehensive Surveillance
 - Emerging Issues
- Public comment encouraged on an annual basis
- Rolling 5 year plans

Swine Health Business Plan

- FY 15 Enhanced risk-based CIS
 - Performance analysis for CIS Swine surveillance risk assessments and cost benefit analysis
 - Document CIS strategy
 - Complete evaluation of FMD/ASF pilot
 - Identify regulatory and non regulatory mechanism for current swine programs
 - Pathways assessment
 - Develop plans for implementing swine brucellosis in NAHLN labs
 - Continue collaboration on enhanced passive surveillance

Swine Health Business Plan

- Emergency preparedness and response planning
 - Database process improvements and connectivity
 - Collaborations in secure pork supply
 - Collaborations to harmonize emergency response plans and data sharing



Swine Health Business Plan

- Field disease surveillance, investigation and control activities
 - Continue enhancement of field epidemiological activities
 - Develop EMRS for swine epi
 - Organize as state/tribal/industry working groups addressing feral/domestic swine interface issues
 - Collaboration on identifying international swine health risks

Swine Health Business Plan

- Zoonotic disease prevention and response
 - Explore alternatives for a trichinae program with industry collaborations
 - Collaborate with ARS on IAV-S activities
 - Collaborate with public health stakeholders to identify and evaluate food safety information



Swine Health Business Plan

- Develop swine health studies and special projects
 - Partner with industry to evaluate PIN tag use for real time surveillance
 - Complete ASF, CSF, FMD international sample collections
 - Collaborate with NVSL staff to evaluate FAD diagnostics
 - Continue collaborations on APHIS Feral Swine Damage Management program

Swine Health Business Plan

- Enhanced communication
 - Outreach to Industry, State partners
 - Develop communication plan for swine issues
 - Develop a CIS report that can be shared to stakeholders
 - Update swine program resource material
 - Develop communication necessary for revising State status and validation notification



Swine Business plan

- Business plans
 - Not set in stone; revised each year to update
 - Public comment and input encouraged
 - Located on the USDA website
 - http://www.aphis.usda.gov/wps/portal/aphis/ourfocus/animalhealth?urlile=wcm%3apath%3a%2Faphis_content_library%2Fsa_our_focus%2Fsa_animal_health%2Fsa_program_overview%2Fct_vsbp
 - Search for Veterinary Services Business Plan(s)!

Questions?

