



Feral Swine and Brucellosis

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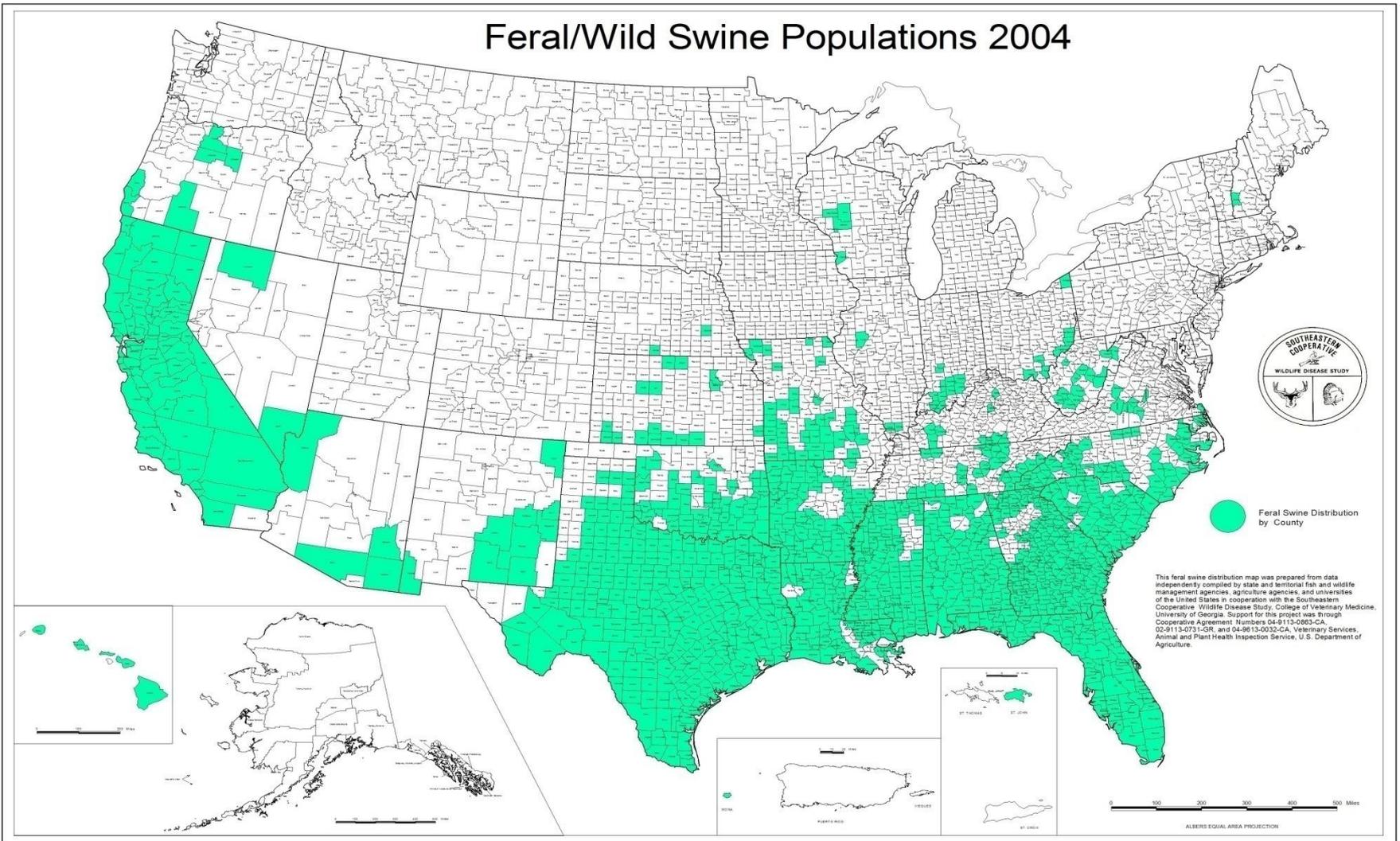
- [Feral Pigs in Florida](#)
- [Feral Pigs in Oregon](#)
- [Feral Pigs in Missouri](#)
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Feral Swine Map

Feral/Wild Swine Populations 2004



Which herd is transitional? Which herd is at risk?



It's not how they look, but how they're managed...



Sid Vicious

of Two Rivers Outdoor Club

The Nation's only Validated Brucellosis-free & Qualified Pseudorabies Negative Herd of Purebred European Wild Boar Hunting & Breeding Stock



A facility in the SE U.S. infected with swine brucellosis



Safeguarding Animal Health

Comprehensive and Integrated Surveillance

CIS is a surveillance system

- Designed for efficiency and flexibility (add /remove diseases, surveillance streams)
- Supports the ability to detect any disease, even those we may not yet know are here
- Composed of components that allow the system to function
 - Surveillance streams
 - Resources to collect samples, respond when needed
 - Labs to test samples
 - Databases for capturing surveillance data
 - People to analyze data and provide situational awareness



Data Stream	Targeted Populations	Pathogen-Specific Surveillance							Non-Pathogen Specific
		CSF	FMD	ASF	IAV- S	PRV	SB	Other	
Harvest (slaughter) surveillance									
Market swine	1 ^o Commercial-growers & finishers /pork	X				X			X
Cull sow boar	1 ^o Commercial- breeding populations	X	X	X		X	X		X
Roaster	1 ^o Commercial; Higher probability of dz	X	X	X					X
FAD / Emerging disease reporting									
Foreign animal disease	Domestic and feral swine	X	X	X				X	
Suspicious cases reported	Domestic and feral swine	X	X	X	X	X	X	X	
Comingling locations									
Live animal markets	Domestic and feral swine					X			
Public exhibitions, sick pigs	Domestic swine				X				
Suspicious cases reported	Domestic and feral swine	X	X	X	X	X	X	X	
Diagnostic laboratory submissions									
Case compatible sick pig	1 ^o Commercial –Targeted -high value	X	X	X	X	X		X	
Routine serology / herd profiles	Commercial swine					X			
Suspicious cases reported	1 ^o Commercial –Targeted high value	X	X	X	X	X	X	X	
High probability of feral exposure	Domestic swine –Targeted high value					X			
Suspected exposure to feral	Domestic swine –Targeted high value					X			
On-Farm collections									
Waste feeding operations	Domestic swine –Targeted high value	X	X	X				X	
Designated high risk areas	Domestic swine –Targeted high value	X	X	X		X			
Exposure to feral swine	Domestic swine –Targeted high value	X	X	X		X		X	
Wildlife monitoring									
Opportunistic feral swine	Feral swine- monitor disease reservoirs	X			X	X	X	X	
Targeted feral swine sampling	Feral swine - in high dz risk areas								
Enhanced Passive surveillance									
FSIS condemnation data	1 ^o Commercial	X	X	X				X	X
Practitioner observations									
Livestock market observations									
VDL syndromic submissions									



PRV Surveillance FY 2010-2014

Surveillance Stream/ Targeted population	Number of swine tested FY 2010	Number of swine tested FY 2011	Number of swine tested FY 2012	Number of swine tested FY 2013	Number of swine tested FY 2014 Q1-Q3
Diagnostic laboratory serologic submissions:					
Sick pig submissions	34	1,890	165	427	152
Routine serology/herd profiling	16,212	26,070	22,566	19,646	19,165
Swine w/ high probability of feral exposure	636	1,207	916	2,143	5,163
Swine w/known feral swine exposure	8	160	250	669	818
Epi traceback investigation	58	95	31	810	59
Total - Diagnostic lab serologic submissions	16,958	29,442	23,928	23,696	25,360
Cull sow-boars at slaughter	278,022	290,304	277,808	239,284	178,887
Market swine at slaughter	13,318	13,795	8,833	11,370	7,238
Feral swine	2,563	3,161	2,804	2,393	2,026
Swine cases highly suspicious for PRV	0	0	0	0	0
TOTAL	310,861	336,702	313,373	276,742	213,511

FY 2014 - No commercial herds identified as infected with PRV

Classical Swine Fever

- No Positives Identified

Surveillance stream	Quarter 1 Oct-Dec 2013 YTD Totals [†]	Quarter2 Jan-March 2014 YTD Totals	Quarter3 Apr-Jun 2014 YTD Totals	Quarter4 Jul-Sep 2014 YTD Totals	All quarters FY 2014 YTD Totals
Diagnostic laboratories	850	598	496	-	1,944
High-risk slaughter swine	582	442	195	-	1,219
Feral swine	280	1021	704	-	2,005
Domestic swine in States with higher probability of CSF introduction	1022	1353	1304	-	3,679
TOTAL	2,734	3,414	2,699	-	8,847

[†]Year-to-date totals are updated each time a new quarterly report is produced

Swine Brucellosis Surveillance FY 2014

Surveillance Stream		Quarter 1 Oct 1 2013 – Dec 31 2013	Quarter 2 Jan 1 2014 – Mar 31 2014	Quarter 3 Apr 1 2014 – Jun 30 2014	Quarter 4 Jul 1 2014 – Sep 30 2014	Fiscal Year- to-Date Total
Cull sow-boars at slaughter	Swine	54,848	67,579	56,460	...	178,887
Feral swine	Swine	285	1,026	696	...	2,007
TOTAL	Swine	55,133	68,605	57,156	...	180,894

**FY 2014 - No commercial herds identified
as infected with Brucellosis**

Swine Health Protection

- 9 CFR 166 – Requires licensing and treatment of garbage (waste material derived from meat of any animal) fed to pigs *
- Data as of 9/30/2014
 - ~1,120 licensed premises
 - ~676 in PR
 - Inspections of licensed premises
 - 5,490 premise inspections
 - 1,089 temperature checks
 - 51 violations
 - Consequences of a violation
 - 28,774 searches for non-licensed feeders
 - 122 non-licensed feeders found



Enhanced Passive Surveillance Overview

- Multiple-data stream syndromic surveillance through monitoring of:
 - Slaughter condemnations
 - Livestock markets
 - Veterinarian and producer on farm health
 - Diagnostic laboratory submissions
 - Wildlife data
- DHS providing funding for EPS system development through TX A&M

USDA APHIS National Feral Swine Damage Management Program

Veterinary Services Roles and Responsibilities



Feral Swine Share Pasture with Cattle
Photo Credit: Jason Wishart

Ryan S. Miller
U.S. Department of Agriculture
Animal and Plant Health Inspection Service
Veterinary Services

APHIS NFS Program Components VS is Involved/Supporting

- **Program Components**
 - Field operations (WS)
 - **Disease and Population Monitoring (VS, WS, IS)**
 - **Diagnostics/Tool Development (VS, WS, ARS)**
 - **Analysis/Modeling/Research (WS, VS, ARS)**
 - Planning, Evaluation, and Monitoring (WS, PPD)
 - Communication and Outreach (LPA, WS)



Current Monitoring Activities

Pseudorabies

FY14: 20.7%

States with Positives



Brucellosis

FY14: 10.0%



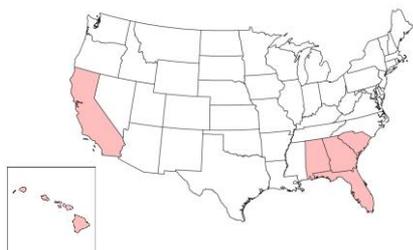
Influenza A virus (serology)

FY14: 6.9%

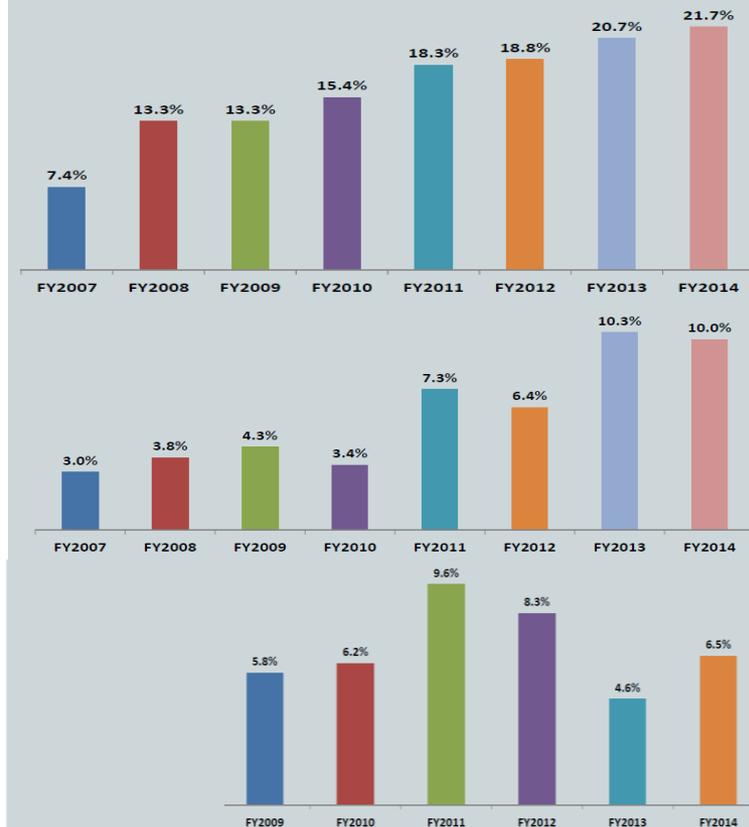


PRRS

FY14: 1.9%



Annual Trend



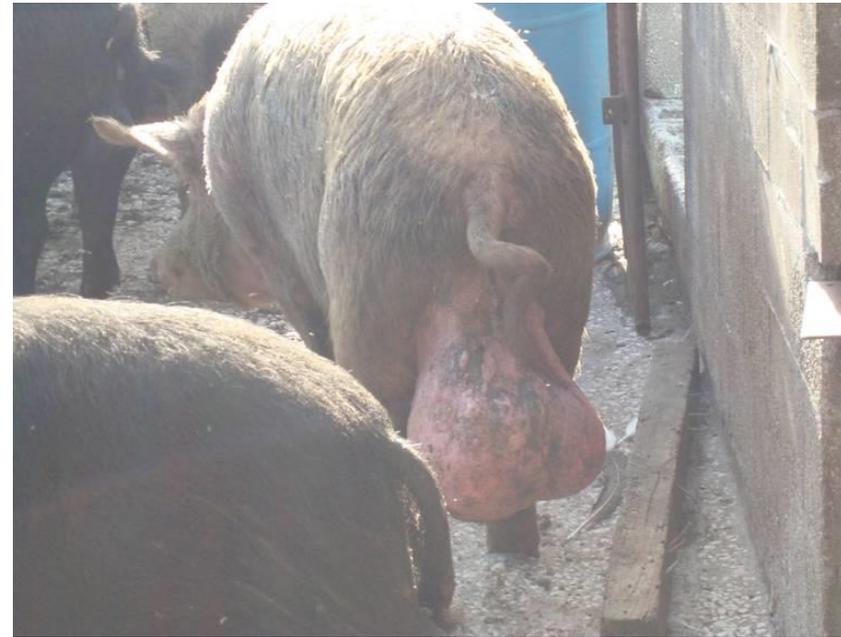


“A Serosurvey of Feral Swine (*Sus scrofa*) in Eastern N.C.”

Authors: Mark R. Sandfoss, Christopher DePerno, Maria B. Palamar, and Suzanne Kennedy-Stoskopf, North Carolina State University; Carl W. Betsill. USDA-APHIS-Wildlife Services; Gene Erickson, Rollins Animal Disease Diagnostic Laboratory

Published: April 2012 in Journal of Wildlife Diseases

Feral Swine Brucellosis - Conclusions



- Feral swine populations are expanding.
- Brucellosis is present within many of these US feral swine population.
- Transmission of Brucellosis from feral swine to domestic livestock and humans continues to be a reality.
- Education of producers and the public is key to reducing disease.

Questions?

