

Swine Surveillance

The National Animal Health Laboratory Network (NAHLN) conducts screening tests for various swine surveillance programs. The U.S. Department of Agriculture's (USDA) National Veterinary Services Laboratories (NVSL), with campuses located in Ames, IA, and Plum Island, NY, are the confirmatory laboratories for all swine foreign animal disease testing.

There are three disease programs included within NAHLN swine surveillance: classical swine fever (CSF), pseudorabies virus (PRV), and swine influenza virus (SIV).

CSF Surveillance

The CSF surveillance program was initiated in 2006 to rapidly detect CSF virus and monitor the risk of introduction in the U.S. swine herd.

Targeted Populations (surveillance streams)

- Sick pig submissions to veterinary diagnostic laboratories (VDLs)
- Pigs condemned at slaughter by USDA's Food Safety and Inspection Service
- Feral swine
- Swine populations (including those at waste feeding operations) with high risk of CSF exposure in Florida, Texas, and Puerto Rico
- Swine highly suspicious for CSF

NAHLN laboratories conduct CSF surveillance testing for the first two surveillance streams listed above; samples from the remaining three surveillance streams are tested at NVSL's Foreign Animal Disease Diagnostic Laboratory (FADDL).

PRV Surveillance

The PRV surveillance program was initiated in 2009 as an extension of USDA's successful PRV eradication efforts. The program gathers surveillance data to support three specific objectives: (1) rapidly detect PRV entry and infection in U.S. commercial swine, (2) demonstrate freedom from PRV in commercial herds, and (3) monitor domestic sources of PRV.

Targeted Populations (surveillance streams)

- Investigation and diagnosis of suspicious PRV cases
- Sick pig submissions to VDLs
- Herds participating in routine serology and herd profiling
- Herds classified as high risk
- Herds with reported exposure to feral swine
- Cull sow-boars at slaughter
- Market swine at slaughter
- Feral swine

SIV Surveillance

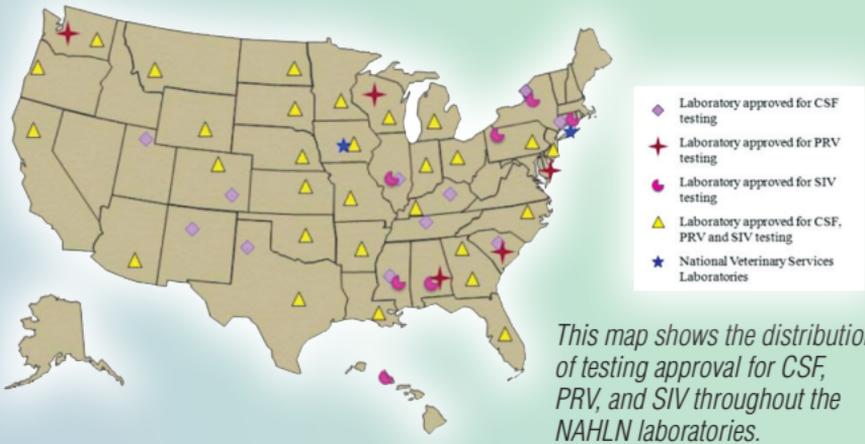
The SIV surveillance program was initiated in 2009 with a focus on monitoring the pandemic H1N1 2009 [pH1N1 (2009)] virus in swine. Since that time, SIV surveillance efforts have expanded to monitor all current circulating forms of the virus. USDA has also adopted an anonymous submission protocol to encourage more industry participation and increase the number of samples available for monitoring SIV in the U.S. swine herd.

Targeted Populations (surveillance streams)

- Case-compatible sick pig submissions to VDLs
- Swine exhibiting influenza-like illness at first points of concentration or commingling events (i.e., markets, fairs)
- Swine populations that are epidemiologically linked to confirmed human cases involving SIV

NAHLN laboratories conduct SIV surveillance for the above-mentioned streams. The NVSL Diagnostic Virology Laboratory is the SIV confirmatory laboratory.

NAHLN Laboratories Approved To Conduct Comprehensive Swine Surveillance



Implementing Comprehensive Swine Surveillance

The U.S. Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS) is in the process of developing an integrated plan for swine health. The focus will shift from disease-specific programs to a surveillance stream approach. The surveillance stream approach allows for the testing of multiple diseases from a single sample. The result is a program that maximizes efficiency and enhances protection of our Nation's swine herd.

Comprehensive Swine Surveillance by NAHLN Laboratories, FY 2010

Surveillance Stream	CSF	PRV	SIV	All Swine Diseases
Sick pig submissions	3,541	19	1,537	5,097
*High-risk swine population	0	515	0	515
Routine herd profiling	0	13,967	0	13,967
**Slaughter submissions	2,753	0	0	2,753
Feral swine	2,560	2,563	0	5,123
All Streams	8,854	17,064	1,537	27,455

* Slaughter submissions include high-risk pigs tested at slaughter (for CSF) or submissions from cull sow-boars and market swine (for PRV).

** High-risk populations include swine populations estimated to be high risk for disease incursion, waste feeders, and animals with potential or actual exposure to feral animals.

This table lists the number of samples tested by NAHLN laboratories for FY 2010 comprehensive swine surveillance.

National Animal Health Laboratory Network

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United States Department of Agriculture
Animal and Plant Health Inspection Service

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