



United States Department of Agriculture

# A COLLABORATIVE NATIONAL STRATEGY TO MANAGE FERAL SWINE IMPACTS IN THE U.S.

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**USDA APHIS National Feral Swine Program**  
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Protecting People  
Protecting Agriculture  
Protecting Wildlife

# Outline

- History of feral swine in the U.S.
- Damages and risks caused by feral swine
- National strategy to manage feral swine
- Feral swine management methods
- Contact information



# History of Feral Swine in U.S.

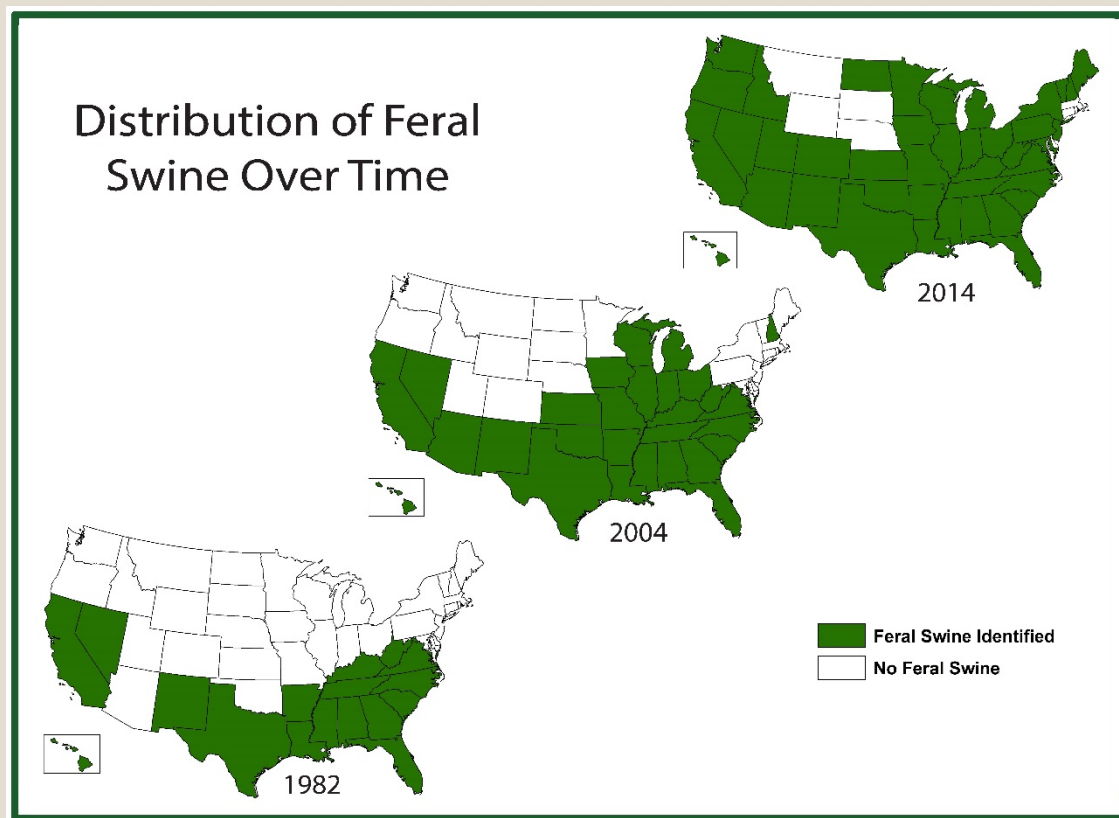
Swine were first brought into the U.S. in the 1500s by explorers and repeated introductions have occurred since.

In the past 20 to 30 years feral swine populations and distribution have greatly expanded due to:

- Intentional translocations
- Escapes from fenced farming and hunting operations
- Breeding with free-ranging domestic pigs
- Prolific breeding behavior at young age

By 2014, Over 6 million feral swine reported in 41 states.

Year	Number of States with Feral Swine
1982	17
2004	28
2014	41
2017	35



# Labeled the “World’s Worst Invasive Alien Species”

Feral swine cause damage by their behaviors:

- Foraging
- Rooting
- Trampling
- Wallowing

Damage across all resources:

- Agriculture and livestock
- Natural resources
- Property
- Human and pet health and safety



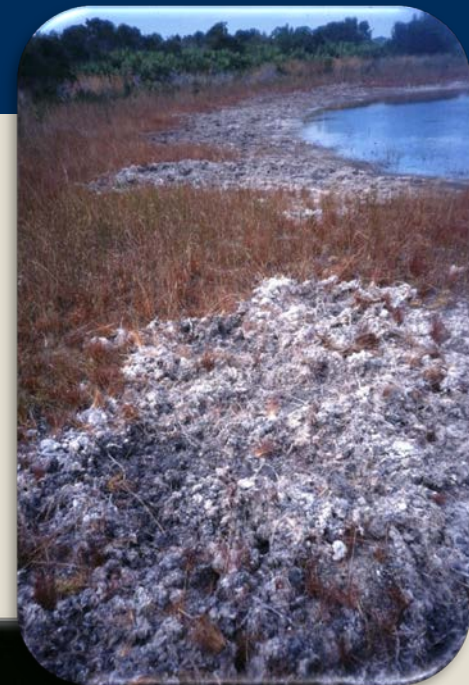
## Damage to Agriculture and Livestock

- Destroy or reduce yield of almost any field or vegetable crop
- Consume or contaminate crops and water sources
- Prey on livestock
- Transmit diseases to livestock
- Damage farm equipment - fences, water systems, irrigation ditches, troughs, levees



## Damage to Natural Resources

- Consume large amounts of vegetation, seeds, nuts, small animals
  - Linked to 95% decline of understory vegetation in some ecosystems
  
- Compete with wildlife
  
- Contaminate water sources
  - Increased levels of nutrients, such as nitrogen & phosphorus
  - Lowered pH & dissolved oxygen levels
  - Transmission of pathogens (e.g., *E. coli*) & parasites (e.g., giardia)
  - Create breeding grounds for mosquitos
  
- Disturbed sites are vulnerable to erosion and establishment of invasive plants



## Damage to Property

- Destroy vegetation in landscaping, parks, golf courses, recreational fields
- Destroy cultural and historical resources – tribal sacred sites and burial grounds, cemeteries, archaeological sites



## Risks to People and Pets

- Carry 30 viral and bacterial diseases and nearly 40 parasites
- Transmit bacteria associated with foodborne illness
- Threaten safety in collisions with vehicles and aircraft
- Aggressive behavior





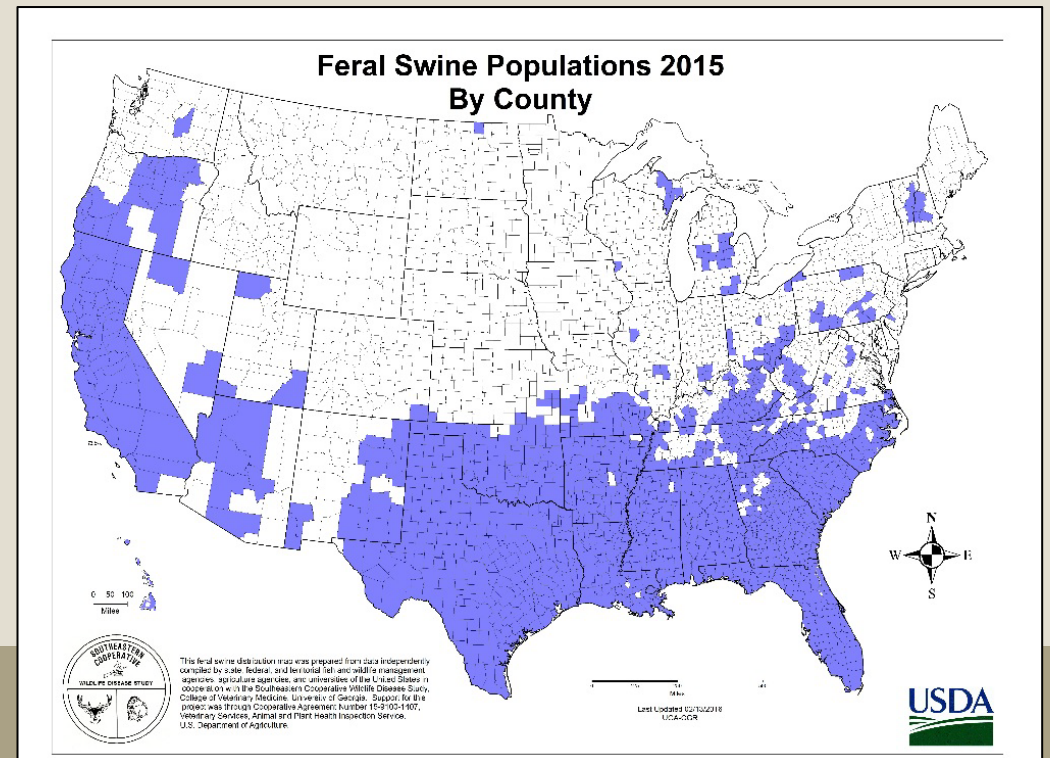
# National Strategy to Manage Feral Swine

In 2014, USDA's Animal & Plant Health Inspection Service (APHIS) began receiving \$20 million annually to implement a collaborative, national feral swine management program in states where there was a recognized feral swine population.

Primary Goal: Minimize damage caused by feral swine to protect agriculture and livestock, natural resources, property, and human health and safety.

Accomplished by:

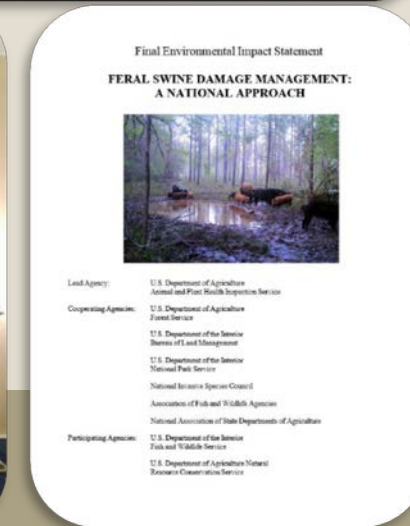
1. Suppressing populations in states where feral swine populations are large and widely distributed
2. Eliminating feral swine in states where populations are low or newly emerging



# Integrated Approach for Managing Feral Swine

## Six Program Components:

- Field Operations
- Disease & Population Monitoring across State and International Borders
- Research
- Planning & Program Monitoring
- Communication & Outreach
- Regulatory Actions



# National Strategy to Manage Feral Swine

Environmental conditions and laws on feral swine vary among states. Therefore, need to allow flexibility to manage operational activities at the state level.

## FY15

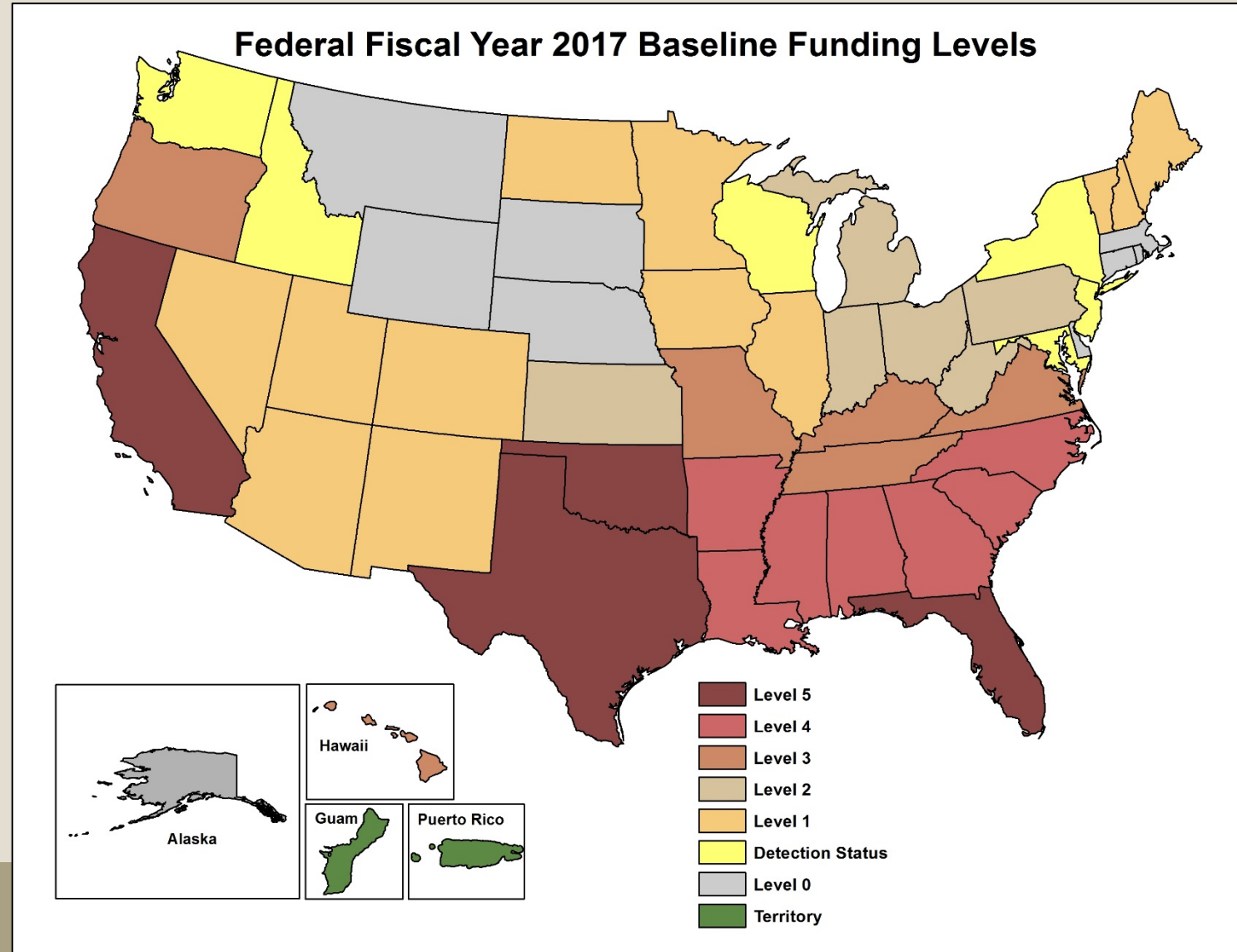
43 WS state and territory programs received federal feral swine allocations

## FY16 – Same as FY15, except:

4 states (ID, MD, NY, WA) - Detection Status  
 MI - Level 3 to Level 2

## FY17 – Same as FY16, except:

NJ & WI - Detection Status  
 NM - Level 2 to Level 1





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# Communication & Outreach

## Diseases of Feral Swine

**FERAL SWINE HUNTERS:**  
PROTECT YOURSELF AND YOUR FAMILY FROM **BRUCELLOSIS**

FIND OUT MORE ABOUT THIS DISEASE AND HOW TO HAVE A SAFER HUNT!



In the United States (U.S.), feral swine (*Sus scrofa*) are defined as Eurasian wild boar, wild-living pigs descended from domestic swine, and hybrids of the two. The negative impacts of this non-native species on agriculture, human health, and wildlife health are significant. This is a quick reference guide to some of the pathogens that can be found in swine.

## Do Not Move Feral Swine!



**WARNING:** Feral swine (wild pigs) cause significant damage to agriculture, native wildlife, ecosystems, and property as well as spread disease. Moving feral swine can create new populations and expand the damage.



To learn more about this invasive animal and the damage they cause, contact your local USDA, Wildlife Services Program at 1-866-4-USA-WS.

Manage the Damage Stop Feral Swine [www.aphis.usda.gov/wildlife-damage/stopferalswine](http://www.aphis.usda.gov/wildlife-damage/stopferalswine)

## Report Feral Swine Sightings at 1-866-4USDA-WS



**Warning** - Feral swine are a destructive and aggressive invasive species. Feral swine damage property, destroy crops, and contaminate water sources. They carry diseases which affect people, livestock, pets, and wildlife. To report feral swine sighting or learn more, contact USDA Wildlife Services in your area at 1-866-4USDA-WS.



<http://www.aphis.usda.gov/wildlife-damage/stopferalswine>

**WS Wildlife Services**

Protecting People  
Protecting Agriculture  
Protecting Wildlife

## Help Protect Virginia's Agricultural & Natural Resources Report Feral Swine



USDA **1 (855) 571-9003**

Feral swine are a threat to crops, domestic livestock, and native wildlife. Please report any feral swine sightings or damage to the toll-free Virginia Wildlife Conflict Helpline.



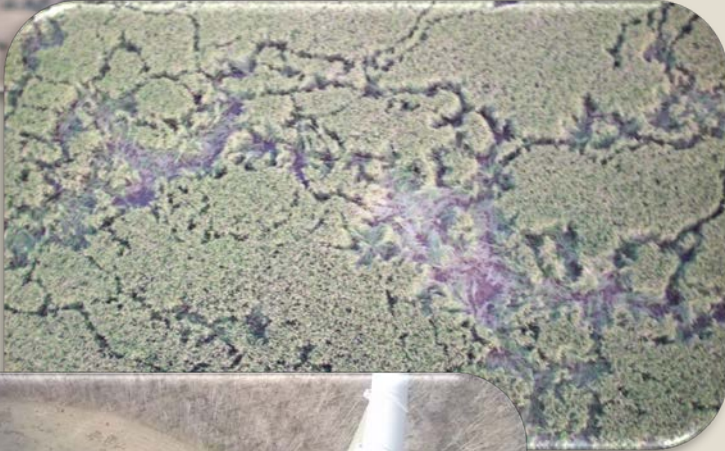
**W.H.E.A.T.**  
WILD HOG ERADICATION ACTION TEAM



# Operations - Surveys



Aerial Surveys



eDNA analysis



Scat Detection Dogs



Trail Camera Surveys



# Operations - Exclusion



# Operations – Direct Management

Trapping



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Judas Pig Operations



Aerial Shooting



Snaring



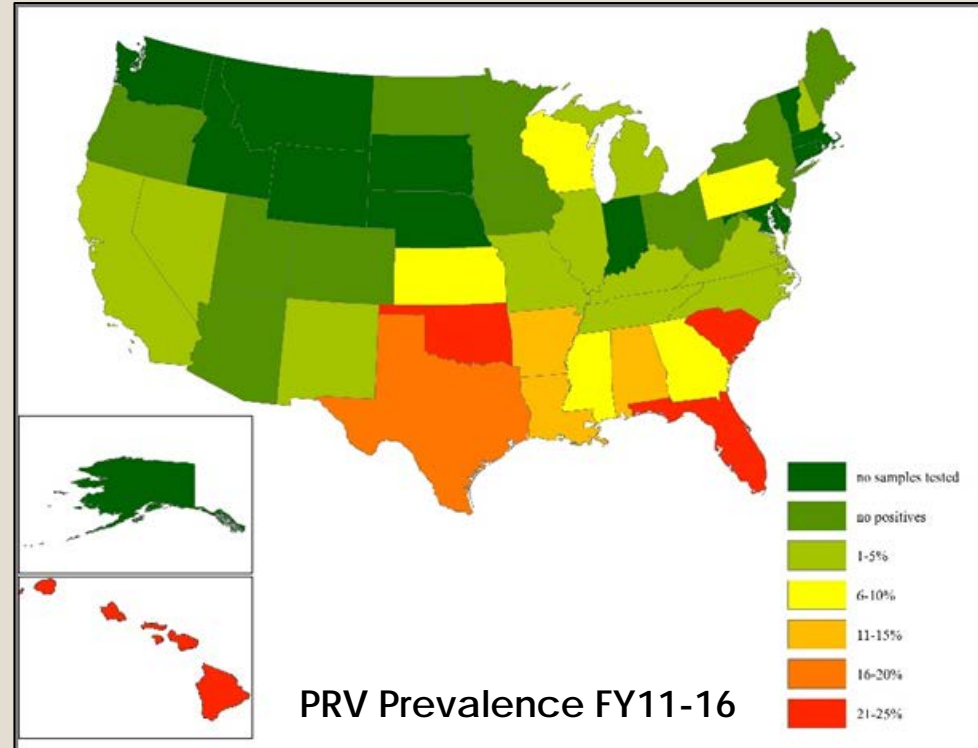
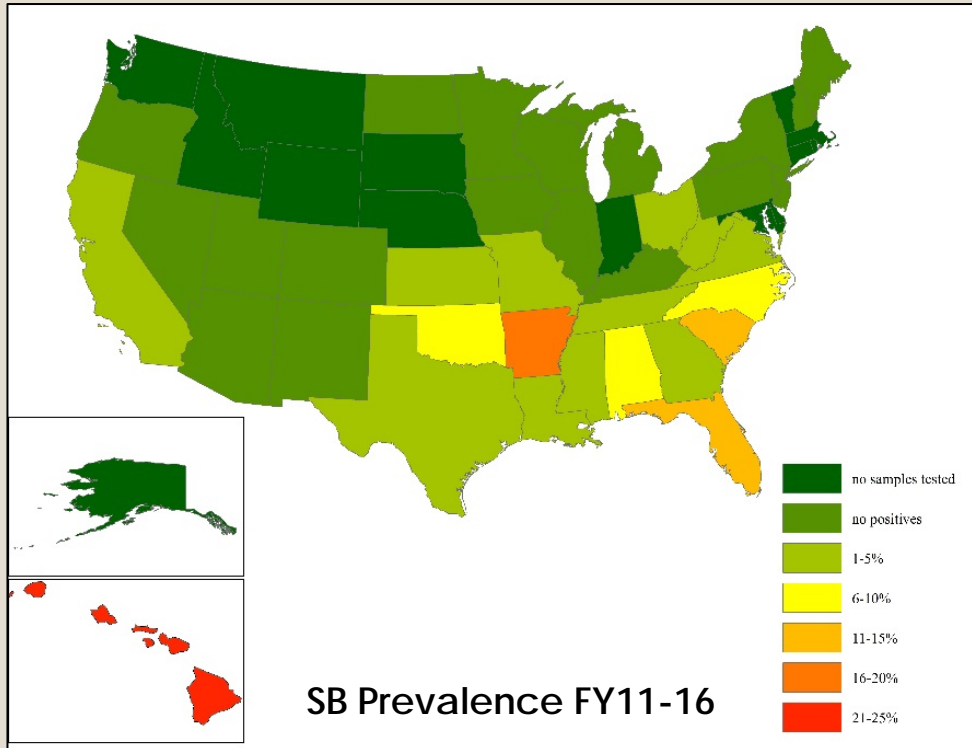
Ground Shooting



# Disease & Population Monitoring

## National level prevalence in FY16

CSF	0% (n=2937)
PRV	19.0% (n=2890)
SB	5.5% (n=2981)





# Research



- Economic Impacts
  - NASS survey to assess damage to select field crops
  - NASS survey to assess damage/risk to livestock
  - Survey with Tuskegee University on feral swine impacts to limited resource farmers through 1890s Institution extension agents
  - Working with Mississippi State University on a national review of feral swine impacts
- Toxicant Development
  - Feral swine toxicant (Sodium Nitrite), bait formulation, and safe delivery system; registration package submitted to EPA for anticipated use of the product by 2020
- Risk Analysis and Identification
- Disease Detection and Vaccine Development
- Ecology, Fertility Control, Population Monitoring, Resource Damage, Impact of Control
- Environmental Detection, Diet Analyses
  - Developed an environmental DNA (eDNA) technique to detect feral swine presence through genetic markers in water
  - Established a National Feral Swine Genetics Archive to help identify the source of new populations and assess the movement of feral swine

# Regulatory Actions

## Federal Law

Interstate movement of domestic or feral swine is prohibited without the proper permits (9 CFR 78.30)

## State Laws

Many states are passing tougher laws on transport, possession, release, or reporting of feral swine

- 2013 NY – illegal to import, breed, introduce into the wild, hunt, trap, or market Eurasian boars
- 2014 IL – illegal to transport, release, or possess feral swine
- 2015 AL and MS – increased fines/charges for illegal transport and release of live feral swine
- 2016 MO – banned hunting of feral swine on state-managed lands
- 2016 OK – created Feral Swine Free Zones to prohibit transport of live feral swine; removal in zone is permitted if immediately reported to the Dept. of Ag
- 2016 MT – mandatory reporting of feral swine presence/sightings; became illegal to import, transport, possess, release, hunt, trap, or kill feral swine



**Nov. 28, 2016: AL Division of Wildlife and Freshwater Fisheries Press Release - Conservations Officers Arrested 16 from 3 States (AL, FL, MS) for Transport, Release or Possession of Live Feral Pigs...**



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# Questions?



For more information, please contact me at:  
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Office 970-266-6094

Visit our website at:

<http://www.aphis.usda.gov/wildlife-damage/stopferalswine>

Or call 1-866-4USDA-WS to reach your local WS office



Manage the Damage  
Stop Feral Swine