Florida SART Partner Workshop

Livestock Disease Updates

June 8, 2023

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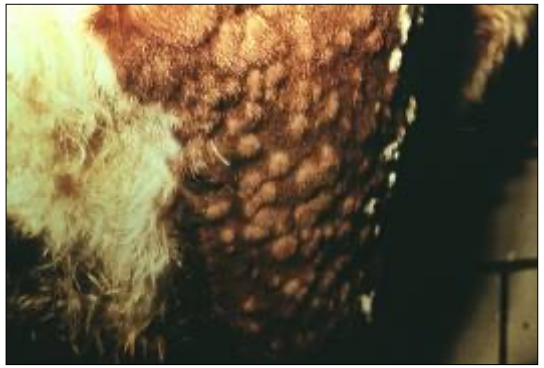
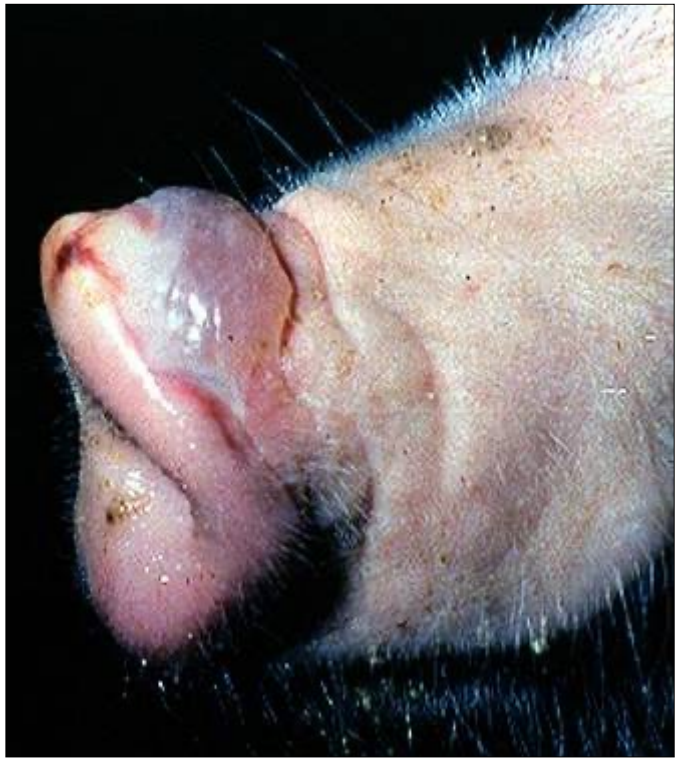
What we do…

- Livestock health
- Foreign animal diseases (FAD) prevention, preparedness, and response





Reportable Diseases

What must be reported? FADs and transboundary diseases

- Diseases on Federal list

www.aphis.usda.gov/aphis/ourfocus/animalhealth/nvap/NVAP-Reference-Guide/Animal-Health-Emergency-Management/Notifiable-Diseases-and-Conditions

- FL reportable list is not the same (e.g. EEE)

www.fdacs.gov/Consumer-Resources/Animals/Animal-Diseases/Reportable-Animal-Diseases

Whom should be notified?

- VS Office (352-316-4060) OR State Animal Health Official

How to Report a Reportable Animal Disease

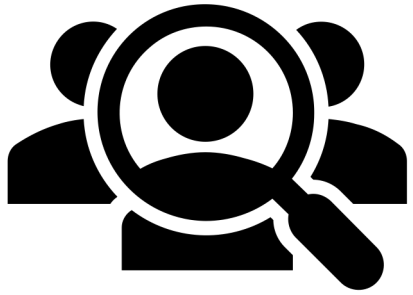
Report a Disease Online

You can also report by:

- **Phone:** (850) 410-0900 (during office hours) or 1-800-342-5869 (after hours)
- **Email:** RAD@FDACS.gov

Reportable Diseases

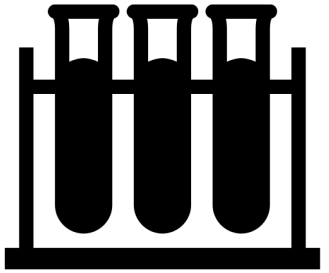
What happens next?



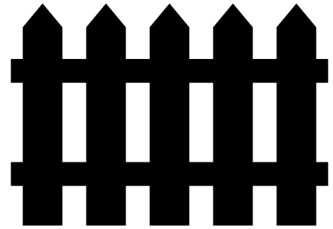
Find out more information

Dispatch FADD

Take some samples



Send them to FADDL



Stay put until results

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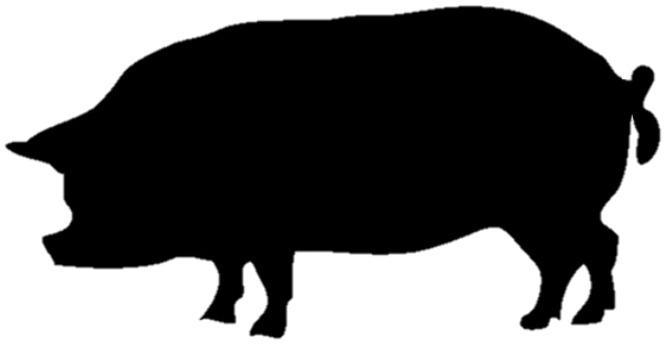
U.S. DEPARTMENT OF AGRICULTURE

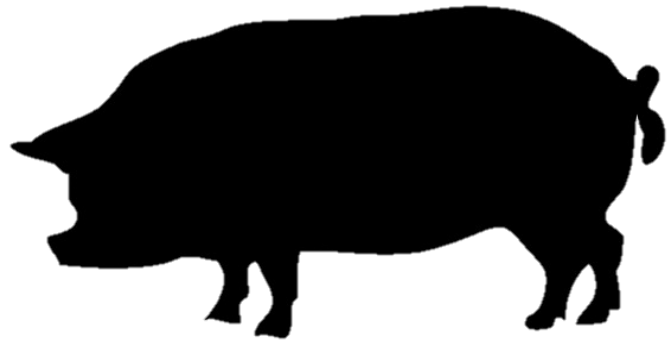


African Swine Fever

African Swine Fever

What is African Swine Fever?

- African swine fever (ASF) is a **hemorrhagic disease** with **high mortality** in pigs
- Cause by **African swine fever virus** (ASFV)
- **Very** stable virus (months to years)
- **Never detected in the United States.**
- Estimated cost for the US to recover from an outbreak of ASF is **$13 billion**.



Let's Talk About Stable Virus

Resilience of ASFV across a variety of environmental conditions

Item	ASFV survival time
Meat with and without bone and ground meat	105 days
Salted meat	182 days
Cooked meat (minimum of 30 minutes at 70 °C)	0
Dried meat	300 days
Smoked and deboned meat	30 days
Frozen meat	1 000 days
Chilled meat	110 days
Offal	105 days
Skin/Fat (even dried)	300 days
Blood stored at 4 °C	18 months
Faeces at room temperature	11 days
Putrefied blood	15 weeks
Contaminated pig pens	1 month

Source: adapted from Scientific Opinion on African swine fever, *EFSA Journal*, 2010; 8(3):1556.
The times given reflect the known or estimated maximum duration and will depend strongly on environmental temperature and humidity.

Where did ASF come from?

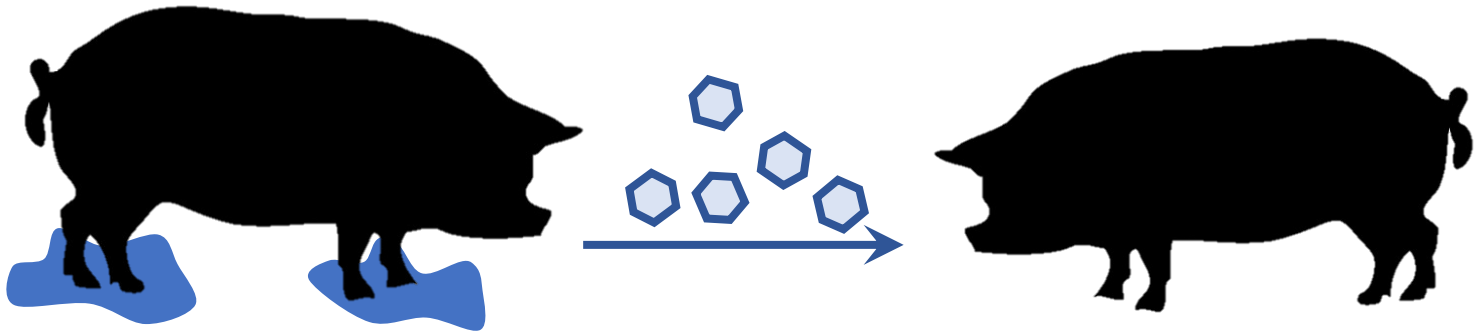
- 1907 - first outbreak in Kenya
- 1984 - last time in the Western hemisphere (Hispaniola)
- 2007 – outbreak in Georgia, Armenia
- 2014 – European Union- multiple countries
- 2018 – outbreak in China
- 2021 – detected in the Dominican Republic

How does ASF interact with a host?

- Direct (inhalation or ingestion) or indirect transmission (fomites or ticks)
- Shed in all secretions and excretions
- Symptoms
  - High fever
  - Decreased appetite and weakness
  - Red, blotchy skin or skin lesions
  - Diarrhea and vomiting
  - Coughing and difficulty breathing

Species
✓ Domestic pigs
✓ Wild pigs

Mortality
✓ High (up to 100%)



How is ASF treated and prevented?

- There is currently **no** available vaccine for use in the US.
- There is currently **no** available treatment for ASF.
- Controlled by strict biosecurity, surveillance, testing, and depopulation.

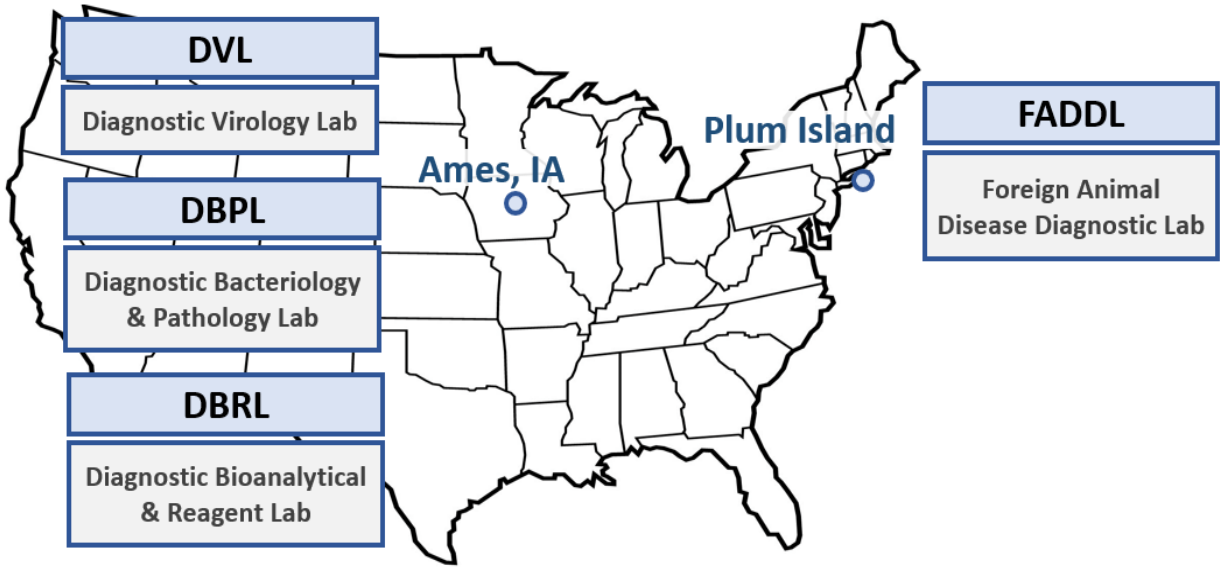
What is the USDA doing to prevent ASF from entering the US and detect and respond if it breaches?

Detect
Lab and Surveillance

Outreach
Industry, Stakeholders, Partners

Training & Capacity Building
Industry and State Officials

Testing and Laboratory Support for ASF

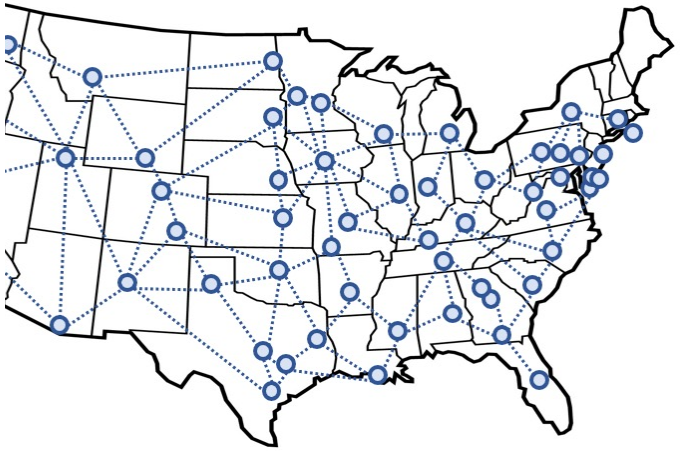


NAHLN

National Animal Health Laboratory Network

60 state and university laboratories

Early detection and **rapid** response



Laboratory Activities in Hispaniola

Haiti ASF+

Dominican Republic ASF+

NVSL-FADDL providing diagnostic support
Developing diagnostic laboratory capabilities
NVSL deploying laboratory personnel

Laboratory Activities in Puerto Rico

Puerto Rico ASF-

Fully operational laboratory for ASF and CSF testing
NVSL deploying laboratory personnel
Confirmatory testing at NVSL-FADDL

What is the USDA doing to detect ASF?

CBP Beagle Brigade and Secondary Screening	MBL (Migrant Boat Landing)/Asylum Seeker	High-risk Premises	Feral Swine

Outreach and Education

USDA Animal and Plant Health Inspection Service
U.S. DEPARTMENT OF AGRICULTURE

AFRICAN SWINE FEVER

REPORT SICK PIGS
866-536-7593

African swine fever is a virus that affects both domestic and wild pigs. It spreads very quickly and kills most pigs that get it. This disease has never been found in the United States. It is not a threat to human health. It is not a food safety issue.

People cannot get African swine fever, but they can carry it on clothing, shoes, and equipment. An outbreak in the United States would have devastating economic effects on the swine industry.

Help keep U.S. pigs free of this deadly disease!

Understand how the virus spreads, and do your part to protect against it.

More info:
www.aphis.usda.gov

African Swine Fever

Don't Bring It Home

International travelers could carry this disease into th United States without knowing it. Take these steps to help keep U.S. pigs safe:

Understand the Risk

- African swine fever can be carried on clothing, shoes, and hands.
- It can also survive for months in pork products.

Declare Items and Farm Visits

- Bring back only safe food and souvenir items. Check www.aphis.usda.gov/travelers to know what items can enter the United States.
- Declare any overseas farm visits to U.S. Customs when re-entering the country.

Take Extra Precautions When Visiting Farms Abroad

- If you visit any farm outside the United States, follow the farm's biosecurity protocols during your visit.
- Wear site-specific footwear and coveralls/clothing, and dispose of this protective gear before leaving the farm. If this gear isn't offered wash and disinfect or throw away your shoes and clothes before returning to the United States.
- When you return to the United States, don't enter a farm or other location with pigs (including livestock markets, zoos, circuses, and pet stores with pot-bellied pigs) for at least 5 days.

Program Aid No. 2237-3 | Revised July 2021

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African Swine Fever

Protect Your Farm Using Biosecurity

What's Biosecurity?

Biosecurity refers to all measures taken to keep diseases and pathogens that carry them—viruses, bacteria, funguses, parasites, and other micro-organisms—away from livestock, property, and people.

People can spread disease without knowing it.

To protect your pigs, use strong biosecurity practices on your farm—all day, every day.

- Review existing biosecurity plans with an accredited veterinarian, and update or improve if needed. No plan? Make one and follow it.
- Make sure anyone who comes to your farm—workers and visitors—knows and follows your biosecurity practices.
- Provide biosecurity training to new workers or anyone on your farm.

Know Who & What Is On Your Farm

Don't let anyone carry disease onto your farm.

- Limit on-farm traffic as much as possible.
- Keep detailed records of all people, vehicles, and equipment at your farm or other pig production facilities.
- Clean and disinfect all equipment and vehicles entering or leaving your site.
- Isolate sick pigs from the herd, and keep them away from visitors.
- Ask visitors about recent international travel. Don't let anyone who has been in an African swine fever-affected country onto your farm for at least 5 days after returning to the United States.
- Make sure visitors wear clean clothes and shoes at all pig production facilities and farms.

Program Aid No. 2237-4 | Revised July 2021

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info:
.aphis.usda.gov

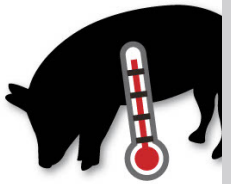
African Swine Fever

Know the Signs and Symptoms

There is **no treatment or vaccine** for African sw
Protect your herd by knowing the signs and imm
reporting any sick pigs.

What To Look For

- High fever
- Loss of appetite
- Depression
- Weakness
- Red, blotchy skin or skin lesions
- Vomiting
- Diarrhea
- Coughing or difficulty breathing
- Abortions
- Sudden death



How To Report

If your pigs show any of these signs, report it immediately to y veterinarian or animal health officials for appropriate testing investigation. Quick detection is essential to prevent the sprea of African swine fever.

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U.S. DEPARTMENT OF AGRICULTURE

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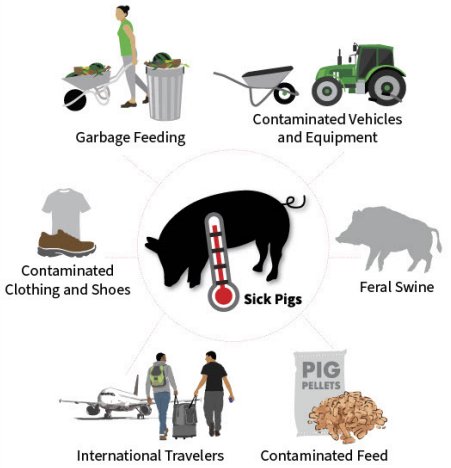
African Swine Fever

Don't Spread This Deadly Disease

It's easy to spread African swine fever—without even knowing it. The virus can stay on clothing and equipment and survive for months in pork products. Be aware of these potential pathways and consider them when creating or updating biosecurity plans.



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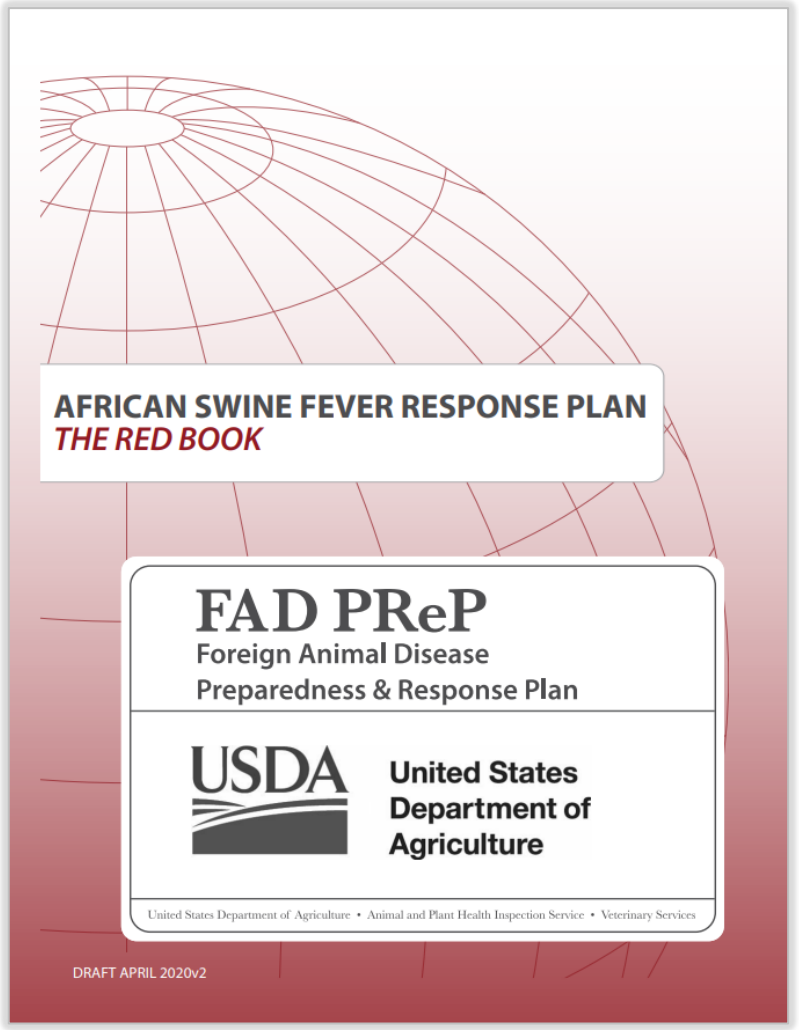
Training and Capacity

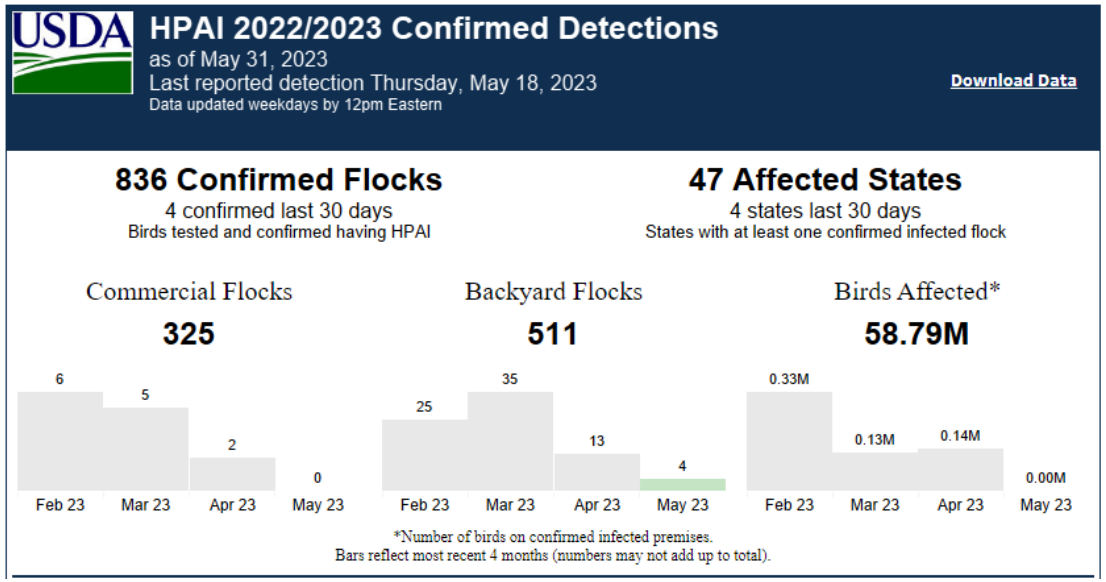
- Exercises
- Workshops with Industry
    - Biosecurity
    - Herd Plans
    - Compost training
- New staff
- Training in Puerto Rico

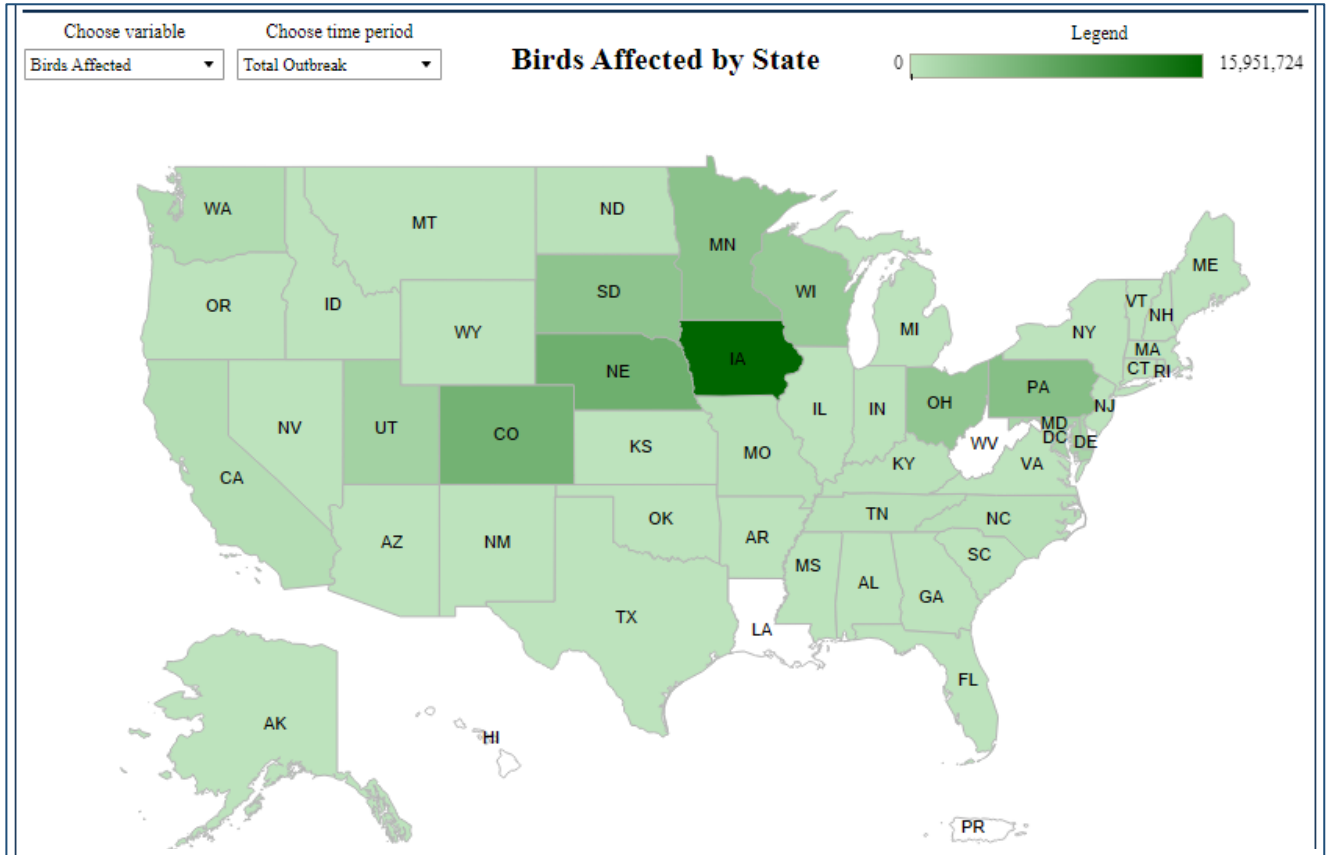


Highly Pathogenic Avian Influenza (HPAI)

HPAI – First domestic poultry- February 8, 2022

Cumulative numbers of flocks and birds affected as of May 18, 2023





[USDA APHIS | 2022-2023 Confirmations of Highly Pathogenic Avian Influenza in Commercial and Backyard Flocks]

Domestic poultry in Florida:

- No commercial poultry cases in Florida
- Total 26 affected premises: 24 backyard flocks and 2 live bird markets
- 12 counties
- Last case detected on March 21

HPAI 2022-202

Wild birds

- 49 states
- Over 6,900 detections in numerous species

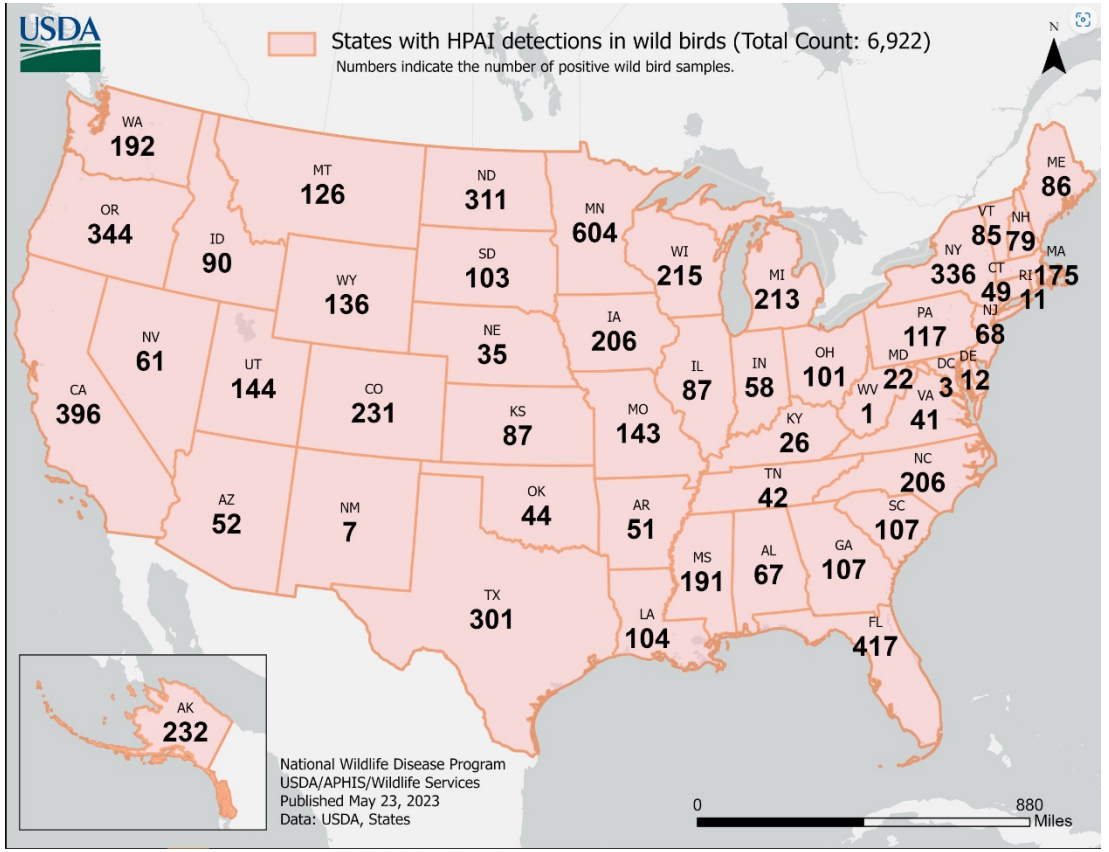
Here in Florida

- Wild birds having contact with backyard flocks and live bird markets
- Outreach continues
- Two more AV notices sent

Nationally

- FL VS supporting heavily, boots-on-ground and with virtual EMRS support

[USDA APHIS | 2022-2023 Detections of Highly Pathogenic Avian Influenza in Wild Birds]

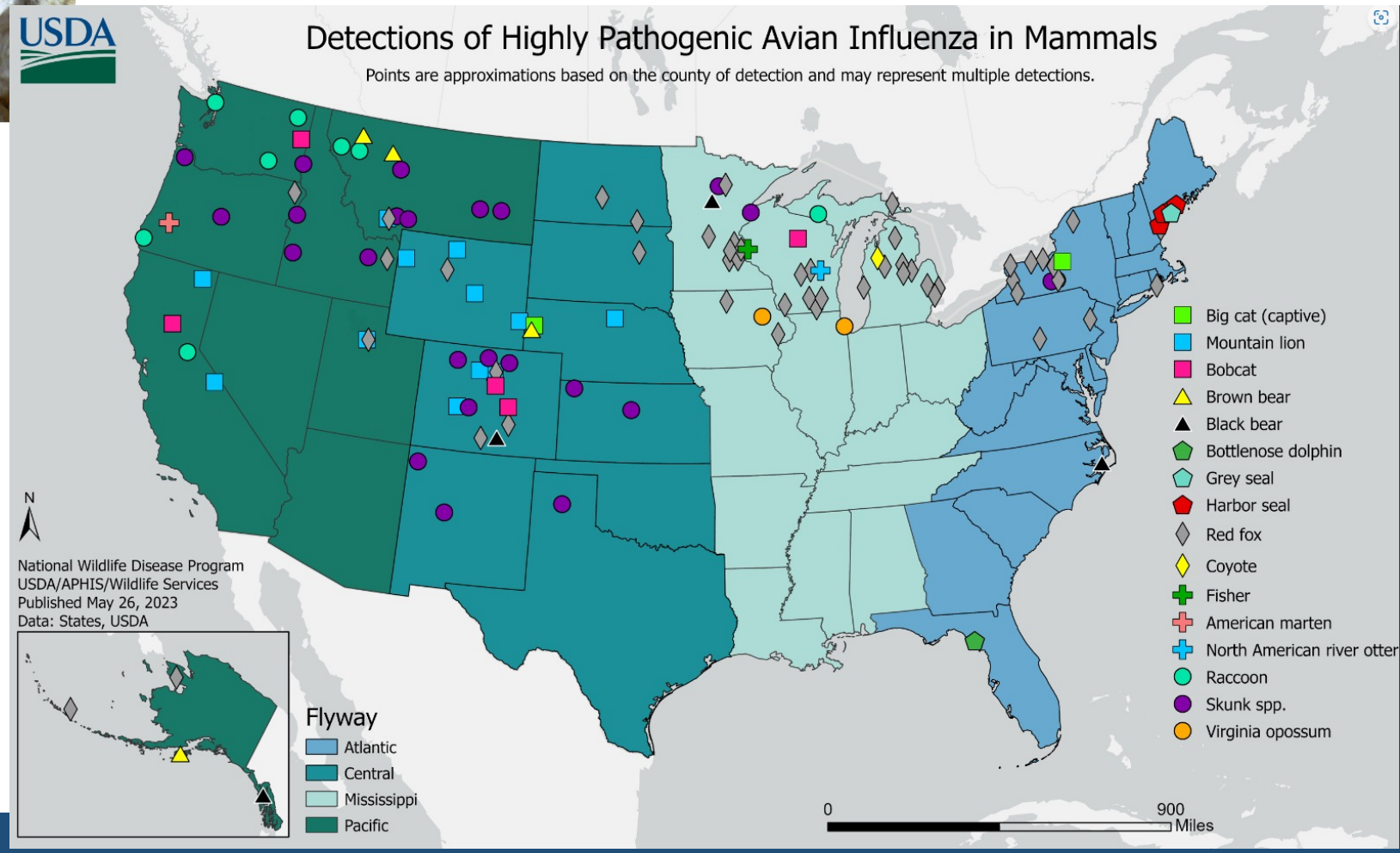


HPAI 2022-2023

2022-2023 Detections of Highly Pathogenic Avian Influenza in Mammals

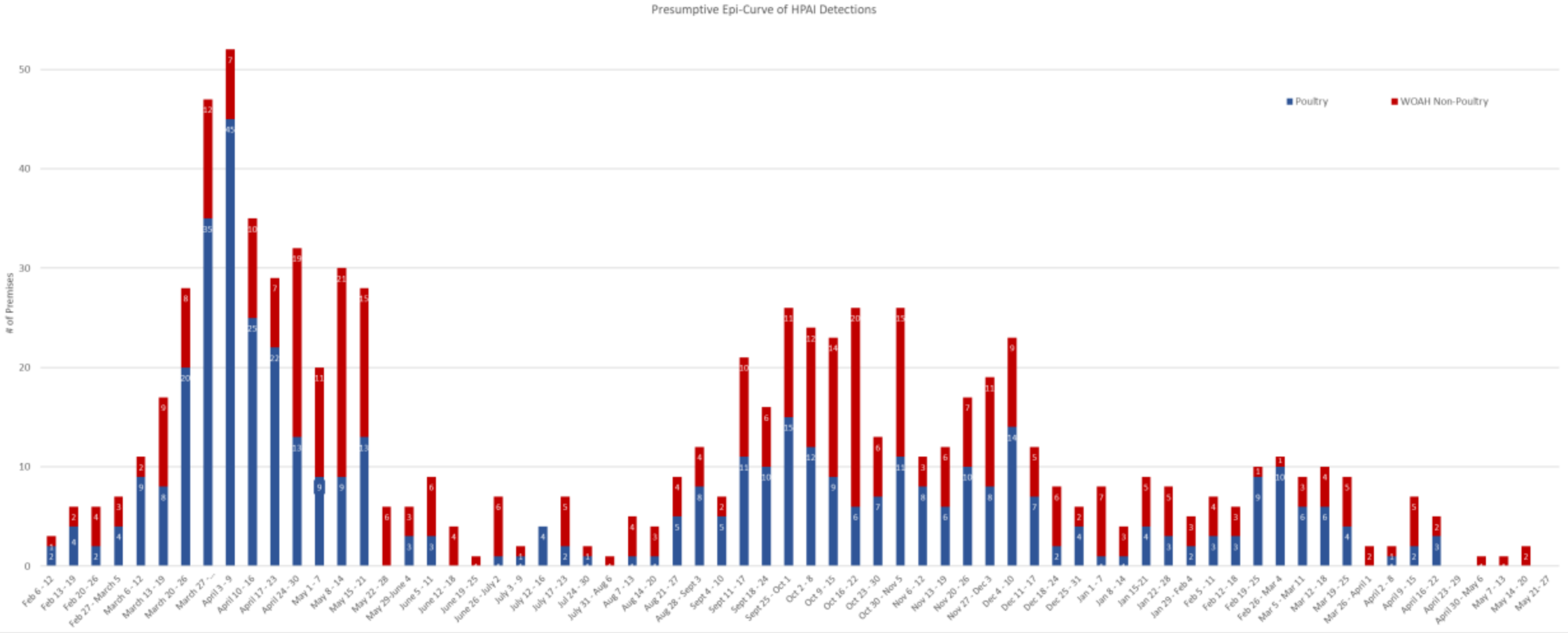
Last Modified: Mar 9, 2023 Print

[USDA APHIS | 2022-2023 Detections of Highly Pathogenic Avian Influenza in Mammals]



HPAI Epidemiological Curve
of Presumptive Cases

Data as of May 26, 2023



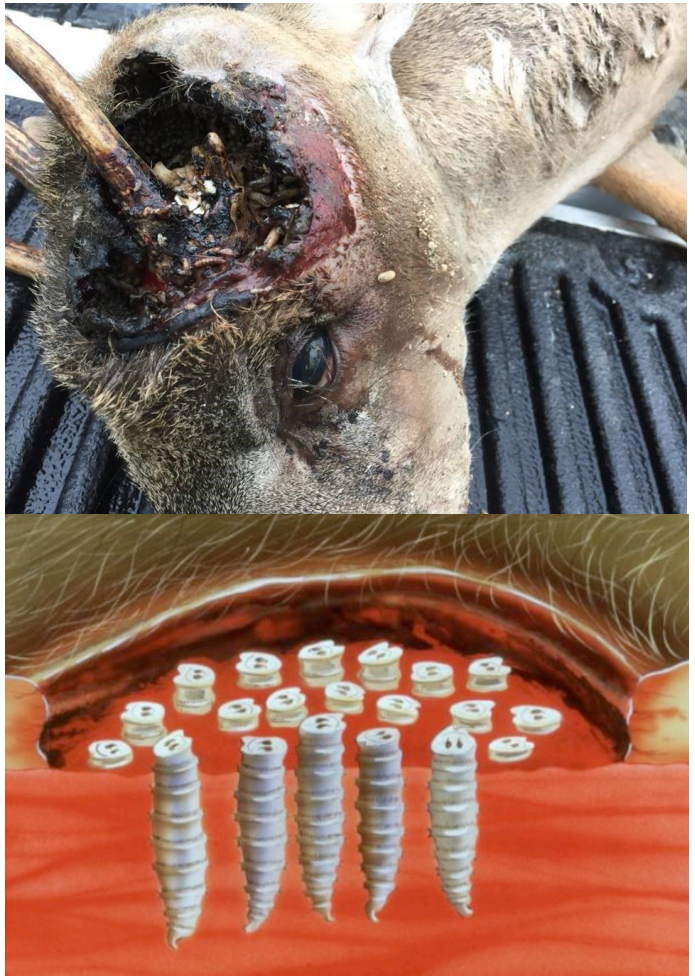
Asian longhorned tick, adult female dorsal view *(James Gathany, CDC)*

Source= Mat Pound/ USDA Agricultural Research Service

- **NEW WORLD SCREWWORM**
- **ASIAN LONGHORNED TICK**
- **TROPICAL BONT TICK**

NEW WORLD SCREWWORM

- New World screwworms (NWS): larvae of the fly *Cochliomyia hominivorax.*
- Female flies lay eggs in wounds or on mucous membranes of warm-blooded animals
- Once hatched, larvae burrow into the animal to feed, resulting in myiasis.
- Severe infestations are almost always **fatal** if untreated.
- Florida: first presumptive positive case July 2016
    - Declared eradicated March 2017



NEW WORLD SCREWWORM SURVEILLANCE

- In the Keys, all animal-related facilities were visited to identify additional infestations
- On the mainland, all animal-related facilities were visited within a 10 mile radius of the initial case
  - door-to-door canvasing was conducted in a 3 miles radius
- 30 Key deer does were fitted with radio collars by USFWS to enable closer monitoring
- Sick animal calls investigated by State & Federal personnel
  - FAD Investigations AND fly/larvae submissions to NVSL
  - 168 total investigations (1/1/2016–4/18/2017) submitted by 22 States & Territories.
- Florida: ONLY State with confirmed positive results.

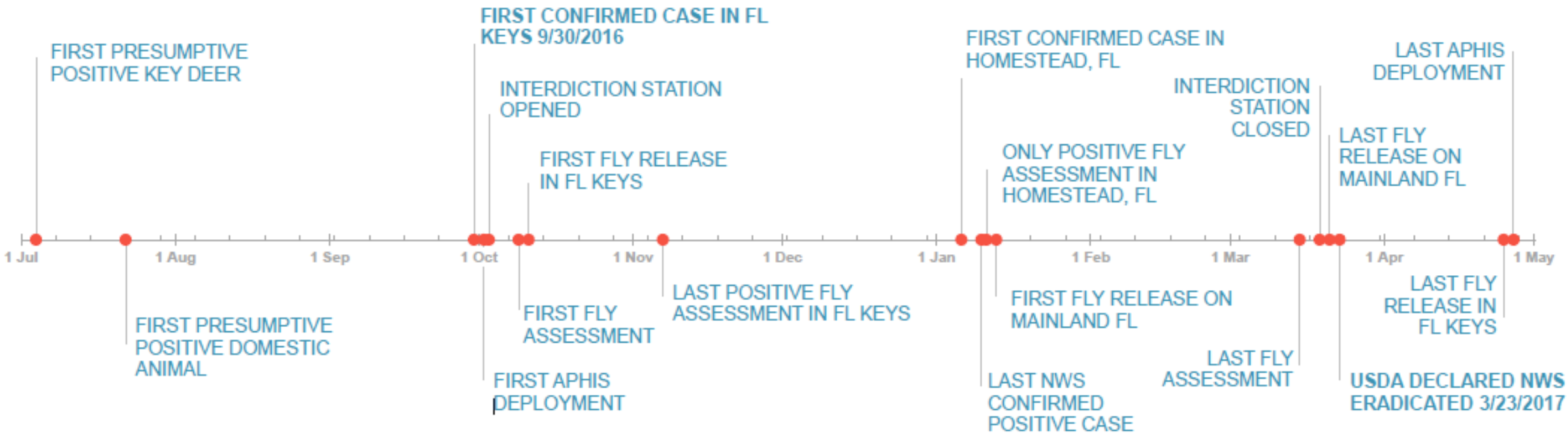
NEW WORLD SCREWWORM STERILE FLY RELEASE

WHY STERILE FLIES???

- Female screwworm flies mate one time in their 21-day life span
- Population of sterile screwworm flies increases → population of fertile screwworm flies decreases →population dies out

- USDA continued releasing sterile flies until there were no new clinical cases
  - ~ 3 million sterile flies released twice per week in the affected area of the Florida Keys
  - 40+ million sterile flies released beginning in early October 2016
  - Screwworm cases in Key deer were declining
- OVERALL: 35 sterile fly release sites → 31 in the Keys & 4 on mainland
  - SIT activities continued until April 25, 2017 in the Infested Zone of the Florida Keys.
  - Fly site assessments and trapping → determined the effectiveness of the SIT & distribution of sterile flies

NEW WORLD SCREWWORM TIMELINE IN FLORIDA



NEW WORLD SCREWWORM

USDA United States Department of Agriculture
Animal and Plant Health Inspection Service

VS Veterinary Services

TICKS

ASIAN LONGHORNED TICK

- *Haemaphysalis longicornis*
- Reported for the first time in the United States in 2017
- Native to eastern China, Japan, the Russian Far East and Korea
- Is an established exotic species in Australia, New Zealand and several island nations in the Western Pacific Region
- Confirmed in: Arkansas, Connecticut, Delaware, Georgia, Kentucky, Maryland, Missouri, New Jersey, New York, North Carolina, Ohio, Rhode Island, South Carolina, Pennsylvania, Tennessee, Virginia, and West Virginia.

ASIAN LONGHORNED TICK IMPACT

- Form large infestations on warm-blooded host animals
  - Reduces animal's growth and production.
  - Severe infestation can kill the animal due to blood loss.

- Longhorned tick can transmit the agents of certain livestock and human diseases

- Anaplasma spp.
- Babesia spp.
- Ehrlichia spp.
- Theileria spp.
- Rickettsia spp.
- Misc. viruses

TROPICAL BONT TICK

- *Amblyomma variegatum*
- Life stages: 3-host tick: Larvae, Nymphs, Adults
  - Immature stages → smaller mammals, reptiles and wild birds
  - Adult stages → cattle, sheep, goats, horses, camels, dogs and some species of large wildlife
- Bites can cause large wounds
- Potential transmission of diseases:
  - African tick bite fever (*Rickettsia africae*) to humans
  - Heartwater disease (*Ehrlichia ruminatium*)
  - Nairobi sheep disease: Bunyaviridae
  - Dermatophilosis: *Dermatophilus congolensis*

TROPICAL BONT TICK

- Distribution: Established on certain islands in the Indian Ocean, Atlantic Ocean, and Caribbean Sea
- Cattle transportation without the correct inspection and treatment
- Migratory birds (cattle egret) → important agent of dispersal of this tick in the Caribbean

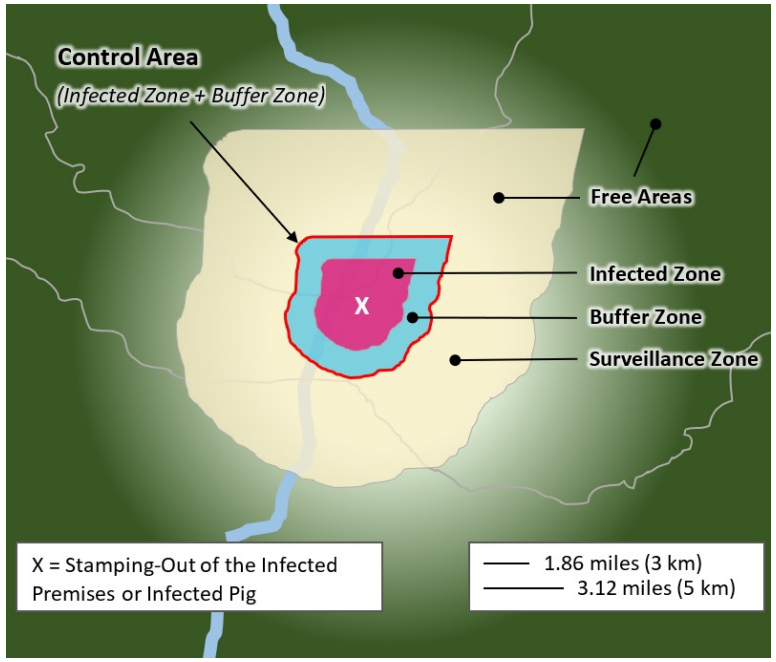
TICK SURVEILLANCE

- We rely on producers & private practitioners!
  - Scratch all patients for ticks
  - Collect in isopropyl alcohol in a clear, plastic tube

- Active Surveillance Methods
  - CO_2 trapping
  - Tick drags
  - Scratching animals

What happens if a FAD is detect in the United States?

Zones and Areas



Note: The surveillance zone is part of the Free Area.

- These diseases and pest can have multibillion dollar impact on the economy
- Quick response by federal and state agencies to try to limit impacts on industry and economy
- Movement controls and quarantines
- Activities on-farm to contain and eliminate disease
- Enhanced biosecurity
- Tracing and epidemiologic investigations
- Surveillance for other cases

- How does this affect counties and the local producers?

How can you help?

- **Report** suspect diseases and flystrike
- **Protect** livestock from getting diseases
  - proper handling of new animals and visitors
  - regular veterinary consultations
  - limiting contact with outside animals
  - use of animal identification
  - knowledge of diseases and transmission
- Understand **biosecurity** and implement on farm
- **Share biosecurity information** with others
- Monitor all mammals for flystrike and have all animals with larvae infestation seen by your veterinarian

Thank You!

For all you do to keep Florida agriculture healthy and safe.

Resources:

- https://www.aphis.usda.gov/aphis/ourfocus/animalhealth/animal-disease-information/cattle-disease-information/cattle-vector-borne-diseases
- https://www.aphis.usda.gov/aphis/ourfocus/animalhealth/animal-disease-information/cattle-disease-information/nws
- https://www.aphis.usda.gov/aphis/ourfocus/animalhealth/animal-disease-information/swine-disease-information/african-swine-fever/seminar/african-swine-fever
- https://www.aphis.usda.gov/aphis/ourfocus/animalhealth/animal-disease-information/swine-disease-information/classic-swine-fever/classic-swine-fever
- https://www.aphis.usda.gov/aphis/ourfocus/animalhealth/animal-disease-information/swine-disease-information/biosecurity
- biosecurity-for-pigs-outdoor-access-factsheet.pdf (usda.gov)
- USDA APHIS | Avian Health - https://www.aphis.usda.gov/aphis/ourfocus/animalhealth/animal-disease-information/avian
- https://www.aphis.usda.gov/aphis/ourfocus/animalhealth/animal-disease-information/avian/defend-the-flock-program
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