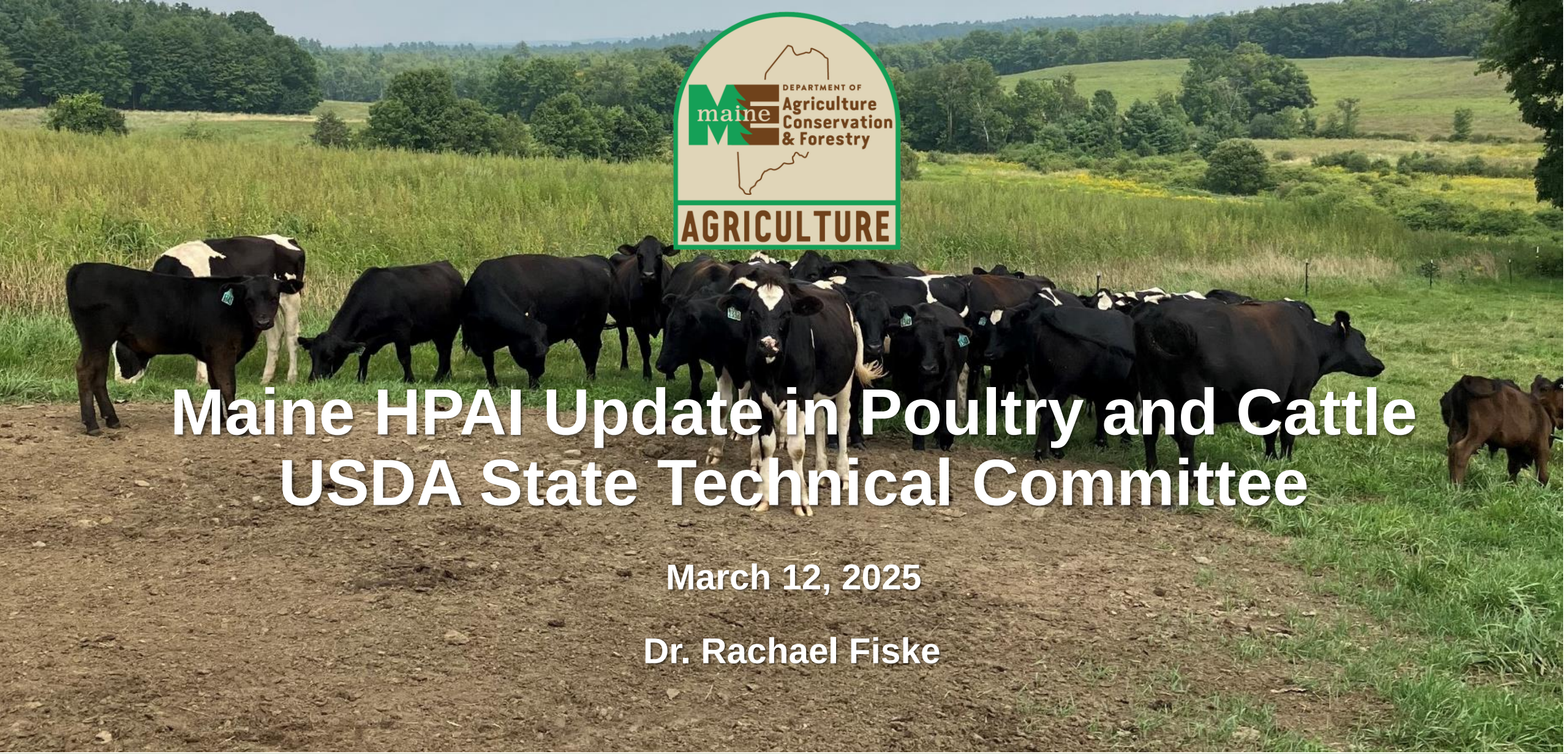

Maine HPAI Update in Poultry and Cattle
USDA State Technical Committee

March 12, 2025

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HPAI Update Outline

1. HPAI in Poultry
2. HPAI in Cattle
3. What producers can do to protect their farms

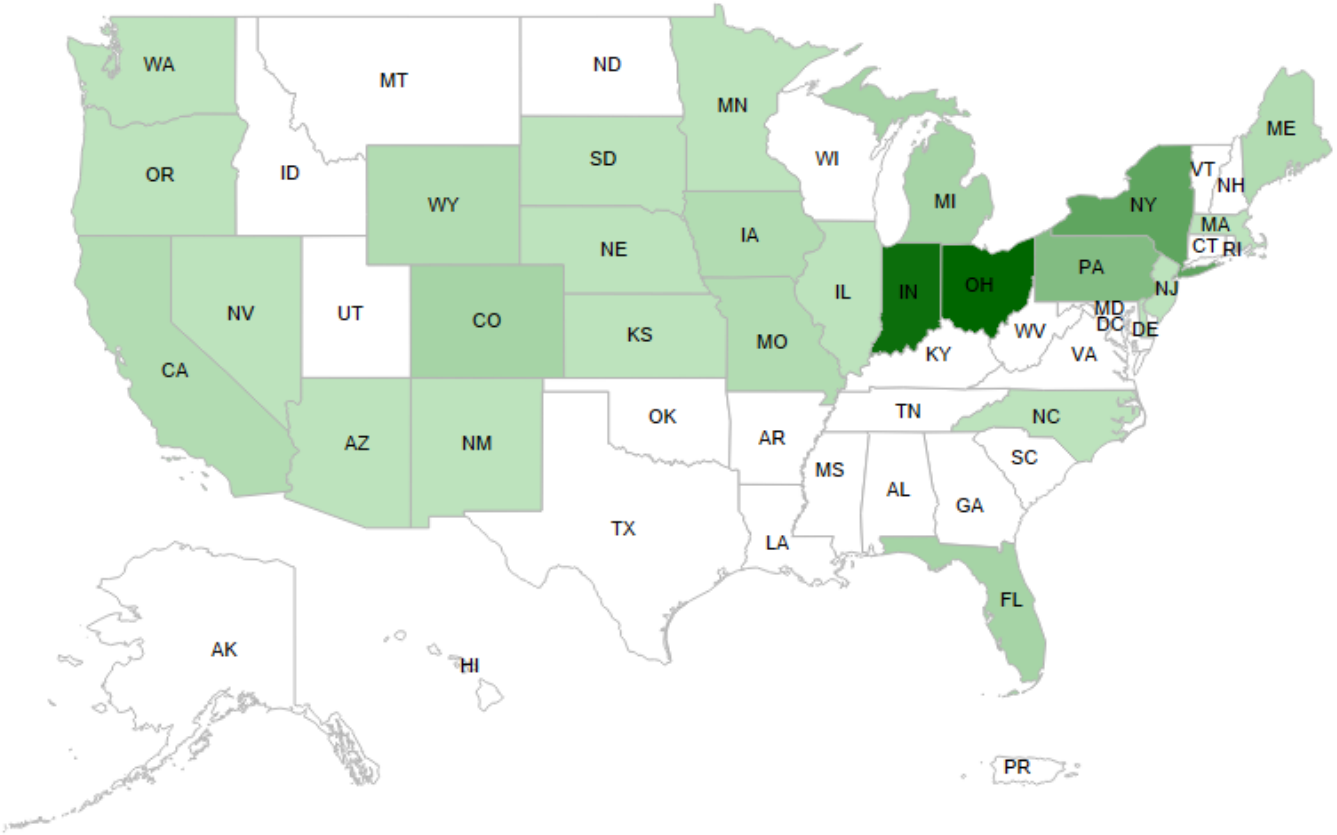
HPAI in Poultry

In the last 30 days in the U.S.:

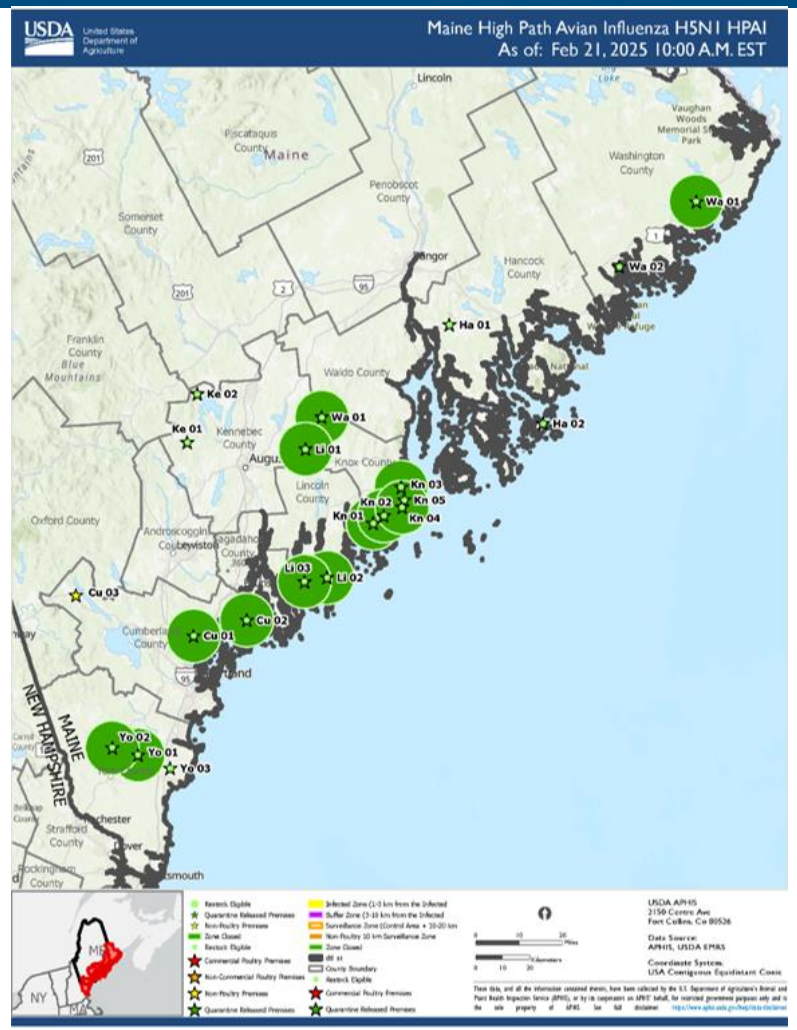
- 81 Confirmed positive flocks
- 33 Commercial Flocks/48 Backyard Flocks
- 8.42 million birds

In Maine:

- 2 Backyard flocks
- Both in Cumberland County



HPAI in Maine



In Maine since 2022:

- 22 Backyard Flocks
  - 21 WOAH (World Organization for Animal Health) Non-poultry flocks
  - 1 WOAH Poultry flock
- 8 Counties (mostly along the coast)
- 2 active quarantines

HPAI in Maine

Demographics of an HPAI-infected Flock:

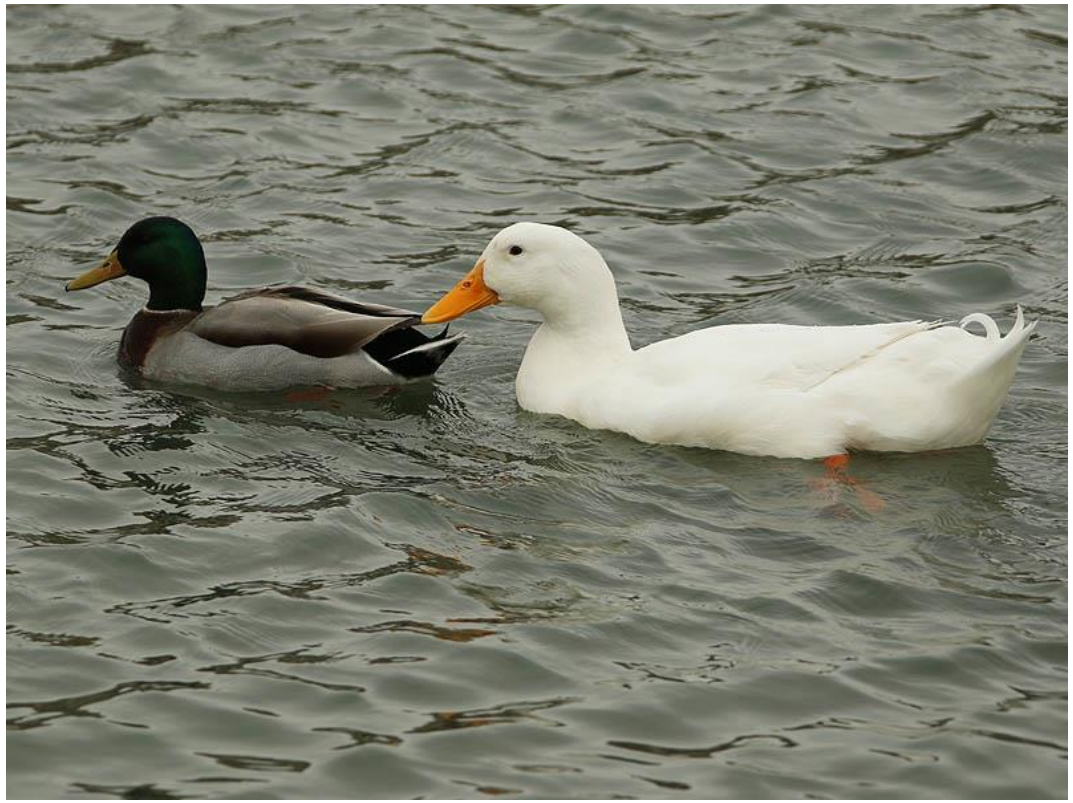
- Mixed flock (chickens, turkeys, ducks, geese, etc.)
- Often housed together in the same coop
- Outdoor access with or without an uncovered run
- All have direct or indirect contact with wild waterfowl

HPAI in Maine

Response Activities:

- **Sick Bird Calls** – respond to flock owners with questions or concerns about flock illness/losses
- **Testing** – Foreign Animal Disease Investigation, Surveillance, Mail-A-Bird in collaboration with Maine Cooperative Extension Veterinary Diagnostic Laboratory
- **Mitigation** – Whole flock depopulation and disposal with fallow period vs. Long-term quarantine
- **Assistance** to flock owner - indemnity, resources to prevent future infection
- **Permitting** – continuity of business for poultry/poultry products being imported to Maine

HPAI in Maine



Prevention for Flock Owners:

- Practice good biosecurity
  - Quarantine new arrivals to the flock for 14+ days
  - Don’t share equipment
  - Limit visitor foot traffic into bird area
- Eliminate direct contact with wild waterfowl
  - Cover runs, farm ponds
  - Wild duck mitigation steps
- Mixed coops aren't a great idea
  - House waterfowl separately from gallinaceous birds
- Be aware of indirect exposure
  - Wear **clean** footwear dedicated to the flock

The ongoing H5N1 (bird flu) outbreak has affected 70 million birds, causing an estimated $2.5 billion to $3 billion in losses to poultry producers

The discovery of H5N1 in cattle raises concerns about greater economic losses and the possibility of further mutations in the virus

Clinical Signs in Cattle

Common clinical signs in affected cows include:

- Scleral injection
- Increased skin tenting time
- Reddened nares and nasal mucosa
- Increased nasal discharge, including serous, mucopurulent, and/or bloody nasal secretions
- Increased salivation
- Inappetence/decreased feed consumption
- Increased respiratory rate and effort
- Subcutaneous emphysema
- Decreased rumen fill
- Decreased milk production
- More concentrated, thicker milk consistency and color change (yellow to gray) with variable increases in somatic cell count
- Vasculitis of the vaginal vestibule
- Change in fecal consistency, including maldigestion and firm feces with increased mucus to diarrhea
- Fever early in the course of clinical signs (103–108ºF)

Epidemiology of HPAI in Dairy Cattle

- Genome sequencing of the virus suggests that it spilled over from wild birds to dairy cattle in a single event and then spread from farm to farm from there (although 2+ additional spillover events have recently been identified through NMTS surveillance)

- Transmission and incubation period of HPAI are under investigation

- The movement of apparently healthy lactating cows from one location to another has revealed cow-to-cow transmission

Proposed mechanisms of viral transmission within a herd or from herd to herd:

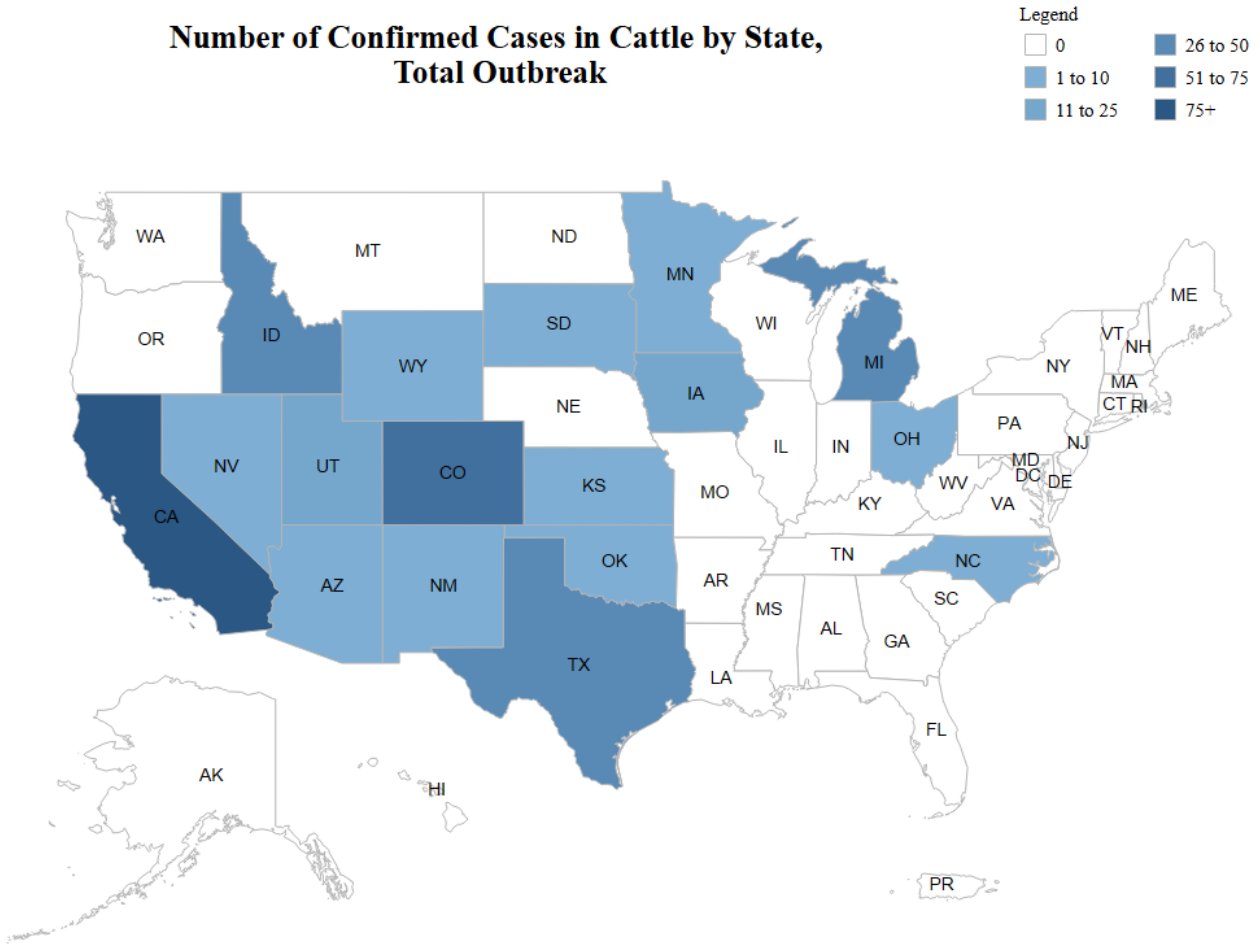
•Direct contact with milk (milk from infected cattle contains high levels of virus)

•Inhalation of aerosolized virus and aerosolized spread to neighboring sites

•Indirect transfer by fomites (eg, workers and visitors, equipment, vehicles)

HPAI Nationally and in Maine

Report date 3/7/25



In the total outbreak, in cattle, there were:
985 Confirmed cases in **17** states
No detections in Maine as of 3/12/25

Source USDA APHIS

National Milk Testing Strategy (NMTS)

- The NMTS offers comprehensive surveillance of H5N1 in the Nation's milk supply and dairy herds
- The 5-stage program provides a roadmap to demonstrate the elimination of the virus from dairy herds
- Includes a combination of dairy processing plant silo monitoring and state-specific surveillance, ongoing testing for case investigation and response, and the mandatory testing for interstate movement of lactating dairy cattle

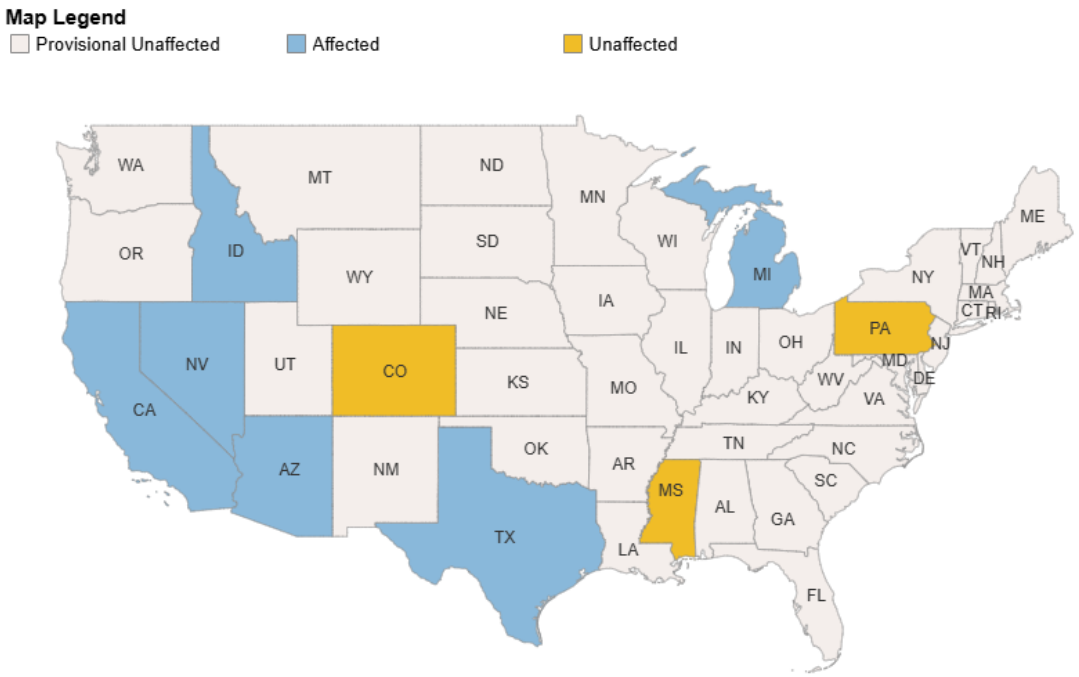
Surveillance of H5 Avian Influenza in Dairy Cattle

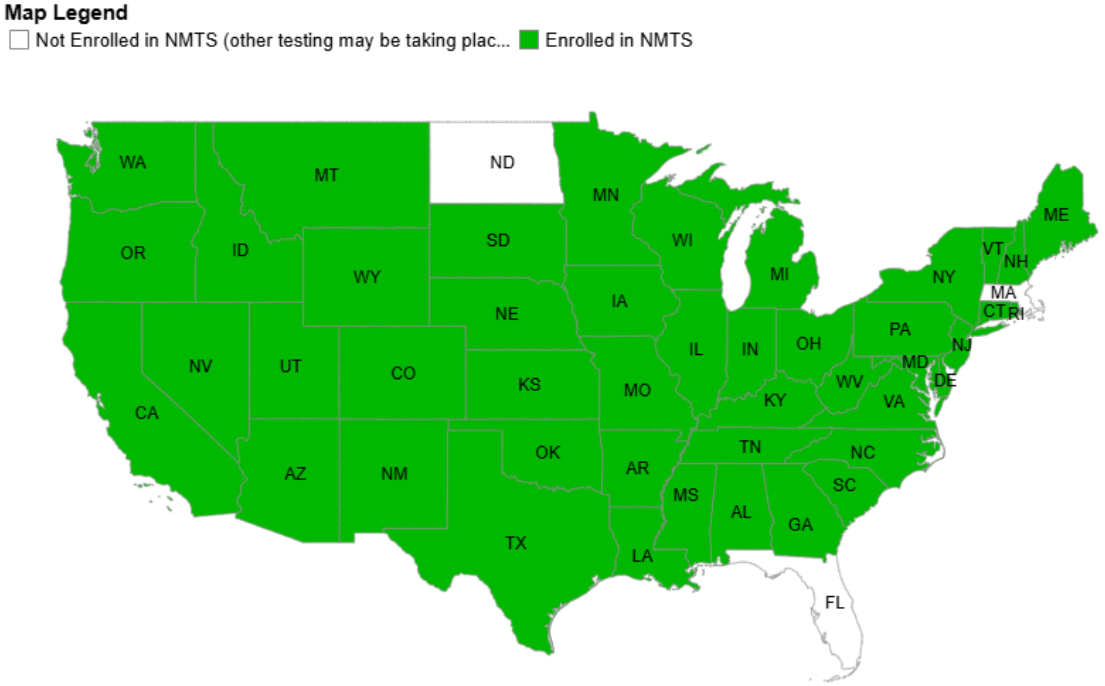
State Statuses based on Testing/Surveillance Activities, as part of NMTS
Report date March 7, 2025

45 States Enrolled in the NMTS and Performing Active Surveillance

3 States are Unaffected

39 States are Provisionally Unaffected





Source USDA APHIS

Maine and the NMTP

Stage 1

- DACF dairy inspection staff will sample 4 silos monthly, which comprise 67% of the State's Grade A milk production
- Samples are sent, per USDA directive, to the National Veterinary Services Laboratory (NVSL) in Ames, IA
- The Processors receiving the majority of the milk from the state's farms have agreed to identify the individual farms contributing to each sampled silo

Stage 2

- Intended to capture those farms shipping Grade A milk not included in Stage 1
- This consists of all of Maine's organic Grade A producers whose milk is processed in NH and a few conventional farms whos' milk is processed in MA
- Licensed samplers, under the direction of the dairy inspection staff, will collect samples from bulk tanks monthly on those farms that ship milk to out of state processors and submit them to an approved lab

Stages 1 and 2 together will allow DACF to sample all Maine farms shipping Grade A milk

Zoonotic Concern

- Zoonotic infections are rare
- Infections in humans can remain subclinical
- As of October 2024, HPAI infection had been confirmed in 70 humans associated with exposure to sick or infected dairy cows or infected poultry in the US
- Clinical signs ranged from conjunctivitis to mild flulike clinical signs and acute respiratory illness
- 1 human death

- The primary risk factor for HPAI infection in humans is contact with infected animals

- People working closely with infected or potentially infected cattle, birds, or other animals are at risk for infection and should take proper precautions, including protecting the eyes, covering the nose and mouth, wearing gloves, laundering outerwear, and washing hands before eating or using tobacco

- They should also use personal protective equipment (PPE), avoid exposure to sick or dead animals, and exercise caution when handling raw milk, feces, and bedding from suspected or confirmed sick animals

Preventing Avian Influenza on the Farm

Biosecurity and simple wildlife management practices

Reduce wildlife attractants

Remove standing water

Manage risks at ponds and basins

Reduce food sources

Cover waste

Prevent wildlife access

Remove perches, plug holes

Add wildlife deterrents

Move and replace scare devices frequently

Biosecurity Best Practices

Limit visitors

Keep germs away

Avoid mixing species

Look out for sick animals

Resources

- Maine Department of Agriculture, Conservation and Forestry: maine.gov/dacf/hpai
- Maine Department of Inland Fisheries and Wildlife: maine.gov/ifw
- Maine Center for Disease Control and Prevention: maine.gov/dhhs
- USDA Avian Influenza Resources: usda.gov
- CDC Avian Influenza Information: cdc.gov

Thank you

Department of Agriculture, Conservation and Forestry
Animal Health Program