True Grit: The Truth about Highly Pathogenic Avian Influenza

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just 2 hrs later



Precipitation

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Moderate Light

Heavy

Migration intensity



Night of September 21, 2022

491 million birds predicted

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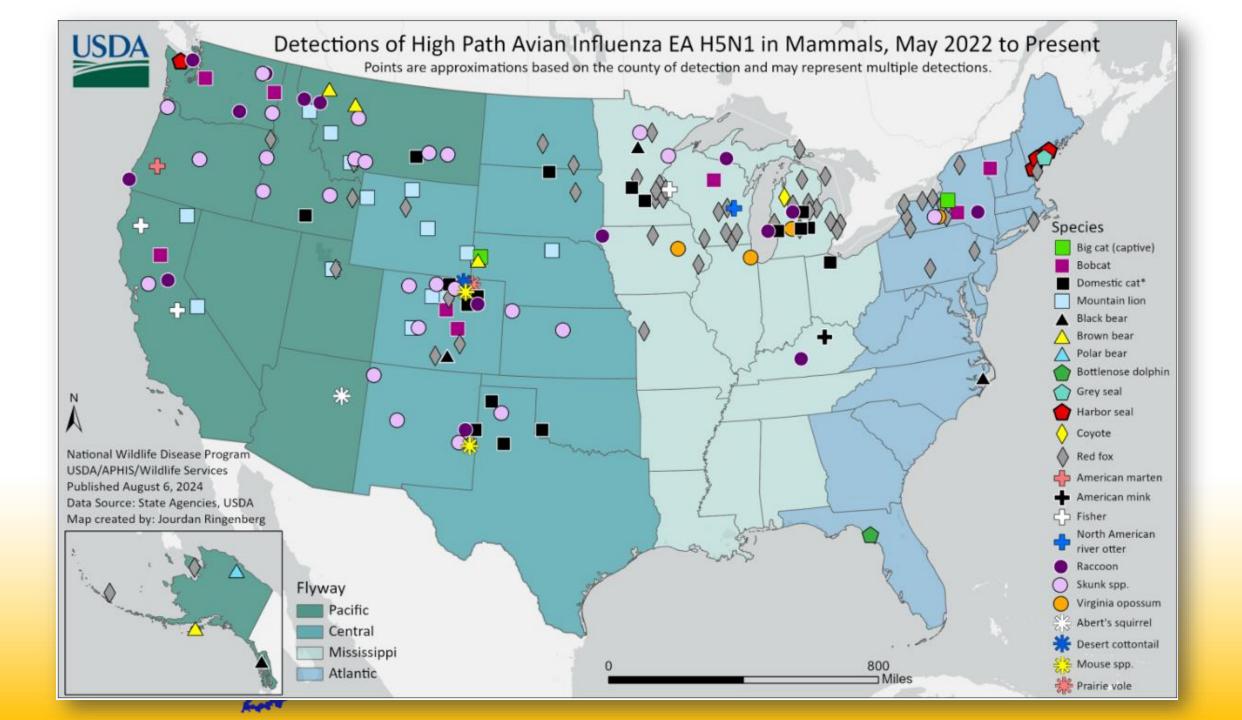
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Bird migration forecast

Van Doren and Horton 2022





Disease of Unknown Origin

- Dairy farms in Texas panhandle
- Clinical Signs:
 - Decrease in feed consumption, rumination and rumen motility.
 - Clear nasal discharge; and subsequent acute drop in milk production.
 - Abnormal tacky or loose feces, lethargy, dehydration, and fever.
 - Severely affected cattle may have thicker, concentrated, colostrum-like milk or produce no milk at all.





Detection of HPAI H5N1

- Confirmed March 25 after extensive rule-out of other diseases
- Infected cattle may be asymptomatic (subclinical) or symptomatic (clinical)
- Virus is predominantly found in milk and mammary tissue, regardless of symptoms





Federal Order

- Effective April 29
- Mandatory testing of lactating dairy cattle for interstate movement
- Mandatory reporting positive Influenza A diagnostic results





Current Epidemiological Findings

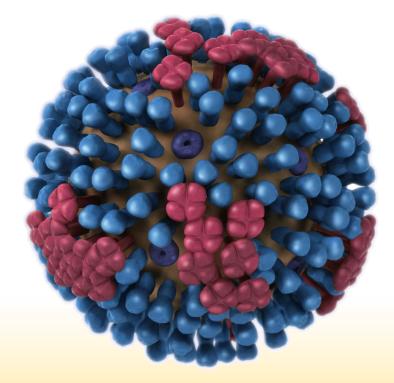
- Spillover event from wild birds
- 12-25 days between introduction and clinical signs
- Unknown role of peridomestic and domestic species
- Phylogenetic and epidemiological data of disease spread from cattle premises to poultry premises





Human Health

- **CDC:** current risk to general public is low.
- USDA FSIS: no virus present in retail ground beef samples; continue to use proper cooking temperatures.
- FDA: initial survey of 297 retail dairy products found to be negative for viable H5N1 HPAI virus.





Human Health

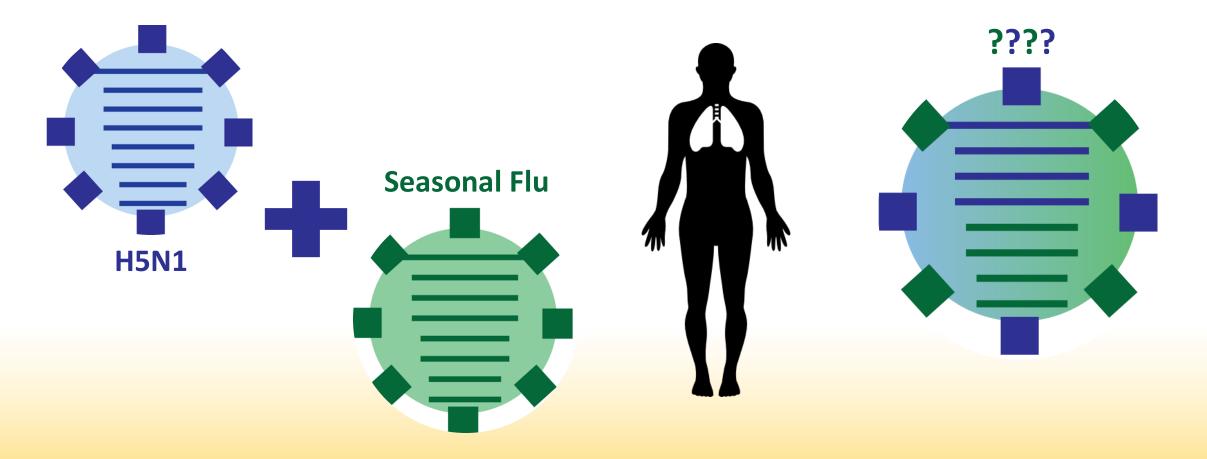
US Health Officials to Spend \$100 Million on Bird Flu Surveillance

The US will pay Moderna \$176 million to develop an mRNA pandemic flu vaccine

US to spend \$10 million to curb bird flu in farm workers, including vaccine push

BOAH Indiana State Board of Animal Health

Influenza Reassortment



BAH Indiana State Board of Animal Health

Human Health

- FDA and USDA issued joint letter to state regulatory partners
- Reiterates effectiveness of pasteurization at inactivating the H5N1 virus
- Ease concerns of milk processors from rejecting milk from dairy farms identified or suspected to have active H5N1 infection



Dear State Regulatory Officials:

The Food and Drug Administration (FDA), the U.S. Department of Agriculture (USDA), and our federal and state partners continue to work diligently through an all-of-government response to the outbreak of Highly Pathogenic HSNI Avian Influenza (HSNI) in dairy cattle. As part of these congoing efforts, we would like to encourage your state's participation in the USDA voluntary HPAI Dairy Herd Status Program as well as future voluntary HSNI monitoring studies being discussed between FDA, USDA, and state regulatory partners. These programs will take a One Health approach to reducing the risk this virus poses to dairy cattle herds and other animal industries as well as human health. Industry, state, and federal partners can gain better insight hich bis virus through coordinated and effective initiatives to collect actionable data and design initiatives to reduce its circulation. Reducing the circulation of this virus is beneficial for our nation's herds, flocks, and people. FDA and USDA stad ready to provide assistance that might be needed for your state to participate in these efforts.

FDA and USDA are aware that concerns regarding whether commercial milk processors might reject milk from dairy premises identified or suspected to have HSN1 infections in their herds could discourage robust participation in voluntary surveillance and sampling programs intended to expand knowledge of the disease and inform programs to reduce circulation of HSN1.

FDA and USDA are confident that pasteurization is as effective at neutralizing H5N1 in raw milk as it is for the pathogens against which we began pasteurizing raw milk looy years ago based on available data and research. FDA expects that the Grade A Pasteurized Milk Ordinance (PMO) requirements and existing quality management systems will ensure that clinically ill cove producing abnormal milk will be segregated from the milking herd, thus reducing the potential level of H5N1 virus in raw milk produced. As with many bovine pathogens, asymptomatic and pre-symptomatic shedding can occur, and thus raw milk bound for processors (and thus pasteurization) might not be free of virus. FDA's High Temperature and Short Time pasteurization study showed it was highly effective in inactivating the full range of viable virus found identified in a multi-state sampling of raw, pre-pasteurized milk bound for processing and pasteurization.

FDA initially assessed that the commercial, pasteurized milk supply was safe in late March 2024. FDA based this initial assessment on a critical review of existing scientific literature, data on pasteurization's effectiveness against pathogeness previously identified in raw milk, and FDA's contruy of real-world evidence from the United States Nilk Safety System. Further, FDA was aware of a study that showed pasteurization against HSNI in egg products was effective in inactivating the virus at times and temperatures typically lower than those used in milk pasteurization. FDA confirmed its initial assessment through two pivotal studies: a sampling study of 297 commercial, pasteurized retail products and a High Temperature Short Time (HTST) pasteurization validation toxidy. Both studies confirmed that the milk safety system -including pasteurization – inactivates HSNI virus and protects public health. While FDA plans additional studies; including thermal inactivation kinetics of HSNI, these data significantly strengthen the scientific evidence of the safety of the commercial, pasteurized milk suphy. FDA's assessment of pasteurization's effectiveness against HSNI does not affect the Agency's authority to conduct inspections or other activities to protect public health. FDA's pre-print

www.fda.gov www.usda.gov

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Preparedness: Before the Detection

BOAH Partnerships & Outreach

- ISDA, IDOH, IDHS, IDNR, IDEM, ISP
- Farmers, Allied Industries
- Purdue Extension, Commodities, IFB

Traceability Efforts

- Premises Identification
- USAHERDS
- Individual Animal ID
- Electronic Certificates

Preparedness: Before the Detection

Reporting Avenues

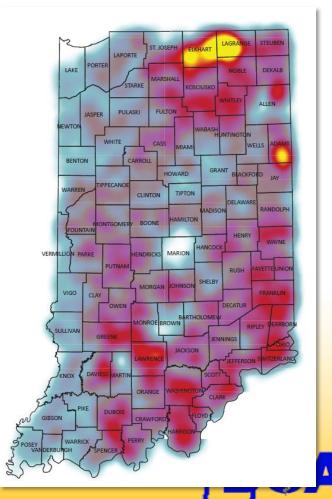
- Producer Reports
- Private Veterinarians
- Laboratory Results
- State, Federal Slaughter Plants
- Epidemiology / Trace Investigations

Surveillance Network

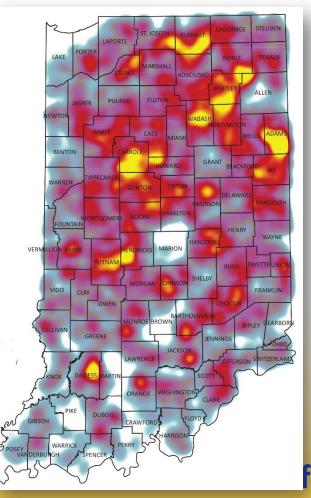
- Foreign Animal Disease Diagnosticians
- Laboratories
 - ADDL@Purdue / NAHLN
 - USDA NVSL

Indiana Registered Premises

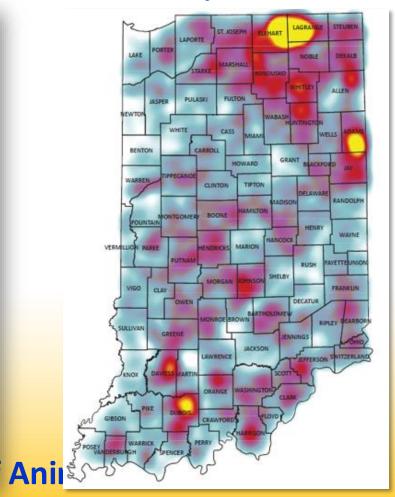
Cattle Premises



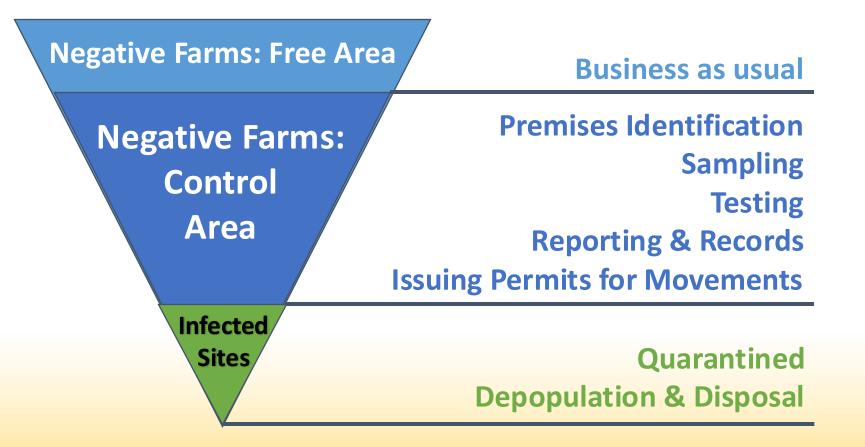
Swine Premises



Poultry Premises



Plan For the Biggest Job



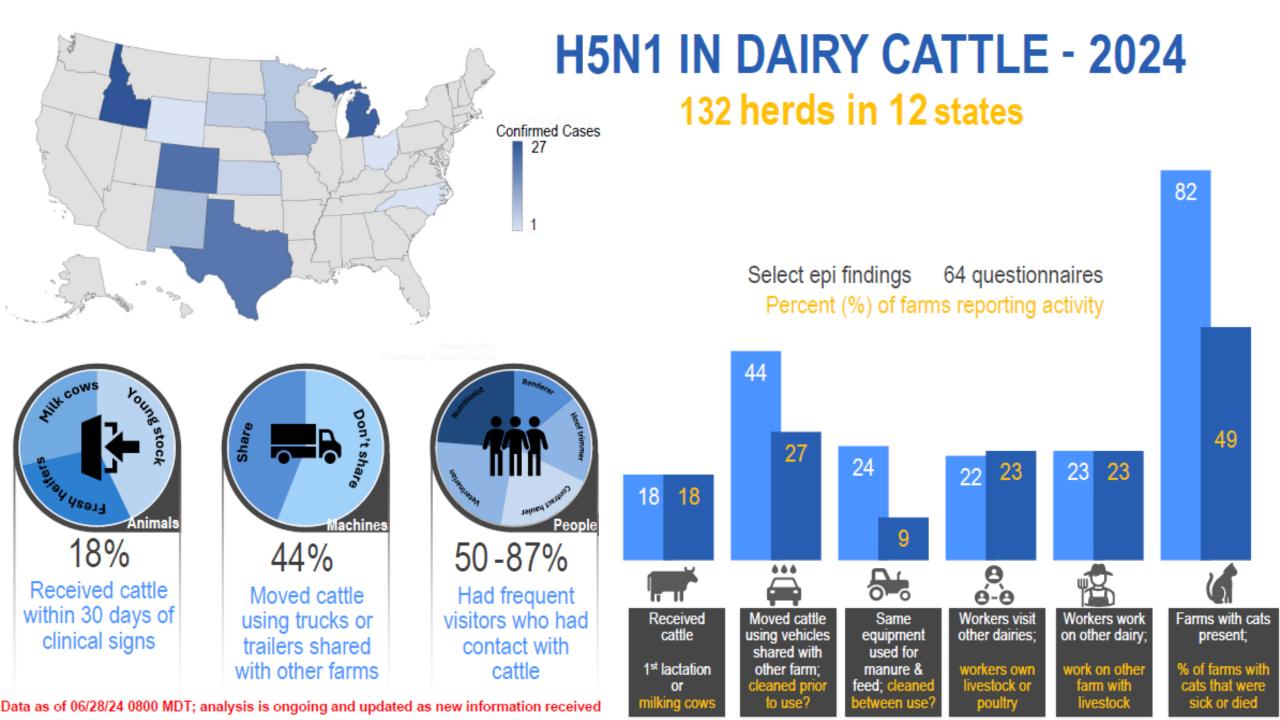
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IN Response Plan: HPAI in Dairy Herd

- Restricted Movement Order
- Epidemiological Investigation
- Enhanced Biosecurity
- Surveillance
 - Dairy Cattle Premises
 - Poultry Premises
 - Epidemiological Traces







Dairy Farm Biosecurity

Farm Workers & Families

All family members—including children, as well as full- and part-time workers

Wash or sanitize regularly before

Keep dedicated barn shoes or

or milking equipment.

and after contact with animals, milk

Visitors

Anyone in contact with cattle, milk or milking equipment, such as nutritionist, veterinarian, feed delivery

Avoid unnecessary touching/ contact with animals, milk or milking equipment. Wash or sanitize before and after contacts.

Wear disposable shoe covers or clean, then disinfect, footwear.

Clothing

Hands

Shoes

boots on the farm-not to be worn elsewhere, even the house. Clean, then disinfect. Wear freshly laundered, dedicated Wear freshly laundered, clean clothing to the barns daily-not to clothing and wash regularly. be worn elsewhere.

Milk Haulers

Are essential to reducing risk of farm-to-farm spread

Wash or sanitize before and after each farm visit or put on clean. disinfectable or disposable gloves.

Wear disposable shoe covers or clean, then disinfect, footwear between farms and before entering the truck cab.

Keep truck clean—spray outerwear with disinfectant (such as Lysol) before entering. Wear clean clothing and wash daily.

Vehicle Traffic

Park in a designated space away from animal areas. Clean the wheelwells with a liquid disinfectant and floorboards with an aerosolized or liquid disinfectant (such as Lysol).



Keep pets out of animal areas. Be extra cautious when farm workers or family members work on another farm or with poultry.

Use a visitor's log to record who comes on the farm and when. Designate a drop-off away from barns for deliveries and packages. Avoid spilling/dumping milk especially from other farms. Soak up outdoor spills with pine shavings.



Be aware of signs of influenza-like illness, especially eye and respiratory issues. Avoid touching your face, especially eyes, nose, mouth. Protect eyes, nose and mouth when near raw milk and sick-pen cows.

More Information

Online: <u>www.in.gov/boah</u> Phone: 317-544-2400 Email: <u>animalhealth@boah.in.gov</u>

