



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

Biosecurity: Audits, Lapses, Opportunities

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USDA APHIS VS

A photograph of a farm scene with a large water tower in the background and a sign in the foreground. The sign is white with red and black text. The background is slightly blurred, showing a dirt road and some farm buildings under an overcast sky.

**KEEP
OUT**
Disease
Control



HPAI in Poultry: Risk Factors over Time

	2015	2016	2017	2018	2019	2020	2022
Virus	H5N2 HPAI	H7N8 HPAI/LPAI	H7N9 HPAI/LPAI	H7N1 LPAI	H5N2 LPAI	H7N3 HPAI/LPAI	H5N1 HPAI
Production type(s) affected	7	1	3	3	1	2	15
State(s) affected	N=15: primarily IA, IN, MN		TN, AL, GA, KY	MO, TX	MN	NC, SC	N=47, widespread
Study type	Case Control	Case Control	Case Series/Expert Elicitation	Case Series	Case Series	Case Control	Case Series, Case Control
Location in a Control Zone							
Rendering trucks near barns							
Garbage trucks near barns							
Dead bird disposal near barn							
Company service person visit							
Visitors do not change clothes							
Shared vehicles/equipment							
Wild mammals around barns							
Mesopredators							
Wild birds on farm							
Water body within 350 yds							
Barn enclosure defects							
Hard surface entry not C&D							
Operation density							
Worker comingling							

 Indicates either statistically significant risk factor or a high proportion of case farms reported the risk factor

HPAI in Poultry: Biosecurity Audit Data

Biosecurity Plan → Biosecurity Implementation



Buffer Zone Biosecurity Audits

- Conducted on commercial poultry premises located in a buffer zone of a control area that request to move poultry onto their premises
- A condition of eligibility for federal indemnity for the birds that will be moved onto the premises, should they become infected with HPAI



By the Numbers

986
Buffer Zone
Audits Conducted

559
Premises Placed
Birds within an
Active Control Area

3
Premises became
Infected within 14
days after Control
Area Closed

11
Premises became
Infected within 180
days of being
Audited

HPAI in Poultry: Impacts of Biosecurity Implementation/Improvements



Permanent barn
ventilation
improvements or
renovations



Temporary wild bird
mitigation structures
or infrastructure



Permanent vehicle
wash stations
improvements or
renovations



Permanent wash
stations for
employees in older
barns

71% ↓



Decreased Farm-to-Farm (Lateral) Spread
Increased Biocontainment

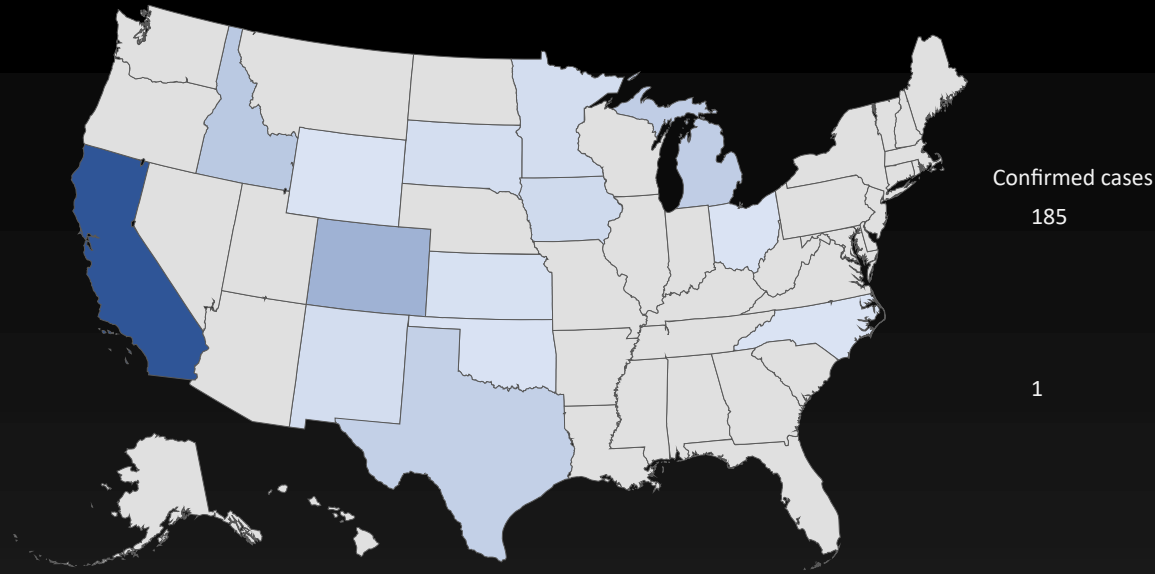
33% ↓



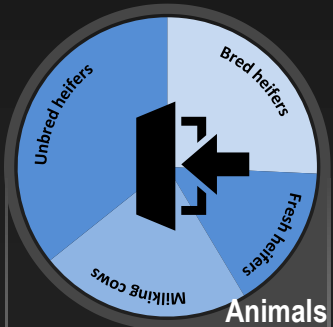
Decreased Risk Factors for Lateral
Transmission

H5N1 IN DAIRY CATTLE - 2024

386 herds in 14 states

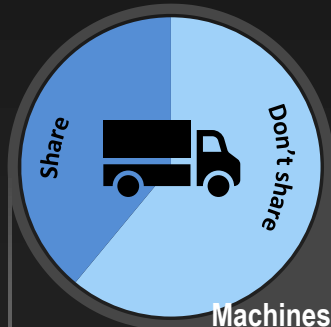


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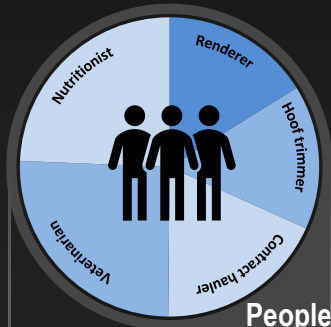
Animals

60%
Received any
cattle within 30
days of clinical
signs



Machines

38%
Moved cattle
using trucks or
trailers shared
with other farms

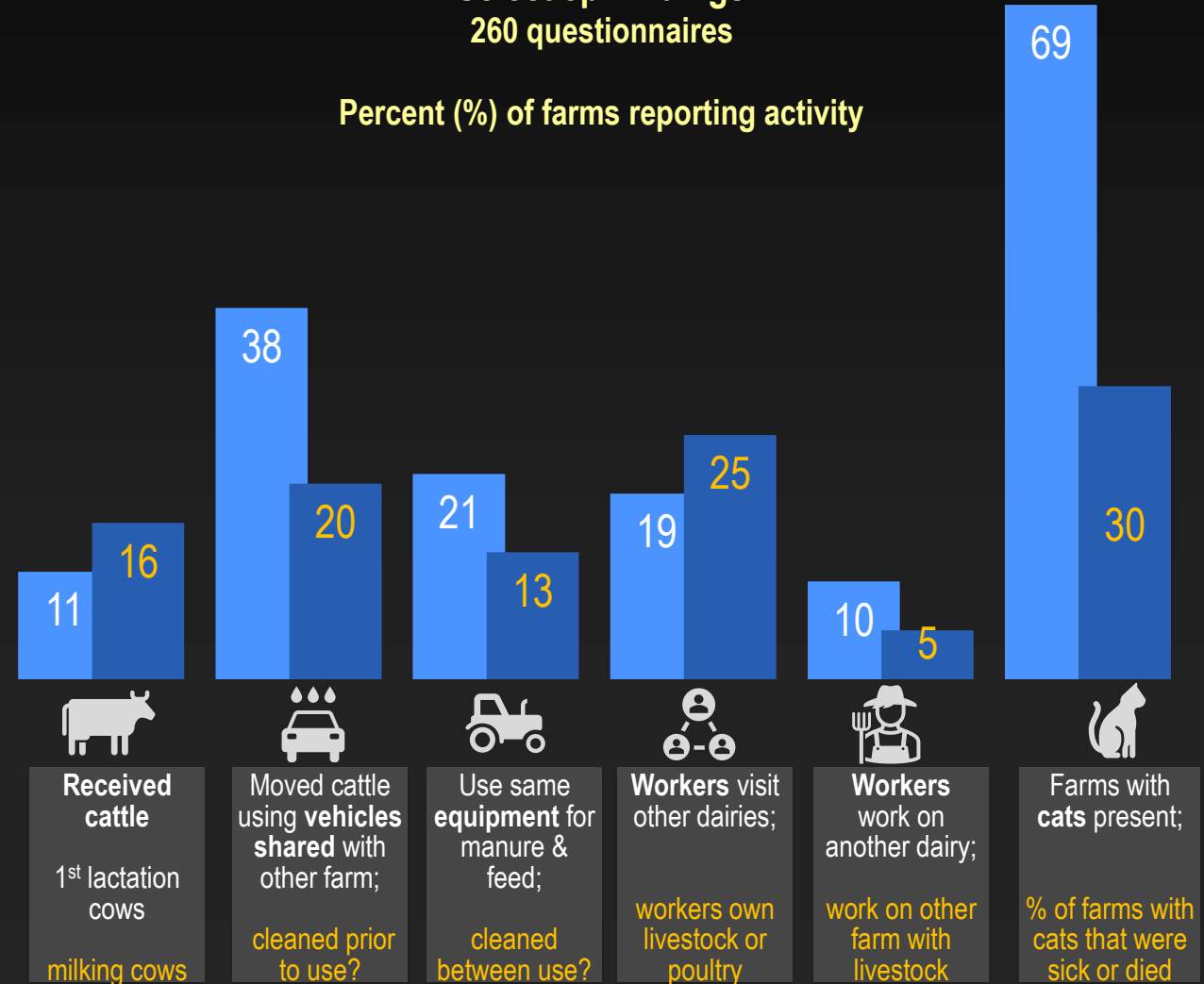


People

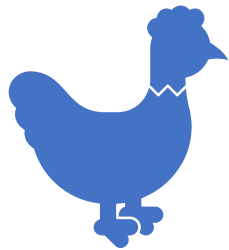
>50%
Had frequent
visitors who had
contact with
cattle

Select epi findings
260 questionnaires

Percent (%) of farms reporting activity



HPAI poultry B3.13 detections since March 1, 2024



52/78 (66.7%) domestic poultry detections are genotype B3.13

- 16 backyard flocks
- 36 commercial poultry flocks

Livestock/Poultry Links



Proximity between dairy & poultry



Shared workers, shared housing



Shared equipment & supplies



Shared service providers



Wildlife, rodent presence

Discussion

1. What are the biggest hurdles for biosecurity planning?
2. What are the biggest hurdles for biosecurity implementation?
Biocontainment?
3. What are lessons learned for biosecurity implementation?
4. What biosecurity changes are being implemented now?
5. What are short-term v long-term biosecurity investments?
Temporary v permanent?

Key Messages



Biosecurity is key to mitigate the risk of disease spread



Lessons learned from previous HPAI outbreaks can greatly improve our approaches now



Early testing and early reporting are critical to protecting yourself and others



Collaborations between industries, States, and USDA are key to moving forward

Biosecurity Recommendations

Biosecurity can only work if **EVERYONE** on the operation follows the established biosecurity plan **ALL** of the time

Enhanced biosecurity can include:

- Limiting visitors.
- Using separate boots from one farm premises to another.
- Disinfecting all vehicles, trailers and tires, and any equipment that may be shared between premises.
- Avoiding mixing species.
- Keeping livestock and pets away from birds.
- Checking animals regularly for signs of illness.
- Isolating and reporting any potentially sick animals to your veterinarian and the local [APHIS Area Veterinarian in Charge \(AVIC\)](#).

[Secure Milk Supply](#)

[Healthy Farms Healthy Agriculture](#)

Biosecurity Recommendations - Farms

- Only allow people on farm who **need to be there**
- Use **one entrance** and exit for the farm
- Keep a record of **all farm visitors**
- Give visitors **disposable shoe covers** to wear on the farm
- Keep a **separate pair of boots** for use on the farm around your animals
- **Use a footbath** with a disinfectant solution (4 ounces of bleach in 1 gallon of water) to clean footwear before entering the farm
- **Spray disinfectant** on all vehicle and trailer tires before returning to the farm
- Don't borrow **tools or equipment** from other farms
- **Don't use untreated water** from ponds or streams



HPAI in Poultry: What We've Learned

Turkey Case-Control Study: How Did Investments Differ Among Turkey Producers?



Control farms spend more

(\$27,657 vs. \$21,159) on temporary measures.

Examples: gates, parking areas, temporary wild bird mitigation, temporary air intake inlet covers, or temporary vehicle wash stations.



NPIP participation **increased likelihood of investing** in temporary biosecurity measures by 28.4%.

What You Can Do Now

- Practice good biosecurity.
- Enroll in the Dairy Herd Status Program.
- Exercise caution when participating in fairs and shows.
- Contact your AVIC to discuss options for financial support.



How We're Helping

Financial Supports

- Personal Protective Equipment (PPE) Support
- Biosecurity Planning
- Milk Treatment
- Veterinary Costs
- Sample Shipping
- ELAP Indemnities

Other Supports

- Dairy Herd Status Program
- H5N1 Research

Financial Support for Producers

Support Option	Affected premises	Unaffected premises
PPE support	Up to \$2,000/month	Up to \$1500/month
Biosecurity planning	Up to \$1,500*	Up to \$1500*
Milk treatment	Up to \$8,000	
Veterinary cost	Up to \$10,000	Up to \$2000
Sample shipping cost	Up to \$50 per shipment**	Up to \$50 per shipment**

*Also includes \$100 for in-line sampler for milk

**For up to 2 shipments per month

Certain conditions apply. For more information, go to www.aphis.usda.gov. Interested producers should contact their [Area Veterinarian in Charge](#) to enroll.

Dairy Herd Status Program

- Provide additional testing options to monitor herd health.
- Ease burden of pre-movement testing for unaffected herds.
- Reduce H5N1 viral spread.
- Support national strategy to monitor and control HPAI in dairy herds.



ELAP Indemnity Program

- Compensation for lost milk production through FSA's Emergency Assistance for Livestock, Honeybees and Farm-Raised Fish Program (ELAP).
- Producers with herds that have tested positive for H5N1 are eligible.
- Pays 90% of the value of milk lost when cows are sick.
- More information is available online at [Disaster Assistance: ELAP - Highly Pathogenic Avian Influenza \(H5N1\)](#).

Supporting Research

USDA is investing in research through our Agricultural Research Service (ARS), National Institute of Food and Agriculture as well as partnerships with academia and other organizations, to learn more about this virus and develop a vaccine for H5N1 in dairy cows.



Up to \$10M available for research opportunities for HPAI vaccine research, development, and evaluation



Focus on viral pathogenesis and transmission studies and diagnostic development for H5N1 in dairy cows



Interest in partnering with industry on collaborative research regarding a HPAI bovine vaccine