Dairy Cattle: Biosecurity for H5N1 Virus

Take action today to keep Highly Pathogenic Avian Influenza A (H5N1) off your dairy farm. The virus continues to spread to new dairies and poultry facilities through the movement of lactating cattle, vehicles, equipment and people from other affected locations. Dairy farms are facing significant milk losses, while poultry farms experience devastating death losses. People in contact with infected cows are also at risk of infection. Biosecurity measures can help protect cattle, poultry, cats, and human health. Recommendations will be updated as more is learned about H5N1 through additional herd testing, producer interviews, and research. Always follow federal and state-specific biosecurity requirements.

Biosecurity precautions aimed to keep H5N1 off the dairy:

1. TEST LACTATING CATTLE
Test lactating cattle prior to movement, following federal and state-specific guidance

2. ISOLATE CATTLE
Isolate newly introduced cattle and cattle returning from an offsite location for at least 30 days

3. KEEP OFF-FARM VEHICLES AND EQUIPMENT AWAY FROM ANIMALS
Design drive paths to keep off-farm vehicles and equipment away from live animals and routes used by farm movements (referred to as a Line of Separation)

4. DISINFECT TIRES, WHEEL WELLS AND EQUIPMENT
Power wash and disinfect tires/wheel wells and equipment that cross paths with on-farm vehicles, enter animal or feed areas, or contact animals

5. REQUIRE CLEAN OR DAIRY-DEDICATED FOOTWEAR, CLOTHING
Require clean or dairy-dedicated footwear for all who enter your farm and clean or dairy-dedicated clothing for all animal handlers

6. SANITIZE CONTACT SURFACES IN MILK HOUSE
Hose down and sanitize contact surfaces in the milk house after collection if the milk hauler enters after being on other farms

Resources with more details are available at the end of this document.

WHAT DOES ENHANCED BIOSECURITY INCLUDE?

The above steps are part of the recommendations included in the Enhanced Biosecurity guidance from the Secure Milk Supply (SMS) Plan. SMS was written based on foot-and-mouth disease (FMD) prevention. Both FMD and H5N1 are contagious viruses shed by cattle in raw milk and other bodily fluids. That is why the enhanced biosecurity steps for FMD are being recommended by USDA to protect cattle from H5N1. A chart of similarities and differences between FMD and H5N1 is below. Review the Secure Milk Supply (SMS) Enhanced Biosecurity for H5N1 for more specific details.

The NMPF's Farmers Assuring Responsible Management (FARM) Program provides free online training to learn how to develop an SMS enhanced biosecurity plan. You can learn how to design driving paths to protect animals, plus much more. Examples are also provided in the free NMPF Enhanced Biosecurity Plan Prep Guide.

ARE BIRDS SPREADING H5N1?

Data shows that waterfowl initially introduced the H5N1 virus to dairy cattle in Texas through a single spillover event. The subsequent spread to other states in March, April, and May 2024 was linked to cattle movement. There is no evidence that wild birds continue to introduce H5N1 to dairies in new states. Wild birds and poultry on infected dairies can get sick or die. Birds may also carry the virus on their feet and feathers. Ongoing bird testing aims to better understand their role in the spread.

IS FINANCIAL SUPPORT AVAILABLE TO DEVELOP AND IMPLEMENT BIOSECURITY MEASURES?

Yes. Dairy producers are eligible for financial support (up to $1,500 per premises) from USDA to develop and implement a biosecurity plan based on the SMS Plan resources. Contact the APHIS Area Veterinarian in Charge to enroll.

WHAT ARE THE SIMILARITIES AND DIFFERENCES BETWEEN FMD AND H5N1?

FMD was eradicated from the United States in 1929 yet can be found in two-thirds of the countries of the world. FMD can infect cloven-hooved animals like cattle, pigs, sheep, goats, and cervids.

This strain of HPAI H5N1 was first diagnosed in U.S. dairy cattle in March 2024 and no other countries are reporting cases to date. This strain of H5N1 has also been found in U.S. poultry, wild birds (various species), cats, alpacas, and other small mammals.

See page three for a chart outlining the differences between the two viruses.

MORE INFORMATION ABOUT BIOSECURITY FOR H5N1 IN DAIRY CATTLE

- Spread and Prevention of H5N1 Virus in Dairy Cattle
- Secure Milk Supply (SMS) Plan Enhanced Biosecurity for H5N1
    - Details related to setting up isolation areas, designing and setting up a line of separation, cleaning and disinfecting vehicles, equipment, milk house, and biosecure entry procedures for personnel

ACKNOWLEDGEMENTS

This resource was created by NMPF and Preventalytics based on USDA, CDC and FDA recommendations, enhanced biosecurity resources in the SMS Plan, published and pre-print research, and USDA epidemiological reports. It was reviewed by the American Association of Bovine Practitioners Working Group consisting of veterinarians working with dairy clients with clinical cases, diagnosticians, academicians, industry representatives, preventive medicine specialists, epidemiologists, biosecurity subject matter experts, NMPF, National Cattlemen's Beef Association and the American Veterinary Medical Association.

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VISIT WWW.NMPF.ORG/HPAI FOR A FULL LIST OF AVAILABLE RESOURCES AND UP-TO-DATE INFORMATION.

VIRUS	SHED BY CATTLE IN	EXPOSE NEW CATTLE THROUGH	SIGNS IN CATTLE

FMD	• Milk
	• Urine
	• Nasal secretions
	• Saliva
	• Feces
	• Semen
		• Direct contact (includes reproductive spread)
		• Fomites (contaminated inanimate objects)
		• Inhalation (aerosol)
		• Oral
			• Blisters on teats, feet, in mouth leading to:
			  • Decreased feed intake
			  • Nasal discharge
			  • Decreased milk production
			  • Lameness
			  • Mastitis
			• Fever (103-106°F)
			• Calf death

H5N1	• Milk
	• Rarely nasal secretions, saliva.
	• Not found in feces.
	• Data on H5N1 presence and survival in semen is not currently available.
		• Intramammary
		• Direct contact*
		• Fomites
		• Inhalation (aerosol)*
		• Oral*
		
		*Research needed to fully understand exposure
			• Decreased feed intake
			  • Decreased rumination
			• Respiratory signs
			  • Clear nasal discharge
			• Decreased milk production
			  • Thick, yellow, colostrum-like to no milk
			• Abnormal feces
			• Lethargy
			• Dehydration
			• Fever
			• Youngstock do not show clinical signs and rare to find virus on nasal swabs