Keeping Our Farms Safe
Protecting Against H5N1

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Extension Collaborative on Immunization Teaching & Engagement

Why It Matters

Biosecurity plans yield a healthy dairy farm. Safeguarding your herd protects your livelihood and the community that depends on you. Protecting animals, people, and the environment from diseases like H5N1 is everyone's responsibility.

What You Need to Know About H5N1

- H5N1 causes severe illness in poultry
- H5N1 is spreading among dairy cows

- H5N1 has been found in wild birds and some mammals, including cats

How Does It Affect Cows?

- coughing, sneezing, runny nose and eyes
- loss of appetite
- sudden drop in milk production

NOTE: Milk from infected cows may appear thick and yellow like colostrum.

Current Spread

H5N1 poses significant risks to livestock, with ongoing multi-state outbreaks in dairy herds escalating at an **alarming rate.**

Virus found in cows' milk, lungs, muscle, and udder tissue.

Human cases have been reported following contact with infected animals, but the public health risk remains low.

How Does H5N1 Spread?

Transmission Paths

- Respiratory droplets from infected animals.
- Movement of infected or exposed cattle.
- Contact with raw milk or contaminated equipment, clothes, and vehicles.

The virus can spread through cows' RAW MILK via

- **Direct contact:** Exposure to infected raw milk.
- **Indirect contact:** Contamination through clothes, animals, vehicles, or equipment.

High-Risk Areas

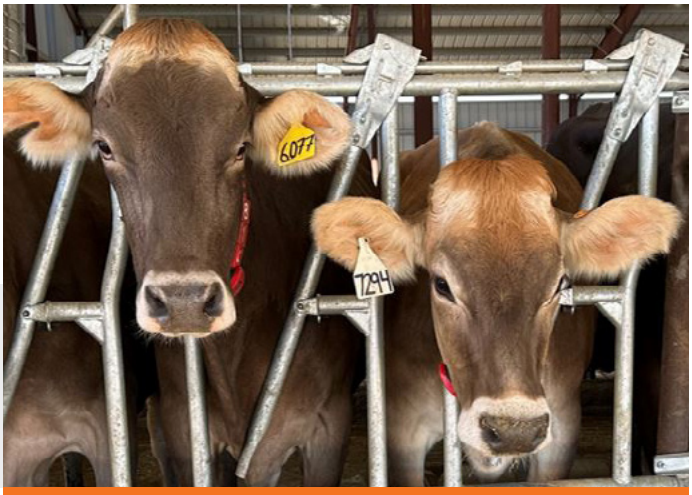
- Milking parlors.
- Sick animal zones.
- Contaminated water sources and surfaces.

Keeping Your Farm Safe

Guardians of the Herd

Your role as a farmer is vital to protect your livestock, farm workers, and community.

The H5N1 virus spreads quickly, but simple preventative measures can make a difference.



Your vigilance protects not only the herd but also your family, employees, and community.

Protect Your Farm: Biosecurity Best Practices

Limit Exposure

- Quarantine new animals for 30 days.
- Isolate sick cattle immediately.
- Avoid raw milk consumption by barn cats or wild animals.

Control Access

- Provide clean clothing and footwear for visitors. Having plastic disposable boots available in boxes that can be reached from the window of a semi or car allows visitors easy access from their vehicle. Also, have trash cans available at all parking areas and delivery areas.
- Install footbaths with chlorine-based disinfectants at all entry points.
- Prohibit drivers and non-essential personnel from animal areas.

Monitor and Test

- Participate in bulk tank milk testing programs.
- Test animals before state fairs or exhibitions.
- Regularly assess herd health for early detection of symptoms.

Risk: What to Watch For

Symptoms in Dairy Cattle

- Decreased milk production across the herd.
- Sudden drops in individual cows' milk, sometimes producing thick, colostrum-like milk.
- Reduced feed consumption and abnormal feces becoming tachy or diarrhea.
- Lethargy, dehydration, and fever.

Potential Contamination Sources
Monitor and prevent contact with these common sources:

- Raw milk
- Viscera and udders from lactating dairy cattle
- Sick animals
- Feces or litter
- Contaminated surfaces or water sources (e.g., ponds, troughs, buckets).

Choosing to take recommended actions demonstrates values that make your farm healthy. Strong farm values like leadership and self-responsibility. Protect your herd and the future of your farm!

Bulk Milk Testing

Why Bulk Milk Testing Matters

- Provides early detection to minimize herd loss. Current testing suggest virus present in milk 14-16 days before clinical symptoms.
- Ensures safe animal movement between farms.
- Helps maintain the safety and sustainability of the dairy industry.

National Milk Testing Strategy

On December 6, 2024, the USDA announced its National Milk Testing Strategy (NMTS), introducing a new Federal Order to combat the spread of H5N1 Avian Influenza in dairy herds. These new rules introduce mandatory measures aimed at detecting and preventing H5N1 in dairy cattle.

Key Changes Under the Federal Order: **Raw Milk Testing Requirements:**

- Dairy farms, transporters, transfer stations, and processors must participate in mandatory raw (unpasteurized) milk testing.
- Any positive test results will be reported to the USDA for follow-up.

Personal Protective Equipment (PPE): Essential for Safety

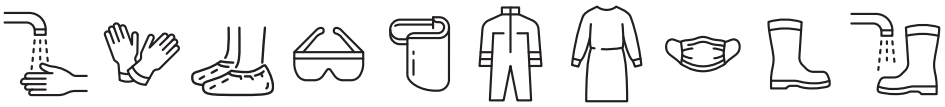
Protect Yourself and Your Farm

Farm tasks determine exposure levels

- **High Exposure:** Work in milking parlors or with sick animals.
- **Medium Exposure:** Work near infected farms.
- **Low Exposure:** Work with no direct animal contact.

Recommended PPE for High Exposure Areas

- Wash your hands before and after contact.
- Wear disposable gloves for every task.
- Wear safety goggles and a face shield if needed.
- Use coveralls or work clothing only for the farm.
- Put on a sleeved waterproof apron.
- Use an N95 or surgical mask.
- Wear rubber boots.
- Use footbaths at entry points.



Your Role: Farm Leadership

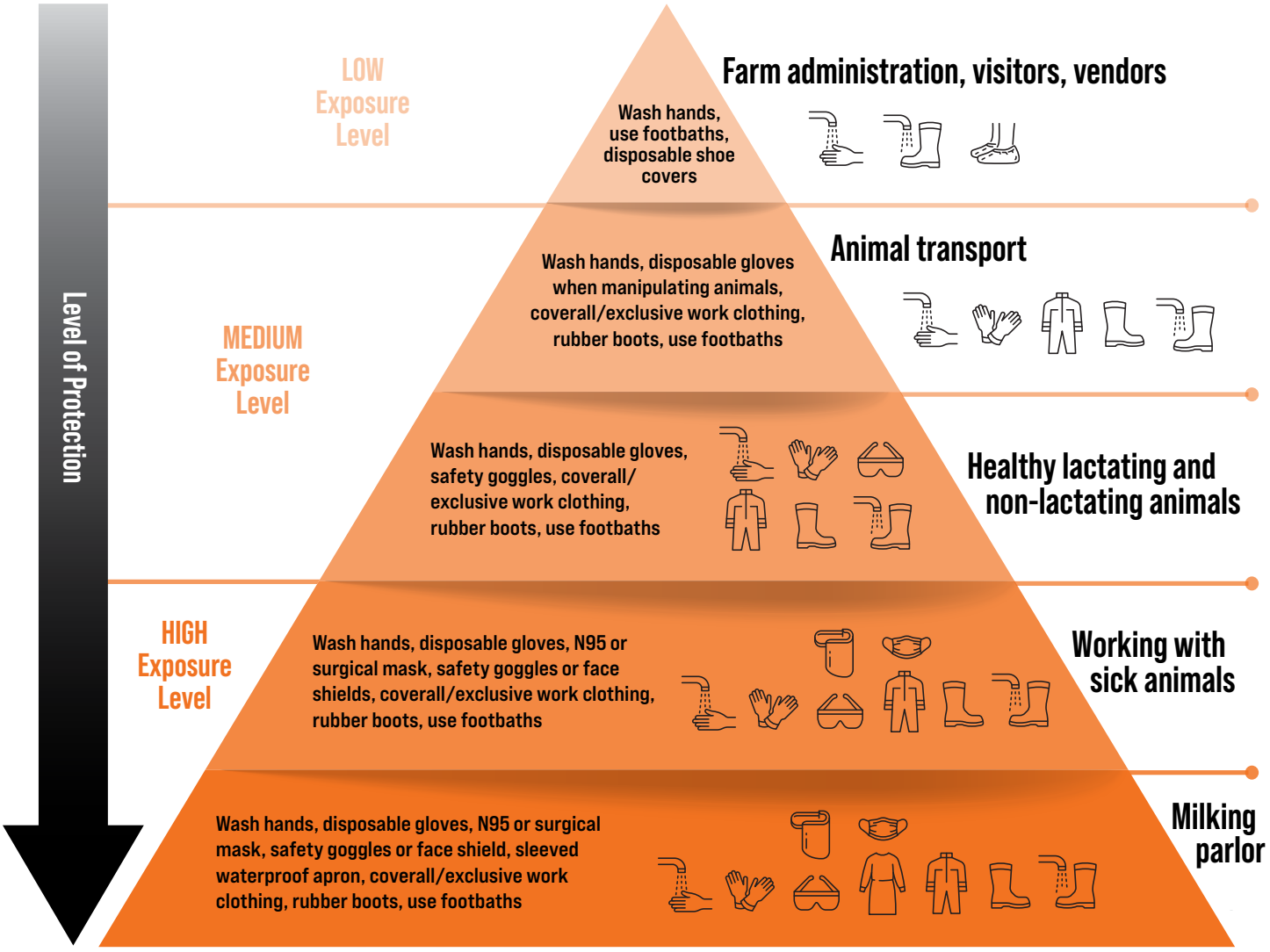
Taking these steps demonstrates commitment to protecting your herd, employees, and community. Proactive biosecurity ensures the sustainability of your farm and strengthens the dairy industry for generations to come.

What PPE should be made available depending on the work tasks in the dairy?

Think of the protection pyramid:

To ensure safety at all exposure levels, encourage workers to follow these basic hygiene measures

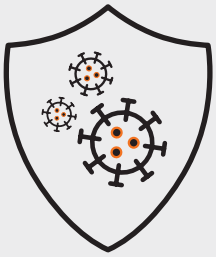
- Do not take work clothing home or to other dairy, cattle, or poultry operations.
- Wash hands regularly.
- Use footbaths or disposable shoe covers when moving to different locations within the dairy.
- Allow boots to dry after using footbaths.
- Report any signs of illness.



PPE Protection Levels

Farm PPE can protect workers from many zoonotic diseases, including:

- H5N1
- E. Coli
- Salmonella
- Campylobacter
- Cryptosporidium parvum



PPE items have different but effective ways to protect human and animal health:

- Regular **hand washing** is one of the most effective hygiene measures to protect health. It can reduce the risk of viral infections in dairy farm workers[12] if done properly.
- Cracks and grooves on hand harbor bacteria and easily spread every time someone touches their face. **Hand washing and wearing disposable gloves** can help protect dairy workers from this spread. **DO NOT re-use gloves.**
- The airways and eye mucosa are the main route of infection. Bacteria and viruses can be aerosolized from milk, urine, manure, or bodily fluids, the protection of the mouth, nose, and eye areas is critical. **Face masks** such as N95 respirators and surgical masks have similar effectiveness in reducing the infection of Influenza virues[12]. Both N95 and surgical masks are suitable for high-exposure tasks in dairy farms.
- **Goggles, safety glasses, or face shields** can decrease this risk and protect the eyes from other particles entering them such as hairs on the tail.
- **Wearing a face mask along with gloves and hand washing** reduced the risk of farm workers being infected by Cryptosporidiosis to 1.29% while no PPE has an infection risk of 29.08%. Wearing gloves and washing hands had an infection risk of 3.88%[13].
- When clothes get splashed by milk, manure, or urine, they can harbor bacteria that can be transferred to the face while taking these clothes off. **Wearing aprons or disposable coveralls** can allow these fluids to easily be washed off and protect workers from disease transfer while helping to keep them dry.
- Leather and cloth shoes can harbor many pathogens that spread everywhere they go, including onto workers' hands when the shoes are removed. **Rubber boots** can be disinfected easily and protect workers from spreading disease.
- **Laundry facilities at the farm** assist with biosecurity by protecting workers' families from taking diseases home with them on their clothes and from bringing diseases onto the farm.
- **Footbaths** reduce the risk of circulating avian influenza virus[14]. Chlorine-based solutions in footbaths can destroy the H5N1 virus[11].

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Contact Information

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