



Early Detection of HPAI H5N1 Virus in Bulk Tank Milk

NOVEMBER 2024



DID YOU KNOW
THAT THE HIGHLY
PATHOGENIC AVIAN
INFLUENZA (HPAI)
H5N1 VIRUS IN
DAIRY CATTLE CAN
BE FOUND IN BULK
TANK MILK BEFORE
THE HERD SHOWS
SIGNS OF ILLNESS?



Dairy products made from pasteurized milk are safe from HPAI virus.

Routine testing of bulk tank milk for this virus is a powerful tool for producers so they can:



PREPARE TO SUPPORT CATTLE

Work with your veterinarian and train caretakers to recognize signs of illness, write protocols, and have supportive care supplies on hand.



ENHANCE BIOSECURITY

Prevent spreading the virus to other livestock or poultry operations.



PROTECT CATTLE HANDLERS

Explain the risk of exposure and encourage use of gloves and eye protection for their health.

Bulk Tank Milk Testing: An Early Warning System



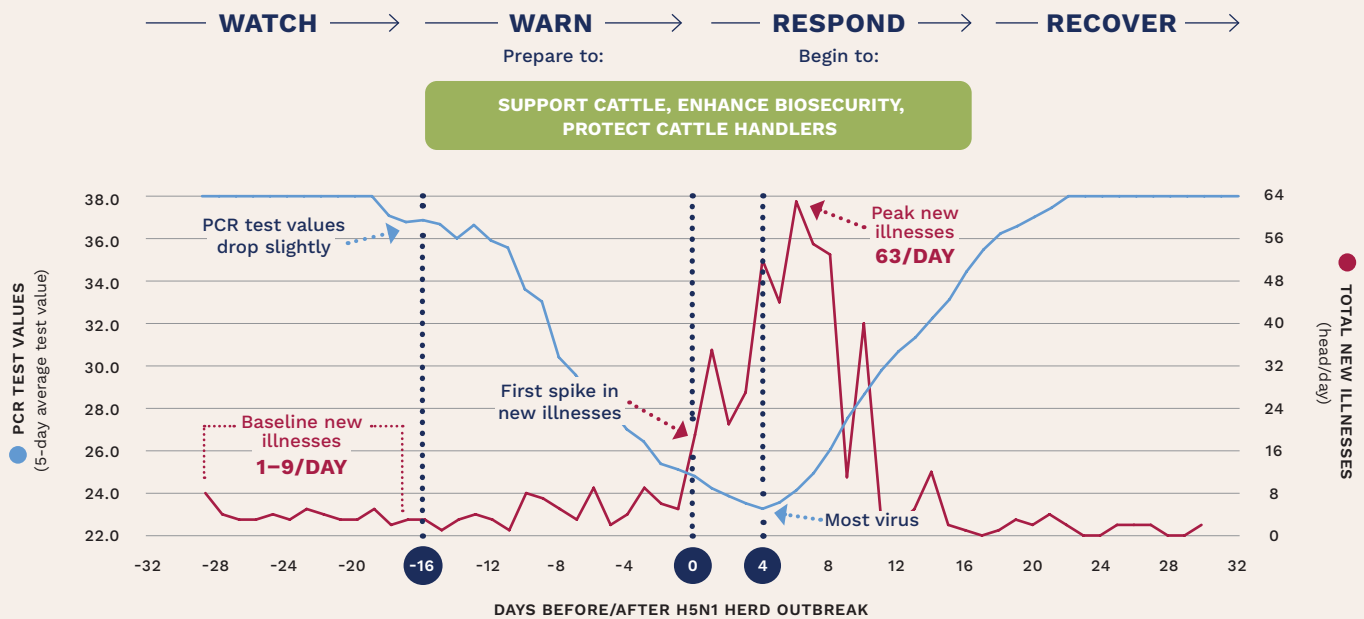
Routine PCR* testing of bulk tank milk is like having a weather radar for your dairy herd. Hopefully herds remain in the “watch” phase (no virus detected). If your herd becomes exposed, bulk tank milk PCR testing is an effective tool for early virus detection so action can be taken for cattle, poultry, and human health. Monitoring over time can also show when the risk of spread is over.

*PCR: Polymerase Chain Reaction, a type of diagnostic test, done in real-time, that detects unique particles of the virus; it cannot tell if the virus is alive or dead. There is no cost to producers to run this test at National Animal Health Laboratory Network labs and funding is available from USDA for shipping supplies and shipping costs. [More info here.](#)

Figure 1 below shows how testing could have “predicted” an H5N1 virus herd outbreak in this 2,500-cow dairy.

FIGURE 1

Early detection of a H5N1 virus outbreak in a 2,500-cow dairy found using PCR testing



DAY -16 PCR test value drops slightly which means one or more infected cows in this 2,500-cow dairy were shedding virus in their milk; new illnesses were staying at baseline.

DAY 0 Outbreak in the herd noticed when the first spike in new illnesses over baseline happened.

DAY 4 The most virus was found in this herd (millions of viral particles were found in a few drops of milk).

Source: Drew Magstadt, DVM, MS. Iowa State University Veterinary Diagnostic Laboratory.



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This resource was created, in part, through USDA APHIS funding to the NMPF and reviewed by the Dairy H5N1 Technical Committee. It may not express APHIS' views.