

HAZARD ASSESSMENT WORKSHEET FOR DAIRY FACILITIES

This hazard assessment worksheet is for employers to complete to determine the best approach for protecting their workers in response to highly pathogenic avian influenza A (H5N1) (“H5N1 bird flu”) virus infections in dairy cattle. This worksheet walks employers through a series of questions and provides recommendations on when and how to implement protective measures in the [Interim Guidance for Employers to Reduce Exposure to Novel Influenza A \(Such as H5N1 Bird Flu\) for People Working with or Exposed to Animals](#).

This worksheet cannot address every situation that may be encountered on a farm and is meant to provide general information about what is currently known.

We encourage employers to use a health and safety committee to work through this hazard assessment worksheet and develop a [workplace health and safety plan](#). It’s best to include both worker representatives and management representatives on the committee. We recommend the workplace health and safety plan include all of the following (more detail provided below, in the worksheet):

- Management leaders and worker participation,
- Hazard identification, including determining if H5N1 bird flu has been detected in domesticated animals in your state, or nearby in another state,
- Monitoring workers, including determining actions to protect workers and continue operations if a case or cases of H5N1 bird flu is found in either cattle or workers, and
- Hazard prevention and control measures, including installing ventilation, providing training, and personal protective equipment (PPE).

Helpful [guidance](#) and [consultation](#) on developing a workplace health and safety plan is available from the Occupational Safety and Health Administration (OSHA) and through your local agriculture extension office.

This hazard assessment worksheet is the first step for farms, cooperatives, or supporting organizations to take the actions needed to determine and reduce worker exposure to H5N1 bird flu virus.



Hazard Assessment Worksheet

1. H5N1 Bird Flu Virus Presence

Question	Response
<p>1a. Has H5N1 bird flu virus been found in domestic animals in your region[§], or in milk samples from your region, if known? Include your state, or nearby, across state lines (USDA maps of HPAI Confirmed Cases in Livestock, Commercial and Backyard Flocks, and Mammals).</p>	<p>Yes No Don't know</p> <p>If Yes, specify: State: _____</p> <p>County: _____</p> <p>Another state, nearby _____</p> <p>If yes, which domestic animals? Dairy cows Poultry Alpaca Goats Other animals, like cats</p>
<p>1b. Have any animals (infected or potentially infected with H5N1 bird flu virus) been transferred into your farm in the last 30 days? Or have your animals left the farm and returned, for example, exhibited at the county fair in the last 30 days?</p>	<p>Yes No</p>
<p>1c. Has H5N1 bird flu virus infection been identified in any people in your region? Consider your region to include your state or, nearby, across state lines.</p>	<p>Yes No</p>
<p>1d. Have any workers or visitors to your farm been on another farm (within the last 30 days) where H5N1 bird flu has been confirmed in domestic animals?</p>	<p>Yes No</p>

If your answer to 1a or 1c in this section is Yes:

Your region has cases of H5N1 bird flu in animals, humans, or both.

If your answer to 1b or 1d in this section is Yes:

Your region may have cases of H5N1 bird flu.

If any of your answers in this section are yes, your farm may have animals or workers being exposed to and/or being infected with H5N1 bird flu virus. Move to the next section on *Exposure Level Classification*.

If all your answers in this section are no:

Your farm is less likely to have animals or workers being exposed to or being infected with H5N1 bird flu virus at this time. It is still useful to complete the rest of the worksheet. Repeat this worksheet if any information changes.

[§]Throughout this document, CDC recommends using the USDA-defined control area (10 km or ~6.21 mile radius around a farm) as the region. Factors that may justify widening a region include: (1) worker commute distances greater than 10 km from their home or other workplaces, especially other farms, (2) joint services that serve the farm (such as veterinary services, milk haulers, feed supply, and transport companies), (3) other considerations in the [USDA Highly Pathogenic Avian Influenza Response Plan \(The Red Book\)](#)

2. Exposure Level Classification

Question	Response
<p>2a. What type of establishment do you own or manage?</p> <p>Primary Dairy, including:</p> <ul style="list-style-type: none"> • Dairy farm <p>Primary Other Animal Production, including:</p> <ul style="list-style-type: none"> • Other animal establishment (for example, poultry) <p>Support, including:</p> <ul style="list-style-type: none"> • Animal health services, veterinary • Animal hauling services • Dead animal collection/renderer • Hoof trimmer • Animal breeding services and sales • Manure hauler • Nutritionist or feed consultant • Other establishment that encounters animals or raw (unpasteurized) milk 	<p>Primary Dairy</p> <p>Primary Other Animal Production</p> <p>Support</p>
<p>2b. For all of these questions, consider the last month.</p> <p>If a primary dairy establishment:</p> <p>Have you noticed decreased feed consumption or unexplained changes in milk production, either in quantity or quality of the cows?</p> <p>Note: <i>The USDA reported that 80% of herds affected by H5N1 bird flu virus reported abnormal lactation and decreased feed consumption and 90% of affected herds reported thickened or clotted milk.</i></p>	<p>Yes No</p>
<p>Has <i>milk</i> from your establishment been tested for H5N1 bird flu virus? If yes, provide the result:</p> <p>_____</p>	<p>Yes No</p>
<p>If Primary Other Animal Production establishment:</p> <p>Have you noticed health-related changes in the animals (e.g., lethargy, neurological problems)?</p>	<p>Yes No</p>
<p>Have any of your animals been tested for H5N1 bird flu virus?</p>	<p>Yes No</p>
<p>If you own or manage an entity with workers who Support dairy or other farms:</p> <p>Have any of the farms that your workers visit had sick workers, sick animals, or milk or animals tested for H5N1 bird flu?</p>	<p>Yes No</p>

Question	Response
<p>2c. If you are a Primary Dairy or Other Animal Production establishment: Have any of your animals tested positive for H5N1 bird flu?</p> <p>Or if Support establishment: Have any cases of H5N1 bird flu in animals been associated with any places that you have visited?</p>	<p>Yes No</p>
<p>2d. In the last month, have you found other animals, such as wild birds, cats, or other animals on your property that are deceased or sick?</p>	<p>Yes No</p> <p>If Yes, specify:</p> <p>Wild birds</p> <p>Cats</p> <p>Others</p>
<p>Have any of these animals been tested for H5N1 bird flu? Have any of these animals tested positive?</p>	<p>Yes No</p> <p><u>Test Results:</u></p> <p>Positive</p> <p>Negative</p>
<p>2e. In the last month, have any of your workers been sick with <u>flu-like symptoms</u> or had conjunctivitis (pink eye)?</p>	<p>Yes No Don't know</p>
<p>2f. In the last month, have any of your workers been tested for influenza (seasonal flu or bird flu)?</p> <p>If so, have any of your workers tested positive?</p>	<p>Yes No Don't know</p> <p><u>Test Results:</u></p> <p>Positive</p> <p>Negative</p>
<p>2g. Do any of your workers also work, volunteer, or visit other farms (for example, on weekends)? Or do you have support workers who also work at or visit other animal farms, such as haulers or animal technicians?</p>	<p>Yes No</p>
<p>If Yes, do any of those farms have suspected or reported cases of H5N1 bird flu, in either animals or humans?</p>	<p>Yes No</p>
<p>2h. Do your workers live with people who work at other farms?</p>	<p>Yes No</p>
<p>Do your workers have their own dairy or poultry animals at home?</p>	<p>Yes No</p>
<p>If either answer is Yes, do any of those farms or animals have suspected or reported cases of H5N1 bird flu in animals or humans?</p>	<p>Yes No</p>

If any answer in the right column in this section is Yes:

Your farm (establishment) has animal or human cases of or risk factors for H5N1 bird flu.

Consider testing animals for novel influenza A virus if indicated. Contact your State Animal Health Official about testing available within your state. If relevant, join the USDA HPAI Dairy Herd Status Program.

Your farm (establishment) should address the sections below:

- *Monitoring Workers for H5N1 Bird Flu Virus*
- *Controls (including PPE recommendations based on work task or setting for farms with confirmed or suspected cases of H5N1 Bird Flu Virus)*

If your answers in this section are No, although not identified on your farm, your farm (establishment) is in a region where H5N1 bird flu has been found. Consider the following:

- Monitor your herd for clinical signs or changes in production metrics, and consider testing animals for novel influenza A virus if indicated. Contact your State Animal Health Official about testing available within your state. If relevant, join the USDA HPAI Dairy Herd Status Program.
- Watch for sick or dead animals on your farm (for example, dead wild birds or cats).
- Consider monitoring workers (see *Monitoring Workers for H5N1 Bird Flu Virus* below)
- See the PPE recommendations for medium exposure work tasks and settings

If either answer in the right column for questions 2e or 2f is Don't know:

- Develop a plan to monitor workers (see *Monitoring Workers for H5N1 Bird Flu Virus* below)

3. Monitoring Workers for H5N1 Bird Flu Virus

Answer the following questions while considering workers that are in direct contact or close contact with animals, whether the animals are infected or not. These are some jobs with possible direct or close contact with dairy cows:

- Milkers
- Managers
- Veterinarians and animal technicians
- Maintenance staff
- Renderer (handling carcasses of dead cows)
- Animal breeder

Some workers may have contact with animals during certain tasks. The following tasks may require workers to have direct or close contact with dairy cows:

- Feeding or watering
- Working with calves
- Transport hauling
- Hoof trimming
- Cleaning pens, production area, milking area, or other areas

Question	Response
<p>3a. Do you have a process to communicate with your workers to determine if they are sick, have been sick, or have been tested for H5N1 bird flu virus infection? For instance, are you collecting information about your workers' symptoms, like conjunctivitis or other symptoms consistent with H5N1 bird flu virus infection?</p>	<p>Yes No</p> <p>If Yes, specify:</p> <p>Daily</p> <p>Twice per week</p> <p>Weekly</p> <p>Monthly</p>
<p>3b. Do workers have access to paid, flexible, sick leave?</p>	<p>Yes No</p>
<p>3c. Do you collect absentee information on your workforce, for example, the number of workers that are absent and why?</p>	<p>Yes No</p>
<p>3d. Do you have a plan in place to facilitate the testing of workers with conjunctivitis, mild flu-like upper respiratory symptoms, or other symptoms consistent with H5N1 bird flu virus infection?</p>	<p>Yes No</p>
<p>3e. Has a person been designated to maintain the records for worker absenteeism, symptoms, and testing?</p> <p>Name: _____</p>	<p>Yes No</p>

If any of your answers are No:

1. Develop a plan that includes checking on workers who are absent daily to determine if they are sick and their symptoms.
2. Develop a plan to have workers with flu-like symptoms and/or conjunctivitis tested for influenza by your state/local public health department. It is best to have a plan in place before testing is needed. Find out who to contact at your local health department.
3. Develop a program to monitor your workers for illness.
4. Consider providing paid sick leave for your staff and sick leave policies that are flexible and nonpunitive so that sick workers remain at home.

If your answer to 3e is No:

1. Assign a person to maintain these records and review them daily.
2. For **Dairy Farm** establishments, in addition to collecting data on workers' symptoms, illness, and absenteeism, work with production managers to monitor information about animals from multiple sources (for example, milk production metrics). Putting separate information together can more quickly determine that there might be a problem.

Regardless of whether you answered yes or no to the questions in this section, please now proceed to the next section below:

- *Controls*

4. Controls

The [hierarchy of controls](#) identifies a preferred order of actions to best control hazardous workplace exposures. Engineering controls are more effective than administrative controls or personal protective equipment because they control exposures without significant and ongoing efforts by workers and their supervisors.

If your farm (establishment) is known or suspected to have H5N1 bird flu in animals:

- Work with your health and safety committee to review this section and provide recommendations, considering H5N1 bird flu virus exposure and knowledge of the workplace tasks and constraints. Include a representative from all jobs (for example, maintenance).
- Train your workers on the signs and symptoms of H5N1 bird flu and on how to do any new procedures, such as additional cleaning or changed work practices.
- Develop a workplace health and safety plan addressing steps to reduce worker exposure to H5N1 bird flu virus.
- Provide personal protective equipment and train on proper use and care.

Question	Response
<p>4a. <i>We recommend a workplace health and safety plan created by the health and safety committee include any measure that are needed to ensure workers are safe from H5N1 bird flu. Examples of workplace controls to reduce workers' contact with animal secretions include:</i></p> <ul style="list-style-type: none"> • Engineering controls <ul style="list-style-type: none"> » Using engineering controls (for example, physical barriers or ventilation) • Administrative controls <ul style="list-style-type: none"> » Properly cleaning and disinfecting surfaces and equipment » Training workers on steps to reduce exposure to H5N1 bird flu virus through contact with animals, animal secretions, or contaminated objects » Monitoring workers for illness and facilitating testing » Providing paid sick leave, so workers who are sick do not come to work • Personal protection <ul style="list-style-type: none"> » Providing personal protective equipment » Conducting trainings for workers on how to recognize signs and symptoms of H5N1 bird flu in themselves and others, any new procedures in the workplace, and proper use and care of their personal protective equipment <p>In review of the workplace health and safety plan for your farm, has your facility determined if other measures are needed to reduce workers' exposure to H5N1 bird flu virus?</p> <p>If <i>No</i>, review and determine if additional actions need to be implemented.</p> <p>If <i>Yes</i>, make sure all groups of workers are involved (for example, maintenance).</p>	<p style="text-align: center;">Yes No</p>

Question	Response	
<p>4b. The circulation of fresh air helps dilute and disperse any potential pathogens and can help control the temperature and humidity. Do you provide a ventilation system that provides a constant supply of fresh air and flows in a clean to less-clean path through the space?</p> <p>If No, strategically place fans and vents to bring in a constant supply of fresh air and generate a clean to less-clean flow path. Use airflow exhaust and makeup air supply strategies that do not discharge high velocity airflow upon building occupants.</p>	Yes	No
<p>4c. The accumulation of dust, feathers, manure particles, and other debris can obstruct airflow and provide a breeding ground for pathogens. Do you regularly clean and maintain your ventilation systems?</p> <p>If No, perform proactive cleaning and maintenance to ensure your ventilation system is operating as designed.</p>	Yes	No
<p>4d. Has your facility trained workers who may have contact with animals or animal secretions about steps to reduce exposure to H5N1 bird flu virus and protective measures that have been put into place for their protection?</p> <p>If No, provide training which includes the following:</p> <ul style="list-style-type: none"> • Understanding the potential for exposure, including potential symptoms • Controls that are in place, including engineering controls, administrative controls, and personal protective equipment • Cleaning and disinfection procedures for the workplace environment • Cleaning and disinfection procedures for reusable personal protective equipment (for example, air purifying half mask respirators will need daily disinfection) • Laundering instructions for work clothes • When and where to shower after work • Self-monitoring and reporting of symptoms of H5N1 bird flu 	Yes	No

Question	Response	
<p>4e. Has your facility trained workers on the use of personal protective equipment? We recommend training include the following:</p> <ul style="list-style-type: none"> • When and where it needs to be worn, • How to properly inspect, • How to put on and remove, and • When to discard and replace disposable items or clean and disinfect reusable items <p>If No, train workers by explaining each item of personal protective equipment including:</p> <ul style="list-style-type: none"> • Its purpose, and when and where to use it, • How to inspect before use, • How to put on, how to remove, and • When to discard and replace disposable items or clean and disinfect reusable items 	Yes	No
<p>4f. Do you provide locations for workers to wash hands with soap and water before eating, drinking, smoking/vaping/dipping, or using the bathroom?</p>	Yes	No
<p>Do workers have a place to shower and change clothes after the work shift?</p>	Yes	No
<p>Do workers have a place to store food and clean personal belongings and clothing outside the contaminated area?</p> <p><i>If your answer to any of the above is no, provide such a location so that workers can stay clean and not transfer animal secretions to themselves, others, their car or truck, or their home.</i></p>	Yes	No
<p>4g. Do you provide laundering for clothing used on the farm?</p> <p>If No, provide laundering on site or, if clothing must be washed at home, have workers transfer their clothing to a separate bag and have them wash it separately.</p>	Yes	No

Question	Response	
<p>4h. By reviewing your workers' tasks, have you identified workers who may have direct contact with animals or animal secretions or close contact with animals, and have you determined the personal protective equipment they should wear?</p> <p>If No, make a list of the hazards each type of worker will face to determine minimum personal protective equipment. Personal protective equipment that is worn for daily routine tasks may need to be supplemented to protect against exposure to H5N1 bird flu virus.</p> <p>Respirators are recommended because they protect workers from breathing in:</p> <ul style="list-style-type: none"> • Biological material that travels through the air from animal to human • Small droplets formed by animal secretions during some work activities <p>Goggles are recommended because they</p> <ul style="list-style-type: none"> • Protect workers' eyes from direct splashes • Prevent workers touching their eyes (reducing possible eye infection or germs entering the eye) <p>Fluid-resistant coveralls, waterproof apron, fluid-resistant sleeved apron, head/hair cover, gloves, and boots are recommended because they protect workers from:</p> <ul style="list-style-type: none"> • Animal secretions getting on their skin, hair, or clothing, which could later be transferred to the eyes, nose or mouth and cause infection 	Yes	No

The following table identifies personal protective equipment that can be used based on our current understanding of the exposure level associated with different work tasks and settings on dairy farms.

Work Task or Setting	Personal protective equipment ^{††}
<p><u>High exposure tasks</u></p> <ul style="list-style-type: none"> • Contact with alive or dead animals confirmed or potentially infected (e.g., work in sick pens) • Contact with raw milk, other secretions, udders, or viscera from a farm with confirmed or potentially infected animals (e.g., work in milking parlor) 	<ul style="list-style-type: none"> • NIOSH Approved® Particulate respirator* • Fluid-resistant coveralls • Optional waterproof apron • Safety goggles • Optional face shield over the top of goggles • Boot covers or boots • Head cover or hair cover • Disposable gloves with optional outer work gloves
<p><u>Limited high exposure tasks</u></p> <ul style="list-style-type: none"> • Work in milking parlors where a splash or spray could only come from one direction, for example, milking parlors where cows line up on only one side, on a farm with confirmed or potentially infected animals 	<ul style="list-style-type: none"> • NIOSH Approved® Particulate respirator* • Fluid-resistant sleeved apron • Safety goggles • Optional face shield over the top of goggles • Boot covers or boots • Head cover or hair cover • Disposable gloves with optional outer work gloves
<p><u>Medium exposure tasks</u></p> <ul style="list-style-type: none"> • Contact with healthy non-lactating animals on a dairy farm that has animals confirmed or potentially infected • Contact with animals from a farm without confirmed or potentially infected animals, but when there are confirmed or potentially infected animals in the region 	<ul style="list-style-type: none"> • NIOSH Approved® Particulate respirator* • Safety goggles • Disposable gloves with optional outer work gloves
<p><u>Low exposure tasks</u></p> <ul style="list-style-type: none"> • Contact with healthy animals, with no confirmed cases in the region • No contact with animals or animal secretions, regardless of the cases on the farm or regional cases 	<p>No special personal protective equipment against H5N1 bird flu virus</p>

Question	Response	
<p>4i. Considering the information in the above table, do you provide the suggested personal protective equipment for the specific scenario and work tasks ?</p> <p>If not, provide the appropriate combination of these items:†</p> <ul style="list-style-type: none"> • NIOSH Approved particulate respirator* • Fluid-resistant coveralls or fluid-resistant sleeved apron • Optional waterproof apron • Safety goggles • Optional face shield over the top of goggles • Boot covers or boots • Head cover or hair cover • Disposable gloves with optional outer work gloves 	Yes	No

†For more information on specifications for PPE items that provide the level of protection needed against H5N1 bird flu viruses, consult [Information for Employers Providing Personal Protective Equipment to Reduce Exposure to Novel Influenza A](#)

‡ Ensure workers shower and launder dirty clothing used on the farm, if possible. If, during work activities, animal secretions get on a worker’s skin, hair, or clothing, they could later get in the workers’ eyes, nose or mouth and cause infection.

*Respirator note: Provide a NIOSH Approved particulate respirator (such as an N95® filtering facepiece respirator, or elastomeric half mask respirator or powered air purifying respirator (PAPR) equipped with a particulate filter).

Consider the following respirator types:

Type of Respirator	Pros	Cons
N95® filtering facepiece respirator	<ul style="list-style-type: none"> • Lightweight • No maintenance or cleaning • May have an exhalation valve to reduce heat burden • Low cost 	<ul style="list-style-type: none"> • Adds to heat burden • Often do not have adjustable head straps • Hard to do a seal check • Protection varies among models • Communication is difficult • Fit test is needed • Some eyewear may interfere
Elastomeric half mask respirator	<ul style="list-style-type: none"> • Low maintenance • Replaceable filters and cartridges • Protects workers from particles and gases (if proper filter cartridges are chosen) • May have an exhalation valve to reduce heat burden • Moderate cost 	<ul style="list-style-type: none"> • Adds to heat burden • Can have inward leakage • Facepiece must be cleaned and disinfected between uses • Communication is difficult • Fit test is needed • Some eyewear may interfere
Powered air purifying respirator (PAPR)	<ul style="list-style-type: none"> • Provides eye protection if hood, helmet, or full facepiece • Low breathing resistance • Flowing air creates cooling effect • Replaceable filters and cartridges • Protects workers from particles and gases (if proper filter cartridges are chosen) • Loose-fitting hood or helmet PAPR does not require fit testing 	<ul style="list-style-type: none"> • Added weight of battery and blower • Awkward to wear for some tasks • Components must be cleaned and disinfected between uses • Battery requires changing • Air flow must be tested with flow device before use • High cost

Adapted from OSHA 2004

Congratulations on completing this checklist for your facility!
Review this checklist periodically to keep this hazard assessment current.

N95 and NIOSH Approved are certification marks of the U.S. Department of Health and Human Services (HHS) registered in the United States and several international jurisdictions.