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PRESS RELEASE

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SAVE YOUR BREATH: Always Use Appropriate Personal Protective Equipment

Nearly every day, farmers may be exposed to elements that pose a hazard to lung and respiratory health. Whether the exposure is frequent or occasional, the health risk can be significant. Symptoms that indicate dust and/or mold spores may have been inhaled ranged from stuffy or runny nose and nagging cough to illness that includes chronic coughing, shortness of breath, fever, aches and pains, and loss of appetite. Long term exposure to dusts and molds can cause respiratory disease.

Anyone who comes in contact with hay, grain, hogs, cattle, poultry, mold or grain dust, woodworking, nuisance odors, resins, solvents, gases, etc. must protect their lungs and respiratory system by using the proper respiratory Personal Protective Equipment (PPE). Depending on the type of exposure, equipment may include disposable filtering face pieces, reusable half full-face respirators, Powered Air Purifying Respirators (PAPR) or for hazardous exposures a Self-Contained Breathing Apparatus (SCBA).

Agricultural dust is a hazard in itself. However, mold spores – so tiny that as many as 250,000 spores can fit on the head of a pin – attach themselves to airborne dust particles, which farmers will unknowingly inhale, unless they're using appropriate respiratory PPE.

“Right now, with so many respiratory PPE supplies dedicated to health care providers, as they should be, many folks wonder where they can find quality respirators to protect themselves,” Ellen Duysen, MPH, Community Outreach Specialist at the University of Nebraska Medical Center’s Central States Center for Agricultural Safety and Health (CS-CASH), says. “Although it may be more costly right now, this PPE is available. Cloth masks and surgical masks are not going to protect you from dust and mold spore hazards on the farm. You need to wear

respirators approved by the National Institute of Occupational Safety and Health (NIOSH) in order to avoid respiratory health issues.”

In a recent CS-CASH survey of farmers and ranchers in seven Midwestern states, 26.2% of all respondents indicated they had a respiratory disease which had been diagnosed by a physician. These data indicate a critical need for protecting the lung health of agricultural workers.

Duysen suggests checking the paint section of your local hardware store for respiratory PPE or buying from a reputable online seller. To ensure the quality of the PPE you purchase, Duysen cautions against buying PPE from a seller you don't know.

“You should find a NIOSH stamp either on the mask or on a brochure in the mask package,” she says.

The NIOSH seal verifies the mask design and quality to ensure it can be properly fitted and will protect the wearer. Recent changes to U.S. manufacturer strategies mean all types of respirators are likely to be more available going forward.

In selecting an appropriate mask, don't choose a single-strap option. It isn't designed to seal, which means air particulates can easily get behind the mask and into a worker's lungs.

At the very least, Duysen recommends use of a NIOSH approved two-strap disposable filtering facepiece when working in a dusty or moldy environment. These “paper” type masks are commonly worn by farmers and are disposed of after they become soiled. These can be N95, N100, R95, or P95 respirators that filter harmful particles out of the air before they are breathed into the lungs. These masks can be purchased with different features, such as an exhalation valve, charcoal filter, and a selection of seal types. They are effective for filtering out dust and mold associated with grain, hay, livestock, pesticide (solids), grinding, woodworking, solvents, and welding. These masks are not effective against gases.

Filtering facepieces are regulated by the U.S. Centers for Disease Control (CDC) and NIOSH (the National Institute for Occupational Safety and Health). They are made of special nonwoven fabrics. An N95 respirator, if worn correctly, can filter out a minimum of 95% of particles above .3 microns in size. An N100 mask will filter out 100% of airborne particulates. This type of mask is higher quality and seals more effectively than lower-rated masks. A two-strap respirator with a valve will help keep the mask from becoming damp and sweaty while it's being used. It also keeps the wearer cooler since the wearer doesn't rebreathe as much of the warm air.

An economical alternative to the filtering facepiece are reusable elastomeric half or full face respirators. This type of respirator is currently more readily available.

These respirators can be used with NIOSH approved removable particulate filters, gas and vapor cartridges or combination cartridges which can be replaced on a schedule or as needed,” Duysen says. “Not only are these masks more versatile, they can provide a great fit with adjustable straps attached to a head cradle.”

These types of masks can be cleaned (according to manufacturer instructions) and used long term. Be sure to purchase filters made by the same company that made the mask. The different brands may not be interchangeable.

General cleaning of elastomeric respirators includes removal of the filter/cartridge/canister, and disassembling diaphragms, valve assemblies, hoses or other components. Components are washed in warm water using a mild detergent or cleaner (see manufacturer instructions), then rinse components in clean, running water. Never use solvents or alcohol wipes on these

respirators. Allow the components to dry, then reassemble and test the mask to insure it functions properly.

During storage, remove cartridges and filters (which cannot be cleaned). If they can be reused, store in a breathable bag to avoid mold growth. If the filter/cartridge cannot be used again, dispose of it. Maintain a written record of when and how each filter/cartridge/canister is used in order to properly change them out.

The elastomeric mask should be stored in a cool, dry place since exposure to sunlight, heat, cold, smoke or chemicals can damage the piece and make it unusable.

Respiratory experts emphasize that none of the respiratory masks discussed above protect users from hydrogen sulfide, a gas found in manure pits. Exposure to that gas requires use of a supplied air respirator and only used by specially trained individuals.

CS-CASH has developed a series of YouTube videos focused on respiratory protection in agriculture.

“Anyone using a respirator should watch the videos, which explain how to select the right mask for the task being done, how to properly fit the mask, and how to care for your mask,” Duysen says. “To provide necessary protection, a mask must be properly fitted.”

This Argisafe guide provides information for each type of mask to assist in selection of a mask appropriate to a specific task.

Find the CS-CASH respiratory protection videos at this link:

<https://bit.ly/2MTEuQc>

A guide provided by the AgriSafe Network gives information on each type of mask that can be used for an agricultural task. It is available at this link:

<http://bit.ly/3aTQrNq>

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