

Respiratory Hazards on Farms



For more information...

If you're interested in purchasing a respirator, check with your local farm supply store, a direct-mail catalog*, or AgriSafe Clinic.

Hazards	Type of Respirator
Mold dust, grain dust and manure dust	N-95 Dust/mist respirator approved for use with toxic dusts
Dust from poultry operations	
Road or field dust	
Untreated sawdust	
Welding fumes	Mechanical filter respirator approved for use with fumes
Ammonia	Ammonia cartridge respirator with added pre-filter
Pesticide dusts, mists, vapors, and gasses	Chemical cartridge respirator for organic vapors with added pre-filter

*This list is not intended to be complete.



For more information about respiratory health, contact:

North Carolina Agromedicine Institute
East Carolina University
West Research Campus

106 West Academic Building
Greenville, North Carolina 27858

Phone: 252.744.1000

Fax: 252.744.1009

Website: www.ncagromedicine.org

* consult your physician or AgriSafe-NC clinic before using a respirator; respirators should be fit tested before use



Farming and Respiratory Health

Live longer, live stronger.



Lungs need protection from farm dust

Exposure to grain dust, molds, pollen, animal dander, soil dust, welding fumes, and diesel exhaust can lead to serious respiratory problems. Although they are less toxic than some chemicals, they become suspended in the air and can easily enter & damage the lungs.



Foreign particles in the lungs have both immediate and long-term effects including but not limited to:

- physical stress
- fatigue or shortness of breath
- congestion, coughing or wheezing
- sensitivity to dust
- frequent respiratory infections such as colds, bronchitis, and pneumonia.

Over time, exposures to foreign particles can result in serious respiratory illnesses, such as:

- farmer’s lung
- asthma
- emphysema
- chronic bronchitis
- and other irreversible, incurable ailments

Choose the Right Respirator

Type of Respirator	Properties
 Particulate	<ul style="list-style-type: none">• capture particles such as dusts, mists, and fumes• do not protect against gases or vapors• more effective as particles accumulate on the filter & plug spaces between fibers• should be replaced when difficult to breath through
Combination	<ul style="list-style-type: none">• used in atmospheres that contain both particulates & gases• have both particulate & gas/vapor filters• may be heavier
 Gas & Vapor	<ul style="list-style-type: none">• used when there are only hazardous gases & vapors• use chemical filters (called cartridges) to remove dangerous gases or vapors• do not protect against airborne particles• provide protection only as long as filter’s absorbing capacity is not depleted• life of filter depends on factors such as humidity, length of exposure, breathing rate, & temperature

What to look for

There are many styles of respirators on today’s market, however, not all are recommended for farming activities. Whether you’re selecting a new respirator or evaluating an existing respirator, always consider several factors.

Testing and approval: All respirators used in farming activities should be approved by the National Institute of Occupational Safety and Health (NIOSH). NIOSH-approved respirators have been tested and meet special federal standards.

Proper use: Many problems result from using an inappropriate respirator. For example, dust masks will not reduce chemical vapors. A respirator approved for use with chemicals may not filter dust.

Always use a respirator appropriate for the task. The specific contaminant for which the respirator is approved will be written on the cartridge filter or instructions with the respirator.

Proper rating: As part of the testing process, a respirator is assigned a “protection factor,” or PF rating, which indicates how well the respirator can perform its job. For farming activities, always use a respirator with a PF rating of 10 or above.

Proper size and fit: The respirator must form a good seal with the wearer’s face so that the respirator can function properly. Dust that slips through a poor seal goes directly to the lungs.