



Tailgate Safety Training for Landscaping and Horticultural Services

Agricultural Safety Program, 590 Woody Hayes Drive, Columbus, OH 43210

Dust and Mold

Objective: Prevent respiratory illnesses caused by organic dust and mold.

How to Use This Module

Workers in the green industry are often exposed to dust and mold that can cause respiratory illness. For this module:

- Review the information below on dust and mold hazards and ways to reduce exposure.
- With your supervisor, identify the organic substances you handle and dust and mold hazards you face.
- Discuss specific ways you can reduce exposure to dust and mold in your work.
- Review the important points.
- Take the True/False quiz to check your learning.

Background

Landscaping and horticultural work often involve peat, vermiculite, perlite, and mulch. Other organic substances may be frequent, too. Those organic substances produce dust when handled. Molds often grow naturally in the substances, too. Mold spores attach themselves to airborne dust particles.

All workers can be exposed to organic dust and mold. Greenhouse and nursery workers often get heavy exposure. Inhaling moldy dust from peat, vermiculite, perlite, mulch, or other substances can cause different diseases.

Farmer's Lung

Farmer's Lung is a noninfectious allergic disease. Basically, an individual becomes allergic to dust and mold. With Farmer's Lung, the immune system cannot adjust to the mold spores. Farmer's Lung has these symptoms:

- Fatigue
- Chills
- Shortness of breath
- Tightness in the chest
- Headache
- Irritating cough
- Loss of appetite

Respiratory symptoms vary with the amount and intensity of exposure. After a first reaction, a worker is likely to develop an increased sensitivity. Then, a worker can have a more severe reaction with fewer exposures.

In Chronic Farmer's Lung, the reaction continues even after all the irritant is gone. It is possible to develop Chronic Farmer's Lung after one acute attack. However, it usually develops slowly over time after repeated exposure. Contact a doctor if concerns about permanent lung damage arise.

Organic Toxic Dust Syndrome

Organic Toxic Dust Syndrome has similar symptoms but does not involve the immune system. Organic Toxic Dust Syndrome goes away after it runs its course. It often hits all the workers in a group at one time.

Bronchitis and Asthma

Exposure to organic dust and mold can cause bronchitis and asthma. Exposure can also aggravate existing bronchitis and asthma.

Using Respirators or Dust Masks



When using respiratory protection, select the appropriate personal protection equipment (PPE) for the task. A dust mask provides some protection if it is fresh, clean, and fit-tested. However, the best protection is a particulate respirator:

- Tested and certified by the National Institute for Occupational Safety and Health (NIOSH).
- With a Type 95, Type 97, Type 100, or HEPA filter.
- Fit-tested to ensure a tight seal between the facepiece and your face.

For more details, see the Tailgate Safety Training modules *Selecting a Respirator*, *Pesticide Exposure*, and *Respirator Fit*.

Reducing Exposure to Dust and Mold

- Identify dust and mold in the work site. Heavy concentrations of mold spores appear as dry, white or gray powder or clouds.
- Minimize the amount and type of dust and mold in your work site.
- Avoid exposure to dust from decayed plants, leaves, mulch, and other materials.
- Limit exposure to all dust and mold.
- Work in a controlled site whenever possible.
- Use mechanical controls to remove dust and mold from the air, where feasible.
- Ventilate dusty areas.

- Move work outside whenever possible.
- Plan outside work to minimize dust exposure. Take natural factors into consideration:
 - ◆ Wind direction.
 - ◆ Windy times of the day.
 - ◆ Using the dewpoint to settle the dust.
- Avoid dusty work in confined areas.

Review These Important Points

- Wear a particulate respirator or dust mask when working with moldy mulches.
- Fit-test particulate respirators and dust masks.
- Work in a well-ventilated area.
- Use exhaust fans when possible to control exposure.
- Seek medical advice when concerned about exposure.
- Know the warning signs of Farmer's Lung.
- Change ventilation filters on a regular schedule.

About These Modules

The author team for the training modules in the landscape and horticultural tailgate training series includes Dee Jepsen, Program Director, Agricultural Safety and Health, Ohio State University Extension; Michael Wonacott, Research Specialist, Vocational Education; Peter Ling, Greenhouse Specialist; and Thomas Bean, Agricultural Safety Specialist. Modules were developed with funding from the Occupational Safety and Health Administration, U.S. Department of Labor, Grant Number 46E3-HT09.

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Answer Key: 1 = T, 2 = T, 3 = T, 4 = F, 5 = F.

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Name _____

True or False?

- | | | |
|---|---|---|
| 1. Dust and mold are major contributors to respiratory illness. | T | F |
| 2. Use the appropriate personal protection equipment (PPE) for the job. | T | F |
| 3. Plan outside work to minimize dust exposure. | T | F |
| 4. Farmer's Lung is a respiratory hazard only to farmers. | T | F |
| 5. Particulate respirators are only needed when working indoors. | T | F |