



Maine Farm Safety Program

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Personal Protective Equipment for Pesticide Handlers

Wearing the proper clothing and equipment is just as important as using the right machine for a job. Personal protective equipment (PPE) must be provided by the employer when required. The employer is responsible for cleaning and maintaining the PPE as well as insuring each handler wears and uses it correctly. Each handler needs to be provided with a clean place to put on and remove PPE and to store personal clothing. The employer must take action, if necessary, to prevent heat-related illness while wearing PPE. The employer needs to insure that any handler does not take home PPE that has been exposed to pesticides.

People wearing PPE also must properly clean and maintain it. Clean, inspect and repair PPE according to the manufacturer's instructions before each use. Dispose of PPE that is non-

reusable or cannot be cleaned. Wash and store PPE separately from personal clothing. (See the Maine Farm Safety Program fact sheet on laundering pesticide handler clothing.)

Become familiar with the types of pesticides used in the farming operation. Knowing the types of

Personal Protective Equipment for Pesticide Handlers

- Use the personal protection equipment that is specified on the label.
- Protect points of entry—skin, mouth, breathing.
- Eye protection is important when handling pesticides.
- All personal protective equipment must be properly maintained and cleaned.



pesticides used determines the protective clothing and equipment needed to handle them. Consider the nature of the pesticides and the proximity of the chemical to points of entry on your body – dermal (through the skin), oral (through the mouth) or inhalation (through the lungs). Dressing for the job and understanding the potential risks of pesticide exposure are a must for anyone that handles, mixes, loads or applies chemicals.

Clothing

Protective clothing can be divided into two groups: disposables and reuseables. Reuseables are usually made of laminated woven or nonwoven fabric like rubberized rainwear. Research has shown that this type of equipment provides excellent protection against all types of pesticides, including spills of liquid concentrates. Advantages are that it is reusable and can be cleaned. However, it is expensive, heavy and uncomfortable in warm weather. Disposable protective clothing is usually made of spun bonded (nonwoven) fabrics that do not absorb pesticides as quickly as woven materials. The most popular type of spun bonded disposable clothing is the Tyvek™ suit. This type provides an effective barrier to several pesticide sprays and dusts.

Respirators

Respirators protect the lungs from chemicals. Respirators must be selected based on the chemicals used. Information detailing what type of respirator to use is located on the

chemical label or should be listed in the farm's chemical logbook. Anyone going to work wearing a respirator first must have a medical check up. Some people may not be able to work wearing respirators. Every respirator must be purchased to fit the person wearing it. Many things can affect how a respirator fits, and each person is different. Test your respirator before mixing or spraying chemicals. If it fails, stop your work immediately.

Two Types of Respirators

Chemical cartridge respirators have a partial face mask fitted with one or two replaceable cartridges. These cartridges contain an absorbent material (often activated charcoal) that purifies inhaled air and filters dust particles. Cartridge respirators are effective against all but the most toxic vapors. They provide added protection when spraying toxic pesticides, using toxic chemicals in confined areas, or hand spraying certain crops. Always use NIOSH-approved respirators.

Powered-air purifiers may be preferred for excessively high concentrations of dusts or pesticides. The devices use the same filter materials mentioned above, but have a motor-blower assembly that forces air through the filter and into the breathing zone of the wearer. Breathing is much easier because drawing air through the filter requires no effort. Supplied-air respirators deliver air through a breathing tube connected to the wearer's facepiece, helmet or hood.

Eye Protection

Protective eyewear should be carefully selected, fitted and cleaned. When handling and applying chemicals, wear splash goggles or full face shields. Never wear contact lenses when handling ammonia or other farm chemicals. Water may be needed to irrigate chemical spills occurring in the eyes. Special eye wash faucets should be installed in areas where chemicals are handled.

Hand Protection

A farmer's hands might come into contact with chemicals. Cuts and abrasions on the hands may allow toxic chemicals to enter the body. Use appropriate gloves, barrier creams, hand cleaners and lotions to protect hands.

Wearing gloves that match the job provides good hand protection. Only sound, properly fitting gloves should be worn. Tight gloves limit dexterity and are uncomfortable. Overly large gloves can interfere with work. Gloves to protect the hands from chemicals can be made of rubber, plastic or other materials and should be unlined. Never use leather gloves. Gloves should be long enough to cover the entire hand and part of the forearm. Wearing long sleeves will provide an extra barrier for the skin along with the gloves. Wear your sleeve outside your gloves to prevent pesticides from getting into your gloves. After using chemicals and before removing your gloves, rinse and clean them thoroughly. After removing your gloves, wash your hands again.

Make sure you have extra gloves on hand. When gloves wear out, throw them away and use another pair. If there is any question about whether the gloves leak, do not use them. There is a simple way to test gloves to see if they leak. Fill them with water and squeeze the top. If water comes out, replace the gloves.

Foot Protection

Toes and feet can be injured when working with pesticides. Boots offer protection when splash hazards are present. When working with pesticides, wear neoprene or nitrile boots to prevent exposure. Do not wear leather boots. Wear your pant legs outside of your boots to prevent pesticides from splashing in.

Personal protective equipment is available from safety supply firms, mail order companies and many retail outlets. Head, face and eye shields, protective clothing and gloves for handling pesticides are frequently available from pesticide sellers.

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This Maine Farm Safety fact sheet is part of an educational fact sheet series produced by University of Maine Cooperative Extension. For more information on farm safety, contact your county Extension office.

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