Greenhouse User Pesticide Safety Information & Contract

What are Pesticides?

The United States Environmental Protection Agency (U.S. EPA) defines pesticides as:

Any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest as well as any substance or mixture of substances intended for use as a plant regulator, defoliant, or desiccant and any nitrogen stabilizer.

Some examples of pesticides include insecticides, miticides, ovicides, rodenticides, and mullocides. Other chemicals part of the pesticide umbrella includes fungicides, bactericides, biofungicides, bioinsecticides, biobactericides, plant growth regulators (PGRs), insect growth regulators (IGRs), and herbicides.

Product Label & Regulation

Pesticide labels are complex legal documents that must be read and understand before the application of any pesticides. Applications must align with strict accordance to all label instructions and state and local regulations. In short, the label is the law.

The U.S. EPA requires manufacturers to attach additional fold-out labels or booklets to packages that are too small to have all the required information printed on them. These booklets, together with the base label, are the complete pesticide label.

A licensed or certified applicator must apply or supervise the application of pesticides. Pesticide use must also be reported to the county agricultural commissioner and the Department of Pesticide Regulation (DPR).

Where Exposure to Pesticides May Occur

Exposure to pesticides can occur through two main forms, direct and indirect. Mixers, loaders and applicators have a higher risk of exposure to pesticides, occupational exposure, both direct and indirect. Greenhouse users have a lower risk of exposure to pesticides, mostly through contact with pesticide residues. When pesticides are applied to plants, surrounding surfaces can be contaminated with the pesticide. Additional surfaces that can contain pesticide residues include pots, plant support structures, benchtops, the floor and walls. Door handles can also be contaminated with pesticide residues.

Routes of Exposure

Inhalation: You can breathe in a pesticide through your mouth or nose. This can be by breathing in the vapor or dust from an application, including pesticide drift, or by entering treated areas.

Dermal: Most often, pesticides get in your body through your skin. Pesticides get on your skin when you touch treated plants, soil, irrigation water, pesticide application equipment, and dirty work clothing. If you use your phone or the toilet with unwashed hands, pesticides may get on your skin too.

Ocular: Pesticides can get into your eyes from pesticide drift or contaminated dust or material, or if you rub your eyes with your gloves or unwashed hands.

Ingestion: You can transfer pesticides from your hands to your mouth if you drink, smoke, or eat without first washing your hands.

Acute and Long-term Effects of Pesticides

Pesticides can get into your body a variety of ways and can have both immediate (acute) and long-term (chronic) effects on your health.

The health effects of pesticides depend on the type of pesticide. Some, such as the organophosphates and carbamates, affect the nervous system. Others may irritate the skin or eyes. Some pesticides may be carcinogens. Others may affect the hormone or endocrine system in the body.

Protecting Yourself

Personal protective equipment (PPE) is used to protect yourself from pesticide exposure. PPE requirements for loaders, mixers and applicators are listed on product labels. With the potential for exposure to pesticide residues post pesticide application, it is important to wear clothing that helps protect you from pesticide residues. This includes long-sleeved shirts, long pants, shoes, and socks. It is important to wear clean clothes every day, residues lingering on your clothing can enter your body through your skin. Before you leave the greenhouse, check your clothing for leaf litter and other debris that may be contaminated with pesticide residues, paying attention to cuffs and pockets. Nitrile gloves can be used to avoid direct contact to pesticide residues when working in the greenhouse.

First Aid & Emergency Medical Care

Read the pesticide label, the first aid section lists what you should do if you or others are exposed the pesticide. Safety Data Sheets provide information about first aid, potential symptoms, and emergency medical treatment. An emergency eyewash station and shower are located in the headhouse hallway. Always know where you are, you may need to describe your location to emergency personnel. Always protect yourself before you help others. If you believe someone else is sick, get the person away from the pesticides if you can without hurting yourself. Remember the sick person might have pesticides on them or be working in an area that could get pesticides on you. Get help right away. If you are sick, do not drive yourself. Do not let someone else who is

sick drive either. Remember: pesticides may not be the problem. It could be something else, like an underlying health condition or heat illness.

Hazard Communication

Proper labeling is required for materials kept on site including but not limited to fertilizers, disinfectants like alcohols and bleach, salts, etc. Then labeling containers, include the lab name, and the contents in the container.

Postings are notices of pesticide application. Postings include the pesticide signal word, the product name, U.S. EPA registration number, date and time of application, restricted entry interval (REI) and emergency contact information. The U.S. EPA defines REI as the period of time after a field is treated with a pesticide during which restrictions on entry are in effect to protect persons from potential exposure to hazardous levels of pesticide residues.

Where to Find Important Documents

Some documents are posted on the cork board outside of Room 102 at the greenhouse. Other important documents are available upon request. Important documents included are product labels, MSDS's, PSIS Series A, PSIS Series N, Application Specific Information, Hazardous Waste Guidelines, Emergency Procedures, and additional EH&S Safety. The PSIS Series A & N are available online, see below.

Resources:

PSIS Series - https://www.cdpr.ca.gov/docs/whs/psisenglish.htm

Understanding Pesticide Labels for Making Proper Applications - http://ipm.ucanr.edu/IPMPROJECT/freepublications.html?src=0915cardstrveg

Greenhouse User Pesticide Safety Contract

All users must read, sign and submit this contract when requesting or renewing greenhouse space. Failure to comply with these guidelines will lead to user loss of access to the greenhouse or termination of the greenhouse space lease.

I acknowledge my responsibilities as a greenhouse user include the following:

- Coordinate with the greenhouse manager for pesticide scheduling, when needed. The greenhouse manager will inform the primary requestor about pest problems.
- Communicate with the greenhouse manager before you bring any pesticides to the greenhouse. Pesticides must be labeled for greenhouse use, for the intended pests and plants.
- Project-specific pesticide needs are to be provided by the primary requestor.
- All pesticides are to be stored in the pesticide storage room.
- All pesticide applications will be completed by the greenhouse manager. Any other person that must apply pesticides, on site, must be trained and supervised by the greenhouse manager.
- If you see a pesticide application posting, read the entire posting before entering the room. The posting will let you know if or when it is safe to enter the treated room.
- Wash your hands before eating, drinking or using the restroom when at the greenhouse.
- Wash your hands when leaving the greenhouse facility.
- DO NOT enter a room that is being sprayed with pesticides.
- DO NOT remove any pesticides from the greenhouse. This means pesticides cannot be taken to another lab on campus or to the user's residence.

Name: _____ Date: _____

Signature: _____