

Who is in charge of pesticide regulation?

The Environmental Protection Agency (EPA) regulates the pesticide industry under the Federal Insecticide, Fungicide and Rodenticide Act. With this law the EPA is permitted to control all aspects of pesticide use, from production through the disposal of empty containers. In many states, the Department of Agriculture is the inspecting and compliance entity for the EPA concerning pesticides.

What is the EPA Worker Protection Standard (WPS)?

The Worker Protection Standard is a regulation issued by the Environmental Protection Agency. It covers pesticides used in the production of agricultural plants on farms, forests, nurseries, and greenhouses. The WPS requires you to take steps to reduce the risk of pesticide-related illness and injury if you use such pesticides or employ workers or pesticide handlers who are exposed to such pesticides.

If you are an agricultural pesticide user and/or an employer of agricultural workers or pesticide handlers, the WPS requires you to provide to your employees, and in some cases, to yourself and others:

- information about exposure to pesticides
- protections against exposures to pesticides
- ways to mitigate exposures to pesticides

The WPS regulations went into effect on January 1, 1995, and can be found in the EPA's How to Comply Manual, 40CFR170.

What is the state Core Manual?

The State Pesticide Applicator Training (Core) Manual has general information on federal and state laws covering the use and storage of pesticides. The manual contains a glossary of pesticide related terms and also has a section on mathematical conversions and calculations to determine the quantity of pesticides to apply. For a copy of the Core Manual contact your local Cooperative Extension. This is the study manual for the Licensed Pesticide Applicator exam.

What can I do to promote public safety while using pesticides?

With proper selection and use of pesticides you can help prevent residues from exceeding federal limits. This is very important for growers that let the general public into their greenhouses. Pesticide run-off and spray drift prevention are very important to ensure public safety.

What is Integrated Pest Management (IPM)?

Integrated Pest Management is using a variety of techniques which maximize the affect of pesticides and maintain crop quality. It is a program that promotes pest control using cultural, biological, mechanical and chemical methods. IPM is supported by federal and state agencies and by grower organizations. Contact your local Cooperative Extension for more information on IPM.

What alternatives are there to using pesticides?

There are three main options:

- 1) Biological Control: A system of reducing pest populations through the action of living organisms, which are encouraged and released by the grower.
- 2) Cultural Control: To inhibit fungal disease use wider spacing between plants.
- 3) Mechanical Control: The process of removing diseased plants.

When should I begin a crop management plan?

You should begin a crop management plan before the beginning of a growing cycle. This plan should include how to control insect infestation and plant disease through available practices. By making an effective management plan before plant growth, you will prevent environmental risks associated with pesticides; this will save you money and time.

What directly affects the safety of pesticide applicators in a greenhouse environment?

- 1.) Frequent Application: Year-round production of plants in greenhouses creates a warm, sheltered environment. These are ideal conditions for pest populations, creating the need for continuous pest control applications.
- 2.) Enclosed Design: Depending on the type and form of the pesticide being applied, the application may require that the ventilation system be stopped while pesticides are being applied. This hinders the pesticide dispersal, which may cause harmful levels to collect and be concentrated in the greenhouse air.

What type of precautions should be used for the applicator and/or handler of pesticides?

While many types and methods of pesticide application do not require respirator use, continuous pesticide exposure through inhalation is a major risk. Follow manufacturer's recommendations regarding respirator use. When in doubt if a respirator is required, use the respirator. Pesticide contact with skin and eyes can build up in the body and have a systemic effect. The handler and/or applicator should follow a list of personal protective equipment (PPE) requirements as indicated on the chemical label or material safety data sheet. For broad guidelines, refer to the Core Manual.

Do I need a decontamination site?

Yes, the Worker Protection Standard requires that a decontamination site be provided regardless of the number of employees. There is no exemption for employers with only a few employees. The decontamination site must be reasonably accessible to the workers and handlers and not more than ¼ mile from where they are working. Handlers mixing pesticides must have a decontamination site at the mixing area. For additional information, please refer to the EPA's How to Comply Manual, 40CFR170.

Do I need to provide an information area for my employees?

Yes, there must be three types of information displayed in a central location where it can be easily seen and read by workers and handlers; such as by the time clock or in the employee break room. (1) A WPS safety poster developed by the EPA or an equivalent poster. (2) Emergency information, which must include the name, telephone number, and address of the nearest medical facility. And (3) an application list (spray log) that must contain the following: location and description of the treated area, product name, EPA registration number, and active ingredient(s) of the pesticides, time and date the pesticide is to be applied, and the restricted entry interval (REI) for the pesticide. Prior to starting a chemical application, information pertaining to the chemical being used must be recorded in the spray log, and must remain there until 30 days after the REI expires. For more information, please refer to the EPA's How to Comply Manual, 40CFR170.

How should I control the amount of pesticides I use?

The information provided on the labels should be your primary way of regulating the amount of pesticides you use.

Do I need to provide training for my employees?

Yes, all employees who may come in contact with pesticides need to be trained in the hazards associated with pesticides as provided in the worker Protection Standard and Hazard Communication Standard. The Worker Protection Standard protects employees on farms, forests, nurseries, and in greenhouses from occupational exposure to agricultural pesticides. The regulation covers two types of employees:

- Workers - those who are employed (including self-employed) for any type of compensation doing tasks, such as carrying nursery stock, repotting plants, or watering, related to the production of agricultural plants on an agricultural establishment.
- Pesticide handlers - those who are employed (including self-employed) for any type of compensation doing tasks, such as mixing, loading, transferring, or applying agricultural pesticides; handling opened pesticide containers; cleaning or repairing pesticide application equipment; or assisting with the application of pesticides in any way. Workers do NOT include such employees as office employees, truck drivers, mechanics, and any other workers not engaged in worker/handler activities. Some requirements do, however, apply to all persons; and some requirements apply to anyone who handles pesticide application equipment or cleans or launders pesticide-contaminated personal protective equipment. For more information, please refer to the EPA's How to Comply Manual, 40CFR170. All employees must also receive "Right to Know" training as required under the OSHA Hazard Communication Standard (29CFR1910.1200). The OSHA training requirements may differ in states that have approved OSHA programs.

What is REI?

REI is the Restricted Entry Interval. It is the waiting period after a pesticide is applied, usually ranging from 4 to 72 hours. During this interval the greenhouse is under restricted entry only. Only chemical handlers and/or applicators or early entry workers are allowed into the restricted areas. They must receive special training as such under the WPS.

What Items Must I Provide At My Decontamination Site?

Enough fresh water (at least three gallons per handler and/or applicator) for routine washing, emergency eye flushing, and for washing the entire body in an emergency; soap, single use towels, and a change of clothing such as one-size-fits-all coveralls. For additional information, please refer to the EPA's How to Comply Manual, 40CFR170.

How should I apply pesticides to hanging plants?

To reduce the risk of accidental poisoning, hanging plants should be taken down for treatment if possible. When left hanging, the plants can drip pesticides onto your workers. In the event that the baskets are left hanging while being sprayed, the applicators should wear a waterproof head covering and eye protection.

How do I prevent plant resistance to insecticides?

When applying insecticide to plants use a combination of insecticides. Use two or three applications of the insecticide in sequence, then rotate to another class.

How should I dispose of used pesticide containers?

All containers containing hazardous chemicals must be triple-rinsed and punctured to prevent them from having the ability to again hold liquids. This process must be done by a chemical handler/applicator. Once this process is completed, there are no restrictions as to who can handle the containers and should pose no threat to people, animals, or the environment. You must ensure that while containers are being rinsed the rinse water doesn't run into storm drains, creeks or other water supply. The rinse water should be incorporated in future compatible spray mixes or applied directly to the crop. It should never be dumped on the ground. After a container is properly cleaned it can be disposed in most landfills. Please contact the NGMA office for more information and other NGMA publications.

For more information, please contact:

National Greenhouse Manufacturers Association

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