

# Federal Insecticide, Fungicide, and Rodenticide Act of 1947

The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), enacted in 1947, and amended several times, sets an overall risk and benefit standard for pesticide registration, requiring that all pesticides perform their intended function, when used according to labeling instructions, without posing unreasonable risks to human health or the environment. The law requires that pesticides be registered with the U.S. Environmental Protection Agency (EPA) before they are sold or distributed in commerce. Pesticide registrants (companies that hold pesticide registrations) are responsible for providing all test data necessary to satisfy EPA's registration requirements. The Federal Environmental Pesticide Control Act of 1972 required the Administrator of the EPA to ensure that the labeling and classification of pesticides works to protect farmers, farmworkers, and other persons coming in contact with pesticides or pesticide residues. In response, EPA issued a worker protection standard in 1974 that dealt with pesticide-related occupational safety and health of workers performing hand labor operations in fields during and after application of pesticides. EPA, after determining the 1974 standard did not adequately protect workers and pesticide handlers, issued a new Worker Protection Standard (WPS) in 1992 (3).<sup>11</sup> The Worker Protection Standard and the Certification of Pesticide Applicators Standard (CAS) restrict workers' exposures to pesticides.

## How the Law Applies to Agricultural Employment

The WPS has a much broader application than the older standard and applies to most employers as illustrated below. Covered employers include:

- Owners or managers of farms, forests, nurseries, or greenhouses where pesticides are used in the production of agricultural plants.

<sup>11</sup>The 1974 EPA standard contained four basic requirements: (1) workers are not to be sprayed with pesticides; (2) restricted entry intervals are specified for 12 pesticides, interim restricted entry intervals for certain pesticides, and general restricted entry intervals for all other pesticides prohibiting reentry into treated areas until sprays have dried, dusts have settled, and vapors have dispersed; (3) protective clothing is required for any worker entering a restricted area before the specific reentry period has expired; and (4) appropriate and timely warnings are required (9).

- Operators who hire or contract for services of agricultural workers to do tasks related to the production of agricultural plants on a farm, forest, nursery, or greenhouse.
- Operators of businesses in which the operator or employees apply pesticides used for the production of agricultural plants on any farm, forest, nursery, or greenhouse.
- Operators of businesses in which the operator or employees perform tasks as a crop advisor on any farm, forest, nursery, or greenhouse (25).

The WPS potentially affects the 170,173 vegetable and melon farms, fruit and tree nut farms, and farms that produce greenhouse, nursery, and floriculture products. However, 45,840 other farms had orchards and harvested vegetables for sale in 1997 (14). Thus, WPS could affect as many as 216,018 farms or about 11 percent of all farms.

Under provisions of WPS, covered employers are required to: Reduce overall exposure to pesticides by prohibiting handlers from exposing workers during pesticide application, excluding workers from areas being treated and areas under a restricted entry interval, and notifying workers about treated areas. Some activities are allowed during restricted entry intervals if workers are properly trained and protected:

- Mitigate exposures by requiring decontamination supplies to be present and emergency assistance available.
- Inform workers about pesticide hazards by requiring safety training (workers and handlers), safety posters, access to labeling information, and access to specific information (listing of treated areas on the establishment).

The general duties of the WPS tell employers what they must do to meet the above general requirements. Under the general duties, an agricultural employer or a pesticide handler-employer is required to:

- Assure that each worker and handler subject to the standard receives the required protections.
- Assure that any pesticide subject to the standard be used in a manner consistent with the labeling of the

pesticide, including the requirements in the standard.

- Provide sufficient information and directions to each person who supervises any worker or handler to assure that each worker or handler receives the required protection. The information and directions must specify which persons are responsible for actions required to comply with the standard.
- Require each person who supervises any worker or handler to assure compliance by the worker or handler with the provisions of this standard and to assure that the worker or handler receives the required protection (3).

Also, agricultural and handler employers are prohibited from taking any retaliatory actions against workers attempting to comply with this standard, and from taking any action that prevents or discourages any worker or handler from complying or attempting to comply with the WPS.

Table 4 summarizes WPS's provisions and how they apply to agricultural employment.<sup>12</sup>

## Definitions

The definitions and explanations presented here are limited to key terms to show the range of coverage of WPS. Readers seeking more detailed information should contact their State agency that regulates pesticides or their regional EPA office and consult *Title 40 Code of Federal Regulations, Part 170*, and *Title 7 United States Code*.

*Agricultural employer* means any person who hires or contracts for the services of workers, for any type of compensation, to perform activities related to the production of agricultural plants, or any person who is an owner of or is responsible for the management or condition of an agricultural establishment that uses such workers (3).

*Agricultural emergency* means a sudden occurrence or set of circumstances that the agricultural employer could not have anticipated and over which the agricultural employer has no control, requiring entry into a treated area when no alternative practices would prevent or mitigate a substantial economic loss (a loss

in profitability greater than that which is expected based on the experience and fluctuations of crop yields in previous years). The State, tribal, or Federal agency having jurisdiction must declare the existence of circumstances that could cause an agricultural emergency on that agricultural establishment (3).

*Agricultural establishment* means any farm, forest, nursery, or greenhouse (3).

*Agricultural plant* means any plant grown or maintained for commercial, research, or other purposes. Included in this definition are food, feed and fiber plants, trees, turfgrass, flowers, shrubs, ornamentals, and seedlings (3).

*Chemigation* means “the application of pesticides through irrigation systems” (3).

*Commercial pesticide handling establishment* means “any establishment, other than an agricultural establishment, that: (1) employs any person, including a self-employed person, to apply on an agricultural establishment, pesticides used in the production of agricultural plants; or (2) employs any person, including a self-employed person, to perform on an agricultural establishment, tasks as a crop advisor” (3).

*Crop advisor* means “any person who is assessing pest numbers or damage, pesticide distribution, or status or requirements of agricultural plants. The term does not include any person who is performing hand labor tasks” (3).

*Early entry* means “entry by a worker into a treated area on the agricultural establishment after a pesticide application is complete, but before any restricted-entry interval for the pesticide has expired” (3).

*Farm* means “any operation, other than a nursery or forest, engaged in the outdoor production of agricultural plants” (3).

*Forest* means “any operation engaged in the outdoor production of any agricultural plant to produce wood fiber or timber products” (3).

*Greenhouse* means “any operation engaged in the production of agricultural plants inside any structure or space that is enclosed with a nonporous covering and is of sufficient size to permit worker entry. Polyhouses, mushroom houses, rhubarb houses, and similar structures are included, but not malls, atriums,

<sup>12</sup>For more details see (9).

**Table 4--Worker Protection Standard: Summary of applicability to agriculture and penalties for violations**

Provisions	Exemptions for agriculture	Basis for agricultural exemptions	Enforcement
<b>Labeling</b> Requires everyone applying pesticides to obey instructions printed on the pesticide container's label.	<b>Responsible agency</b> None	None	U.S. Environmental Protection Agency.
<b>Worker</b> 1. Only appropriately trained and equipped workers allowed in area during pesticide application. 2. Workers may enter a treated area before the restricted entry interval (REI) has expired only if the worker will have no contact with pesticide residue, will not be performing hand labor, or is entering for a short term, emergency, or specifically excepted tasks. 3. Workers must be provided with protective equipment in proper working order. 4. Workers must be notified of pesticide applications, treated areas must be posted, and/or oral warnings must be given to workers as directed by labeling. 5. Workers must have received safety training during the past 5 years before being allowed to enter a treated area during an REI. 6. Pesticide safety poster must be on display in a central location. 7. Decontamination site must be provided and maintained if workers are required to enter treated area during REI and ensuing 30 days. 8. Emergency assistance must be provided to any worker when there is reason to believe the worker was poisoned or injured by pesticides.	Partial	Limited to crop production. Owner or operator and immediate family exempted from some but not all provisions.	<b>Penalties</b> Both civil and criminal on a case-by-case basis for any violation.

Continued--

**Table 4--Worker Protection Standard: Summary of applicability to agriculture and penalties for violations--Continued**

Provisions	Exemptions for agriculture	Basis for agricultural exemptions	Enforcement
<b><i>Pesticide Handler Protection Standard</i></b>			<b><i>Penalties</i></b>
1. Handler must provide information to handler employer prior to applying any pesticide.	Partial	Owner or operator and immediate family.	Both civil and criminal on a case-by-case basis for any violation.
2. Only appropriately trained and equipped handlers allowed in area being treated.			
3. Handler employee must have knowledge of label, safe use of equipment, and posted information before starting handling activity.			
4. Handler fumigating in a greenhouse must be in continuous voice or visual contact with another handler.			
5. Handlers must use protective equipment specified on the label for use with the product.			
6. Handlers must be provided with a decontamination site.			
7. Emergency assistance must be provided to any worker when there is reason to believe the worker was poisoned or injured by pesticides.			

Source: Compiled by ERS from 40 Code of Federal Regulations, and EPA's *The Federal Insecticide, Fungicide, and Rodenticide Act as Amended, 1988* and *The Worker Protection Standard for Agricultural Pesticides, How Soon Do You Need to Comply?* 1993.

conservatories, arboretums, or office buildings where agricultural plants are present primarily for aesthetic or climate modification” (3).

*Hand labor* “means any agricultural activity performed by hand or with hand tools that causes a worker to have substantial contact with surfaces (such as plants, plant parts, or soil) that may contain pesticide residues. Most hand labor activities, other than operating, moving or repairing irrigation or watering equipment, or scouting, are included” (3).

*Handler* means any person who for any type of compensation: (1) mixes, loads, transfers, applies, disposes of, or transports open containers of pesticides; (2) acts as a flagger; (3) cleans, adjusts, or repairs the parts of mixing, loading, or application equipment that may contain pesticide residues; (4) must enter an area being treated with pesticides to assist in the application of pesticides; (5) must enter a greenhouse or other enclosed area after the application of a fumigant, smoke, mist, fog, or aerosol product to operate ventilation equipment or to monitor air levels before the exposure level listed in the labeling or one of the ventilation criteria has been met; (6) must enter a treated area to move chemigation equipment (used to apply pesticides with irrigation water) before a restricted entry interval has expired; or (7) must enter a treated area outdoors after application of any soil fumigant to adjust or remove soil covers such as tarpaulins. The term does not include any person who is only handling pesticide containers that have been emptied or cleaned according to pesticide labeling instructions or, in the absence of such instructions, have been subject to triple-rinsing or its equivalent (3).

*Handler employer* means “any person who is self-employed as a handler or who employs any handler, for any type of compensation” (3).

*Immediate family* includes “only spouse, children, stepchildren, foster children, parents, step parents, foster parents, brothers, and sisters” (3).

*Nursery* means “any operation engaged in the outdoor production of any agricultural plant to produce cut flowers and ferns or plants that will be used in their entirety in another location. Such plants include, but are not limited to: flowering and foliage plants or trees; tree seedlings; live Christmas trees; vegetable, fruit, and ornamental transplants; and turfgrass produced for sod” (3).

*Owner* means “any person who has a present possessory interest (fee, leasehold, rental, or other) in an agricultural establishment covered by this part, unless that person has both leased such agricultural establishment to another person and granted that same person the right and full authority to manage and govern the use of such agricultural establishment” (3).

*Pesticide* means “(1) any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest, and (2) any substance or mixture of substances intended for use as a plant regulator, defoliant, or desiccant...” (24).

*Restricted entry interval* means “the time after the end of a pesticide application during which entry into the treated area is restricted” (3).

*Treated area* means any area to which a pesticide is being directed or has been directed (3).

*Worker* means any person, including a self-employed person, who is employed for any type of compensation to perform activities relating to the production of agricultural plants on a farm or in a greenhouse, nursery, or forest. These activities include hand harvest tasks (weeding, planting, cultivating, and harvesting) and other tasks in the production of agricultural plants (such as operating or moving irrigation equipment). While workers are performing pesticide handling activities, they are considered to be handlers subject to the requirements for handlers in the WPS (3 and 25).

## Exceptions and Exemptions

In addition to the above definitions, the terms “exceptions” and “exemptions” require explanation. Unless specifically stated in the WPS as an exception or an exemption, the standard covers all pesticide use on a farm, greenhouse, nursery, or forest that produces agricultural plants.

*Exceptions to WPS* are for pesticide application on agricultural establishments in the following circumstances:

- For mosquito abatement, Mediterranean fruit fly eradication, or similar wide-area public pest control programs sponsored by governmental entities.
- On livestock or other animals, or in or about animal premises.

- On plants grown for other than commercial or research purposes, which may include plants in habitations, home fruit trees and vegetable gardens, and home greenhouses.
- On plants in ornamental gardens, parks, and private lawns and grounds intended only for aesthetic purposes or climatic modification.
- By injection directly into agricultural plants. Direct injection does not include “hack and squirt,” “frill and spray,” chemigation, soil incorporation, or soil injection.
- In a manner not directly related to the production of agricultural plants, including, but not limited to, structural pest control, control of vegetation along rights-of-way and in noncrop areas, and pastures and range use.
- For control of vertebrate pests.
- As attractants or repellents in traps.
- On the harvested portions of agricultural plants or on harvested timber.
- For research uses of unregistered pesticides (3).

Three specific exceptions have been added to the standard. These exceptions are for limited contact activities, irrigation activities, and for harvesting greenhouse-grown cut roses during the restricted entry interval (REI). The limited contact activities exception is for performing “limited contact tasks that could not have been foreseen and which, if delayed, would cause significant economic loss” (1). The irrigation activities exception is for performing “irrigation tasks that could not have been foreseen and which, if delayed, would cause significant economic loss” (1). Both of these exceptions have the following conditions for early entry activities:

- The worker’s contact with treated surfaces is minimal and is limited to the feet, lower legs, hands, and forearms;
- The pesticide product does not have a statement in the labeling requiring double notification;
- Personal protective equipment (PPE) for early entry is provided to the worker and must either conform with the label’s requirements or include at least coveralls, chemical-resistant gloves, socks,

chemical-resistant footwear, and eyewear (if eyewear is required by the product handling);

- No hand labor activity (such as hoeing, picking, pruning, etc.) is performed;
- The time in treated areas under an REI for any worker may not exceed 8 hours in a 24-hour period;
- The workers do not enter the area during the first 4 hours, nor until applicable ventilation criteria have been met, nor until any label-specified inhalation exposure level has been reached; and
- Before workers enter a treated area under an REI, the agricultural employer shall give them oral or written notification of the specifics of the exception to early entry in a language that the workers understand (1).

***Exemptions from specific*** provisions of the WPS apply only to owners of agricultural establishments and crop advisors. Owners of agricultural establishments are exempt from the following provisions while they are performing tasks related to the production of agricultural plants on their own agricultural establishments:

- *Entry Restrictions Provision* (3, Section 170.112 ). Owners of agricultural establishments are not required to provide assurance to themselves and members of their immediate family that they have read or understood all labeling requirements related to human hazards and precautions before entering a restricted area. They are not required to provide and maintain personal protective equipment, or to wear personal protective equipment to perform early-entry activities. They are not required to provide decontamination sites. They do not have to prohibit members of their immediate family from wearing or taking home any clothing or personal protective equipment that have been contaminated with pesticides.
- *Notice of Application Provision* (3, Section 170.120). Owners of agricultural establishments are not required to give notice to themselves and members of their immediate family of any pesticide application.
- *Providing Specific Information About Applications Provision* (3, Section 170.122 ). Owners of

agricultural establishments are not required to display information to themselves and members of their immediate family about the location and description of the treated area, the product name, EPA registration number, and active ingredient(s) of the pesticide, time and date of the application, and the restricted-entry interval for the pesticide within 30 days of a pesticide application or during a REI.

- *Pesticide Safety Training Provision* (3, Section 170.130). Owners of agricultural establishments are not required to provide assurance to themselves and members of their immediate family that before they are allowed to enter a treated area during a REI, they have received safety training within the past 5 years.
- *Posted Pesticide Safety Information Provision* (3, Section 170.135). Owners of agricultural establishments are not required to display pesticide safety information when only themselves and members of their immediate family will be present within 30 days of pesticide application or the expiration of the REI.
- *Decontamination Provision* (3, Section 170.150). Owners of agricultural establishments are not required to provide decontamination supplies (see section 170.150 of 3) for themselves and members of their immediate family performing an activity in the area where a pesticide was applied within 30 days of the pesticide application.
- *Emergency Assistance Provision* (3, Section 170.160). Owners of agricultural establishments are not required to provide prompt transportation to an appropriate emergency medical facility, and provide to the injured person or medical personnel, promptly on request, any obtainable information described in the standard when there is reason to believe that an employee has been poisoned or injured by exposure to pesticides.

The owner of the agricultural establishment must provide all of these protections to other workers and other persons who are not members of his or her immediate family.

Certified or licensed crop advisors and persons under their direct supervision are exempt from WPS provisions except for the pesticide safety training required for handlers of pesticides. A person is under the direct supervision of a crop advisor when the crop

advisor exerts the supervisory controls stated in the standard. Direct supervision does not require that the crop advisor be physically present at all times, but he or she must be readily accessible to the employees at all times. The conditions for this exemption are as follows:

- The certification or licensing program requires pesticide safety training equivalent to that for handlers of pesticides.
- The exemption applies only when performing crop advisory tasks in the treated area.
- The crop advisor must make specific determinations regarding the appropriate PPE, appropriate decontamination supplies, and how to conduct the tasks safely. The crop advisor must convey this information to each person under his or her direct supervision in a language that the person understands.
- Before entering a treated area, the certified or licensed crop advisor must inform, through an established practice of communication, each person under his or her direct supervision of the pesticide product and active ingredient(s) applied, method of application, time of application, the REI, which tasks to undertake, and how to contact the crop advisor (1).

This exemption applies only after the pesticide application ends and while crop advisory tasks are being performed.

### **How the Certification of Pesticide Applicators Standard Applies to Agricultural Employment**

The EPA classifies pesticides for general and restricted use. The Certification of Pesticide Applicators Standard (CAS) requires an individual applying restricted-use pesticides to be certified by a certifying agency as competent and thus authorized to use or supervise the use of restricted-use pesticides. Certification programs are conducted by States, territories, and tribes, but must at least meet requirements established by EPA. The definitions listed above for the WPS, also apply to the CAS.

*Applicators* are classified as private and commercial. *Private applicators* use or supervise the use of any restricted-use pesticide for producing any agricultural commodity on property owned or rented by the applicators or their employer, or (if applied without

compensation other than trading of personal services between producers of agricultural commodities) on the property of another person (1). *Commercial applicators* use or supervise the use of any restricted-use pesticide for any purpose or on any property other than as provided by the definition of “private applicator” (1).

Standards for certification differ between private and commercial applicators. According to the standard for certification of private applicators:

- They must show a practical knowledge of pest problems and control practices associated with their agricultural operations; proper storage, use, handling, and disposal of pesticides and containers; and legal responsibility.
- The knowledge must include the ability to recognize common pests and the damage caused by them, read and understand labels and labeling, apply pesticides according to label instructions and warnings, recognize local environmental situations to be considered during application to avoid contamination, and recognize poisoning symptoms and procedures to follow in case of a pesticide accident.
- Competence will be determined by a written or oral testing procedure, or an equivalent system, approved as part of a State plan.

According to the standard for certification of commercial applicators:

- They must demonstrate practical knowledge of the principles and practices of pest control and the safe use of pesticides.
- Competence will be determined on the basis of a written exam and, as appropriate, performance testing in the areas of label and labeling comprehension, safety, environment, pests, pesticides, equipment, application techniques, and laws and regulations.
- Tests must also be given on a particular category of the certification. The pest control categories are agricultural (plants and animals), forest, ornamental and turf, seed treatment, aquatic, right of way, industrial, institutional, structural and health related, public health, regulatory, and demonstration and research (1).

All States, territories, and tribes must ensure a continuing level of competency for certified applicators. This involves training and recertification every 3 to 5 years.

## Enforcement

States have primary enforcement responsibility for pesticide-use violations if the Administrator of EPA determines the State: (1) has adopted adequate pesticide-use laws and regulations; (2) has adopted or is implementing adequate procedures for the enforcement of its laws and regulations; and (3) has kept records and made reports showing compliance with (1) and (2) above, as the Administrator may require by regulation (4).

The Administrator of EPA may also enter into cooperative agreements with States and Indian tribes to delegate the authority to cooperate in the enforcement of FIFRA (4). Violations of FIFRA, WPS, CAS, and other EPA regulations carry both civil and criminal penalties.

## Summary

The FIFRA plus the EPA regulations are comprehensive and apply to anyone who uses pesticides. They require any person applying restricted pesticides to become a certified applicator. According to the WPS, farm employers must warn employees of any danger of pesticide exposure and not require their employees to work in areas where they might be sprayed with pesticides or come in contact with them before the reentry period has expired. Farm employers using pesticides or having them applied need to remember that there are no exemptions to WPS.

WPS covers more agricultural employers than most other laws and regulations that affect agricultural employment (2). Although many of the laws and regulations affecting agricultural employment discussed in the report exempt farming enterprises that employ small numbers of hired farmworkers, the WPS has no exemptions based on the number of employees.

According to the CAS, an individual applying restricted-use pesticides must be certified by a certifying agency as competent and thus authorized to use or supervise the use of restricted-use pesticides. Certification programs are conducted by States,



territories, and tribes, but must at least meet requirements established by EPA.

Farm operators and employers and pesticide applicators should remember that many States have pesticide safety laws and regulations that are more

restrictive than Federal laws and regulations. Familiarity with pesticide safety in States where they operate is absolutely necessary for agricultural employers and highly recommended for operators who are nonemployers and risk exposure to pesticides.