

Federal Regulations Affecting Use of Pesticides¹

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Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)

The first regulation of pesticides by the US government occurred in 1910 with passage of the Insecticide Act. The basis of this law was to protect agricultural producers from adulterated or misbranded products. A more encompassing law, the original Federal Insecticide, Fungicide and Rodenticide Act, known as FIFRA, was passed in 1947. Its intent was for the United States Department of Agriculture to register all pesticides prior to their interstate commerce. This law remained in place until 1964, when it was amended to allow refusal of products that were determined to be unsafe or ineffective and their removal from the market.

Since pesticides have become an integral part of controlling pests, a succession of federal and state laws has addressed their changing role and regulation. In 1970, the Environmental Protection Agency (EPA) was formed and was charged with enforcing FIFRA, which was again amended in 1972. Pesticide laws and regulations were refocused with the basic goals of

- Requiring EPA registration of all pesticides, each use of the pesticide, and product label approval.
- Classifying all registered pesticides as either "general use," which can be used by anyone, or "restricted use," which requires licensing.
- Establishing certification and licensing programs carried out by individual states that must meet at least minimal FIFRA requirements, although they are allowed to be more stringent. Licensed applicators are considered to be either "private" or "commercial" applicators.
- Establishing tolerances for pesticide residues that may legally remain on raw agricultural products or in processed food.
- Penalizing pesticide users for "use inconsistent with the labeling" of a pesticide.
- Making it illegal to store or dispose of pesticides or containers other than as directed by regulations, and penalizing for illegal handling of containers.
- Providing civil penalties when there is an unintentional violation of a regulation. Fines can be

\$1,000 for private applicators and others and as much as \$5,000 for each offense by commercial applicators.

- Providing criminal penalties when the law is knowingly violated. The maximum penalty for private applicators and others is \$1,000 and/or 30 days in prison. Commercial applicators may be fined up to \$25,000 or one year in prison, or both.

Certification of Applicators

FIFRA distinguishes between commercial and private applicators. Private applicators use or supervise the use of pesticides on property owned or leased by them or their employee for the purpose of producing an agricultural commodity. Commercial applicators include all other certified applicators. The EPA has established rules and procedures to be followed by individual states for certifying both groups.

Private applicators may be required by states to demonstrate their competency to apply pesticides through a written or oral examination. This generally involves testing their ability to read and understand directions on pesticide labels and their general comprehension of safety and environmental problems potentially arising from pesticide use.

Restrictions on commercial applicators are more stringent, requiring people seeking certification to demonstrate competency by taking a written examination and, if required by law, to attend certification programs and take performance tests. Topics covered by the examinations may include a person's ability to read and understand a pesticide label, knowledge of application equipment and techniques, knowledge of potential harmful effects of a pesticide on human health and the environment, and basic knowledge of pesticide laws.

The EPA regulations also divide commercial applicators into categories based on types and sites of pesticide use. For example some categories are agriculture, ornamental and turf, rights-of-way, and aquatic pest control. Persons seeking certification as commercial applicators must demonstrate knowledge of the use and handling of pesticides generally and knowledge of the particular standards applicable to their respective area or areas. Individual states determine when certification must be renewed.

Recall of Suspended Pesticides

The 1988 amendments to FIFRA require the recall of pesticides if their registration is suspended or if the EPA determines that a recall of the pesticide is necessary to protect health or the environment. If a pesticide is recalled, the registrant must take reasonable steps to inform users of the recall and must provide storage facilities to persons in possession of the pesticide, as well as transportation of the pesticide if requested. Users of the recalled pesticide are entitled to an indemnity from the EPA for the price of the pesticide. An indemnity cannot be made unless there is a specific line item appropriation of funds made in advance by Congress.

The Federal Food, Drug, and Cosmetic Act (FFDCA)

The FFDCA of 1938 has been amended several times in its history. It is administered by the Food and Drug Administration (FDA) of the Department of Health and Human Welfare. Pesticide residues on agricultural commodities are regulated under both FIFRA and FFDCA. FIFRA regulates residues by forbidding the use of a pesticide in a manner inconsistent with its label and by denying registration to pesticides found to cause unreasonable adverse effects to people or the environment. Because FFDCA prohibits the distribution of agricultural commodities that contain levels of pesticides that exceed federally determined maximum tolerances, it is interrelated with FIFRA. In order for EPA to register a pesticide under FIFRA, a tolerance must be established under FFDCA. Information on a tolerance is useful in determining to register a pesticide and, if so, how the label will be composed. This takes into account that if the label's directions are followed correctly, the tolerance will not be exceeded. If a pesticide is used on a crop not listed on the label, the crop may be determined to be unfit and destroyed by the government.

Pesticide Record Keeping Requirements

The Food, Agriculture, Conservation, and Trade Act of 1990 (FACT Act, Farm Bill) contains regulations that require certified applicators of restricted-use pesticides to keep records of applications. Certified applicators are determined to include both commercial and private applicators. The USDA Agricultural Marketing Service is responsible for implementing the record keeping provisions of the FACT Act. FACT further requires that certified applicators adhere to individual state record keeping requirements. If there are no state record keeping regulations, then certified applicators must include the following items as outlined by FACT:

- The pesticide's product name.
- The amount of pesticide applied.

- The date that the pesticide was applied.
- The location of the pesticide application.
- The size of the treated area.

FACT requires that all pesticide records be kept for at least 2 years after each application. Also, the application must be recorded within 14 days after the pesticide was applied.

Endangered Species Act (ESA)

The (ESA) is a Federal law administered by the Fish and Wildlife Service (FWS) of the Department of the Interior. The ESA makes it illegal to kill, harm, or collect endangered or threatened wildlife or fish or to remove endangered or threatened plants from areas under federal jurisdiction. It also requires other federal agencies to ensure that any action they carry out or authorize is not likely to jeopardize the continued existence of any endangered or threatened species or to destroy or adversely modify its critical habitat. As a result, the EPA must ensure that no registered pesticide use is likely to jeopardize the survival of any endangered or threatened species.

The FWS has the authority to designate land and freshwater species as endangered or threatened and to identify their current habitat or range. The National Marine Fisheries Service has the same authority for marine species.

The FWS has the authority to prosecute persons, including pesticide users, who harm endangered or threatened species. In addition, EPA enforcement personnel have the authority to ensure that pesticide users observe labeling restrictions.

Occupational Safety and Health Act of 1970 (OSHA)

The OSHA of 1970 is administered by the Occupational Safety and Health Administration of the Department of Labor. This law:

- Requires any employer with eleven or more employees to keep records of all work-related deaths, injuries, and illnesses and to make periodic reports. Minor injuries needing only first aid treatment need not be recorded. Records must be made if the injury involved medical treatment, loss of consciousness, restriction of work or motion, or transfer to another job.
- Requires investigation of employee complaints that may be related to pesticide use, reentry, or accidents.

Written and administered by OSHA, the Hazard Communication Standard (HCS) provides protection for employees exposed to hazardous chemicals. Pesticides are considered hazardous chemicals. An employee is defined as a worker who may be exposed to hazardous chemicals

under normal operating conditions or in foreseeable emergencies. Exposure or exposed means that an employee is subjected to a hazardous chemical in the course of employment through any route of entry (inhalation, ingestion, skin contact, or absorption) and includes potential (accidental or possible) exposure. This law requires:

- Employers to read the standard and understand the provisions and responsibilities of an employer.
- A list of the hazardous chemicals in the workplace be made.
- Employers to obtain safety data sheets (SDS) for all hazardous substances on their list.
- All containers to be labeled.
- A written communication program be developed and implemented.
- Employee training to be conducted based upon the chemical list, SDS, and labeling information.
- Employers to create a hazard communication file and make it available to any employee upon request in a reasonable period of time.

Superfund Amendments and Reauthorization Act of 1986 (SARA Title III)

SARA Title III is a federal right-to-know law that affects those that produce or store hazardous chemicals. Pesticide producers, distributors, retailers, and some pesticide applicators are among those that must comply with this law. It is designed to inform communities regarding hazardous chemicals located in the vicinity and addresses the need for community emergency response plans in the event of an accident.

Title III has many sections; however, the areas that affect pesticide applicators, applicator businesses, or dealers are confined to:

- Emergency planning and notification: under certain conditions, the law requires notification of state and local officials about the location and amount of hazardous chemicals at a site. The EPA has designed a Threshold Planning Quantity (TPQ) for a number of active ingredients, not the formulated product. When the product in storage is at or above the TPQ, the State Emergency Response Commission (SERC) must be notified in writing. Each facility is also required to designate a coordinator to work with the Local Emergency Planning Committee (LEPC). The state will notify the LEPC that the operation is covered under SARA. This is a one-time notification.
- Emergency release reporting: describes the safety measures when an accidental release, such as a spill of any extremely hazardous substance, occurs. If all of the following occur:

- The pesticide was spilled;
- The pesticide is covered under SARA Title III;
- The spill quantity was greater than the Reportable Quantity (RQ); and
- The spill created off-site exposure

then one is required to notify the SERC, LEPC, and the National Response Center (1-800-424-8802). If a pesticide is applied according to the label, the use is exempt from emergency release reporting.

- Safety data sheets (SDS) reporting: employers are required to obtain and keep safety data sheets. They must submit copies of each SDS, or a listing of SDSes that must be maintained, to their local fire department, the LEPC, and the SERC. There is one exclusion: if a chemical is used solely for household, consumer, or agricultural purposes, notification is not required.
- Annual inventory reporting: all regulated facilities must submit an annual inventory to their local fire department, LEPC, and SERC. The inventory must include
 - All hazardous chemicals stored at the facility in quantities of 10,000 pounds or more, and
 - All extremely hazardous chemicals stored in quantities of 500 pounds or 55 gallons or more, or in a quantity that exceeds the TPQ, whichever is less.

Agricultural producers are exempt from this section.

Resource Conservation and Recovery Act of 1976 (RCRA)

The EPA regulates wastes under the RCRA. The EPA issues a list of materials that are considered hazardous. Under RCRA

- Private applicators (farmers) who properly dispose of pesticide wastes, excess pesticides, and triple rinsed empty containers on their own property are in general exempt from the requirements of this law (states and tribes often have more strict laws).
- "Wastes" include unrinsed containers, excess pesticides and pesticide dilutions, and rinse and wash water that contain a listed chemical and cannot be used.
- Those who accumulate wastes of acutely toxic pesticides totaling 2.2 pounds or more per month or wastes of any RCRA-regulated pesticides totaling 2,200 pounds per month are regulated. Such users must register as a generator of hazardous waste, obtain an identification number from the EPA, state, or tribe, and follow certain disposal requirements.

The EPA RCRA hotline can be contacted for determining if a pesticide is listed in RCRA: 1-800-424-9346.

Food Quality Protection Act (FQPA)

The FQPA was signed into law in 1996 and was the first significant amendment to FIFRA since 1988. The following are some of the major provisions of FQPA:

- Periodic review of pesticide registrations. FQPA requires EPA to establish a system for periodic review of all pesticide registrations on a 15-year cycle using new food safety standards mandated under the act.
- Emergency suspension authority. EPA may suspend a pesticide registration immediately. A notice of intent to cancel must be issued within 90 days, or the emergency suspension would expire.
- Minor-use pesticides. FQPA enhances incentives for the development and maintenance of minor-use registrations through extensions for exclusive use of data and flexibility to waive certain data requirements, and by requiring the EPA to expedite review of minor-use applications.
- Time-limited tolerances. FQPA requires the establishment of a time-limited tolerance for pesticides that have received registration under Section 18 of FIFRA.

Worker Protection Standard (WPS)

In 1992, EPA announced its final rule revising its regulations regarding protection of workers from exposure to agricultural pesticides. It is directed toward the working conditions of the following two types of employees:

- Pesticide handlers. Those who handle agricultural pesticides, including mixing, loading, applying, cleaning or repairing equipment, flagging application equipment, etc.
- Agricultural workers. Those who perform tasks related to cultivation and harvesting.

The provisions are intended to accomplish the following:

- Eliminate or reduce exposure to pesticides. Exposure is limited by establishing restricted entry intervals (REIs) for all pesticide products used in the production of agricultural plants and for which REIs have not been set according to current standards.
- Mitigate exposures that occur.
- Inform employees about the hazards of pesticides.

Products affected by the WPS are, with some exceptions, those products registered for use in the production of agricultural plants. It includes any product registered for use in the production of agricultural plants on farms, forests, nurseries, and greenhouses. Facility owners and operators are ultimately responsible to ensure compliance within the WPS.

Safe Drinking Water Act (SDWA)

The EPA establishes national drinking water standards, called Maximum Contaminant Levels (MCLs), for protecting the quality of drinking water for both underground and aboveground sources. Public water systems may not deliver water exceeding the MCLs. Congress amended the law to require the development of a screening and testing program for chemicals, including pesticides, for possible endocrine disrupting effects. EPA has the same requirement within the FQPA.

Hazardous Materials

Transportation Act (HMTA)

The HMTA was enacted over the concern for spills of unknown substances on public highways. It is under the jurisdiction of the Department of Transportation (DOT) since it is the agency responsible for the safe transportation of all materials on public highways. HMTA allows the Secretary of Transportation broad authority to designate any material shipped in commerce as hazardous if it poses an unreasonable risk to health, safety, and property. Hazardous materials can include radioactive materials, disease-causing agents, flammable and combustible liquids or solids, oxidizing or corrosive materials, compressed gases, poisons, and explosives. The list of materials does not include certain chemicals used in pesticides; however, pesticides fall within the materials characterized as hazardous under the regulations issued by DOT.

The regulations apply to common, contract, or private carriers of hazardous materials. A commercial pesticide applicator transporting pesticides for application under contract would constitute either a contractor or private carrier and be subject to the regulations. Under certain circumstances, a private applicator transporting pesticides may be subject to the regulations. Generally, the carriers subject to HMTA

- Operate across state lines and transport materials listed in the Hazardous Material Table; or
- Transport materials above the reportable quantities for various chemicals listed in the Hazardous Substance Table; or
- Do not meet the above requirements but operate in a state that requires compliance with DOT regulations.

Most states have adopted the DOT requirements for intrastate commerce. It is important to note that one should always follow the DOT regulations if there are no state requirements and there is no interstate commerce.

To avoid liability, manufacturers and distributors of hazardous materials often provide the information needed to follow HMTA regulations. However, it is the responsibility of anyone handling hazardous chemicals to

ensure that the information is correct. Anyone who falls under the jurisdiction of the DOT and HMTA should know how to use the Hazardous Materials Table and Hazardous Substance Table.

Private carriers transporting only within the borders of a single state are exempted from this requirement provided the transport vehicle has a gross vehicle weight of less than 10,000 pounds. If the vehicle is a tank truck, it must have a tank of less than 3,500 water gallons capacity to be exempted.

List of Acronyms

DOT: Department of Transportation

EPA: Environmental Protection Agency

ESA: Endangered Species Act

FACT: Food, Agriculture, Conservation, and Trade Act

FDA: Food and Drug Administration

FDCA: Food, Drug, and Cosmetic Act

FIFRA: Federal Insecticide, Fungicide, and Rodenticide Act

FQPA: Food Quality Protection Act

HCS: Hazard Communication Standard

HMTA: Hazardous Materials Transportation Act

LEPC: Local Emergency Planning Committee

MCL: Maximum Contaminant Level

OSHA: Occupational Safety and Health Act

RCRA: Resource Conservation and Recovery Act

REI: Restricted Entry Interval

RQ: Reportable Quantity

SARA: Superfund Amendments and Reauthorization Act

SDS: Safety Data Sheet

SDWA: Safe Drinking Water Act

SERC: State Emergency Response Commission

TPQ: Threshold Planning Quantity

WPS: Worker Protection Standard

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Use pesticides safely. Read and follow directions on the manufacturer's label.

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