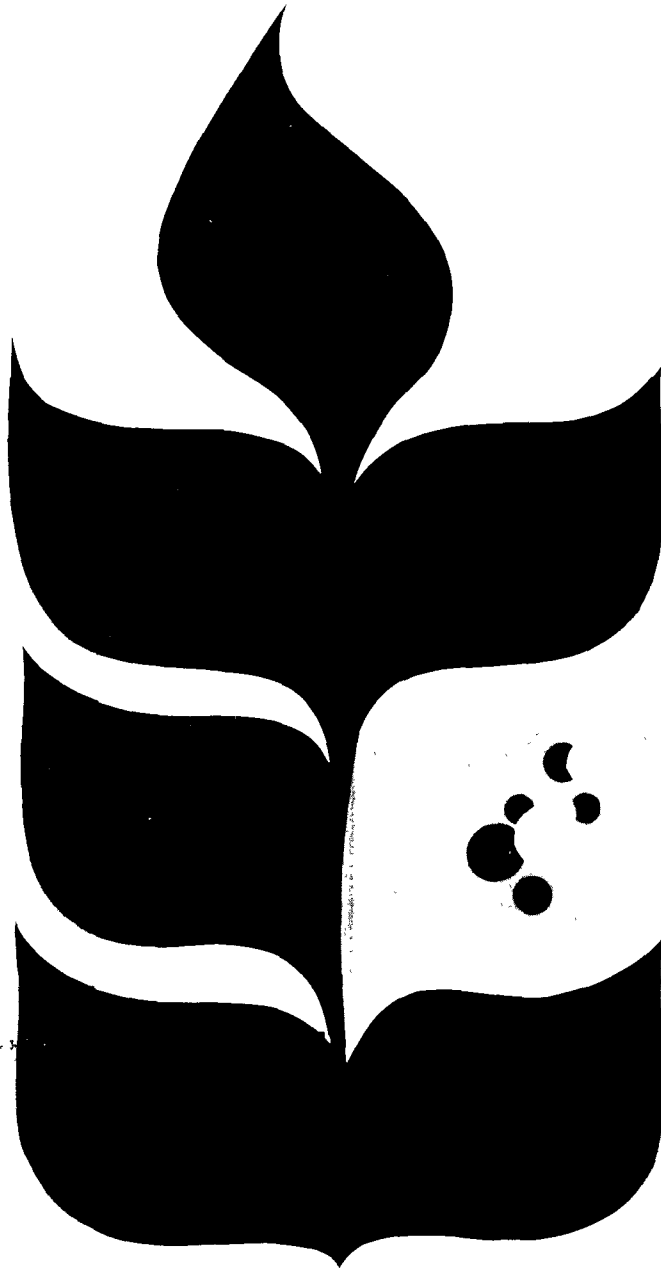
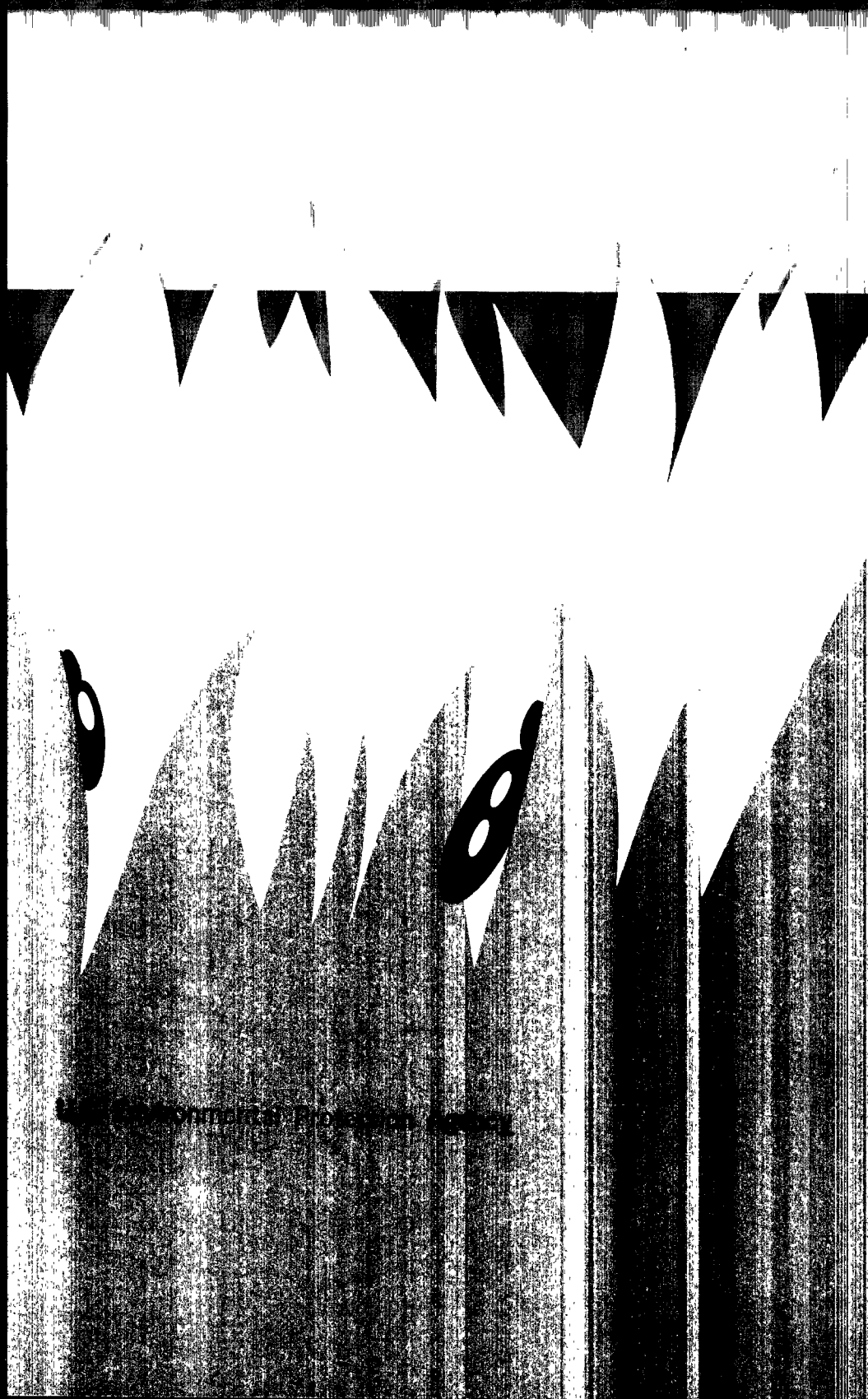


Regulating Pesticides

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U.S. Environmental Protection Agency
Regulating Pesticides
2200
Chicago, Illinois



Pesticides

The word comes from the Latin *cida*, "to kill," and *pestis*, for "plague," which is exactly what it means—pesticides are substances used to kill or control unwanted insects, plants, fungi, mites, rodents, bacteria, or other pests. More than 34,000 such products—derived from about 600 basic chemical ingredients—are currently registered by the U.S. Environmental Protection Agency for use in this country.

The challenge and complexity of regulating pesticide products and their use arise from the dual nature of the chemicals themselves: Pesticides are of tremendous value to society, but improperly used these products can be a threat to human health and the environment.

Pesticides contribute significantly to the production of food and fiber, to improved public health through the control of disease-carrying pests, and to the overall quality of life by reducing aggravations caused by a wide variety of pests. On the other hand, pesticides can affect non-pests as well. Each year, almost 2 billion pounds of pesticides are used to gain the benefits they offer. If not handled correctly, the more toxic substances can present an immediate danger to the user and even death if spilled on the skin, inhaled, or otherwise misused. Some of the earlier pesticides also persist in the environment over long periods of time, moving up through the food chain—from plankton or insects to birds, fish, animals, and eventually to humans through food. Finally, some pesticides exhibit evidence of long-term adverse health effects under some conditions. In short, while most of us initially considered pesticides to be a sort of modern day miracle, we have now come to view them more circumspectly.

EPA's mission is to assure that society reaps the benefits of pesticide use with minimum risk to health and the environment. It is an extremely difficult job which at times requires choices to be made at the outer limits of current scientific knowledge.

FIFRA and FFDCA

EPA regulates pesticides under two laws: the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and the Pesticide Amendment to the Federal Food, Drug, and Cosmetic Act (FFDCA).

FIFRA was enacted originally in 1947 and was then administered by the U.S. Department of Agriculture. EPA assumed this responsibility when it was established in 1970.

The 1947 law made it illegal to detach or destroy pesticide labels and provided for pesticide inspections, but it did not address actual pesticide use and was not applicable to pesticides used solely within a single state. Despite the 1947 legislation, reports of pesticide-related health and environment problems became increasingly alarming in subsequent years.

In 1972, Congress amended FIFRA to provide for a broader regulatory program, covering all pesticides used in the United States instead of only those involved in interstate commerce. Under this legislation, all pesticides must be registered by EPA before they can be sold to the public, and misuse of a registered pesticide is unlawful.

The Pesticide Amendment of the FFDCA provided an additional measure of public protection by authorizing the establishment of "tolerances." These are amounts of pesticide residues that may safely remain on a treated food or feed crop after harvesting. Tolerance levels must be established for all pesticides used on food or feed crops.

Registration and Re-registration

EPA registers specified uses of pesticide products on the basis of both safety *and* benefits. FIFRA requires EPA to determine whether a pesticide can perform its intended function without causing “unreasonable adverse effects” upon human health or the environment while taking into account the potential benefits of the proposed use. This balancing of risks and benefits underlies all basic regulatory decisions under the Act.

To make sound judgments, EPA must have all pertinent information on every pesticide it evaluates. Manufacturers of pesticides are required to provide data on the potential for skin and eye irritation; hazards to non-target organisms including fish and wildlife; the possibility of acute poisoning, tumor formation, birth defects, reproductive impairments, or other serious health effects; the behavior of the chemical in the environment after application; and the quantity and nature of residues likely to occur in food or feed crops.

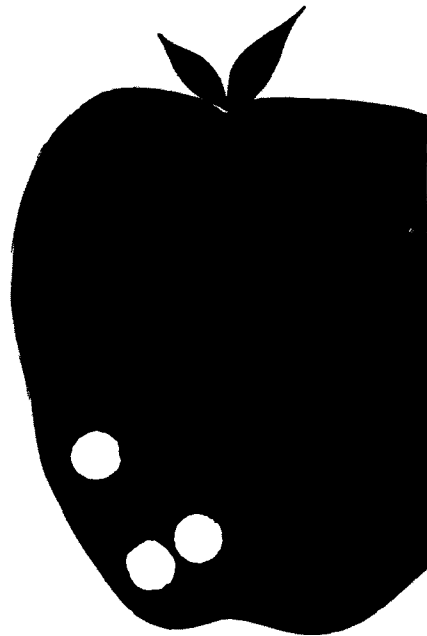
Amassing health-related data is not limited to new, unregistered pesticides. Amendments to FIFRA enacted in 1972 require EPA to reassess the safety of pesticide chemicals already in use. Most older pesticides do not meet the standards of testing required now. In the re-registration process, therefore, manufacturers of these older products must meet the same testing standards which new chemicals must meet. This normally requires under-taking and completing various tests which are then reviewed by the Agency to determine whether products may remain on the market.

If a pesticide ingredient poses a special concern due to a perceived health or environmental risk, the agency can conduct a special review of the product’s risks and benefits. The review process allows all interested parties—the general public, environmentalists, pesticide users, manufacturers, and scientists to participate. At the conclusion of a special review, EPA may decide to continue, restrict, or cancel pesticide uses under consideration. A regulatory decision to cancel uses of a pesticide may be appealed to the EPA Administrator for an adjudicatory hearing.

Tolerances

Tolerance levels—the amount of pesticide that may remain on a crop after harvesting—must be established under federal law for all registered pesticide uses expected to result in residues in raw agricultural commodities, processed food or feed. Tolerances are legal enforcement levels set well below—normally 100 times below—the level that might cause harm to people or the environment.

The Food and Drug Administration, which enforces tolerances, inspects agricultural commodities, both domestic and imported, to insure that residues in food to be offered for sale in the marketplace do not exceed the limits established by EPA. In addition, the U.S. Department of Agriculture inspects meat and poultry for such residues. Any food found to have residues in excess of the tolerance level is subject to seizure and destruction.



FIFRA Enforcement

EPA and its state partners share the responsibility for pesticide enforcement. Their trained personnel continually check on marketed pesticide products. Samples are collected from manufacturers and distributors in all parts of the country. These are field tested and analyzed in government laboratories for verification of label claims concerning content, effectiveness, and safety. Labels are reviewed to determine that no claims are made other than those accepted by EPA at the time of registration.

If a product is found to be ineffective or unsafe, EPA may take one of several actions. In the case of a minor violation, an informal notice to the company concerned is usually sufficient to insure the correction of a deficiency. More serious cases may result in a formal notice of violation, seizure of the company's goods, or initiation of civil or criminal proceedings against the violator.

When a question arises about the safety of a pesticide currently in use, EPA may issue a formal notice of cancellation that becomes effective within 30 days unless appealed. If the cancellation is challenged, the product registration remains valid and marketing may continue pending the completion of the appeal process.

If immediate action is warranted, EPA can suspend the registration of a pesticide determined to be an imminent hazard to the public welfare. This action halts further sale, distribution or shipment of the pesticide, regardless of any appeal by the manufacturer, until a decision is made through the cancellation procedure.



Classification and Certification

EPA must classify all pesticide products for either "general" or "restricted" use.

General use pesticides are primarily those that will not cause unreasonable adverse effects to the user or the environment when used in accordance with label instructions. Such products generally are available to the public with no restrictions other than those specified on the label.

Restricted use pesticides are those which may cause adverse effects to the applicator or the environment unless applied by persons who have been specially trained in their use.

The law provides for government certification of applicators qualified to handle and apply restricted use pesticides without harming themselves, others, or the environment. Actual training of applicators, as well as certification, is carried out at the state level by the states and the Cooperative Extension Service. Virtually all states now have an active certification program. To become certified, applicators must demonstrate an understanding of labeling; safety requirements; environmental factors; consequences of pesticide misuse; hazards associated with residues; equipment use, and application techniques.

Read the Label

One of the most important outcomes of the registration process is the product label, which must be written to exacting specifications and appear on every pesticide container. Labels should be read in their entirety before use of a pesticide product. The user should be aware that it is illegal to use a pesticide in ways inconsistent with its labeling. Information on the label includes:

The EPA registration number. This number assures the user that the product is legally registered and considered safe to use as directed.

Directions for use. Always use a pesticide only on the sites specified and in the prescribed amounts. Don't think that twice that amount will double the effectiveness. It won't. It will only enhance the possibility of unintended harm, either to the user, houseplants, crops, etc. Some labels include directions for special applications, such as misting plants.

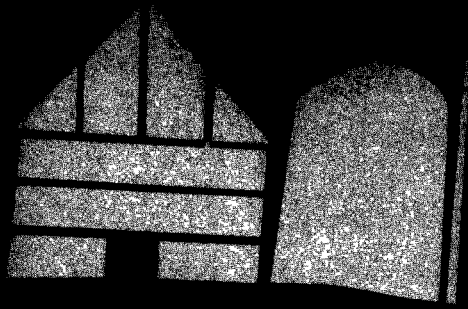
Precautions. Pesticides with the highest degree of toxicity are marked with a skull and crossbones and state DANGER-POISON; the word WARNING appears on the labels of less toxic pesticides; and CAUTION is used on the least harmful products. Pay special attention to any instructions regarding precautions for children and pets or the need for protective clothing. Heed instructions about accidental spills on skin or clothes.

Read first-aid instructions. Follow these instructions if an accident occurs. Call a poison control center and use the label to describe the chemical. If the accident results in a visit to a doctor or hospital, take the label with you.

Storage and disposal. Store the product in the original container. Never transfer a pesticide to a soft drink bottle or any other container that might be attractive to children. Dispose of empty containers as recommended by any special label instructions.

U.S. Environmental Protection Agency

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