Office of Pesticide Programs

Technical Services Division

EPA

U.S. Environmental Protection Agency
Washington, D.C.
20460

Effective and safe use of pesticides is the objective of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) as amended in 1972.

The responsibility for achieving that objective belongs to the U.S. Environmental Protection Agency (EPA). Within the Agency, the Office of Pesticide Programs administers the law and enforces it, in cooperation with the Pesticide Enforcement Division.

The amended FIFRA set more stringent rules governing the use of pesticides. Among them it:

- requires Federal registration of all pesticides sold or distributed interstate as well as intrastate;
- prohibits the use of any pesticide in a manner not prescribed on the label;
- restricts the use of certain very hazardous pesticides to certified applicators.

To carry out these provisions the Office of Pesticide Programs is functionally organized into four divisions:

Registration: Evaluates applications for pesticide registration to see that they comply with FIFRA requirements;

Criteria and Evaluation: Establishes standards and criteria for product registration and tolerance setting;

Operations: Develops and recommends pesticide program content and model legislation for States, provides policy direction to technical assistance and training programs, and coordinates information on pesticide accidents and incidents;

Technical Services: Provides technical data for use by the other divisions, develops standardized testing procedures, operates and interprets data from the National Pesticide Monitoring System, conducts field studies to determine the effects of pesticides on people and develops and disseminates information relating to pesticides.

July 1975

Basis for Regulatory Action

Extensive scientific and technical support as well as constantly updated information are needed by the Office of Pesticide Programs as a basis for regulatory actions. These needs are filled by the Technical Services Division (TSD).

Specifically, the Office of Pesticide Programs uses the Division to develop and support establishment of standards and criteria to be applied in setting residue tolerances and human and environmental safety levels. It evaluates currently registered chemicals. It assists in the consideration of regulatory actions such as cancellations, suspensions and enforcement actions and it identifies pesticides and their impact in accident investigations.

The Division also provides these services to other Federal agencies, to State and local officials and to the general public upon request.

This leaflet describes the services offered by the Technical Services Division through its five branches: Chemical and Biological Investigations, Ecological Monitoring, Human Effects Monitoring, Systems Support, and Information.

Chemical and Biological Investigations Branch

To determine the safety, effectiveness and quality of registered pesticide products and products with experimental permits, this Branch conducts tests in laboratories in Beltsville, Maryland, Corvallis, Oregon, and Bay St. Louis, Mississippi.

Staff biologists represent various disciplines including pharmacology, microbiology, plant and animal biology, entomology and virology.

Representative studies include: testing of commercial products such as kitchen cleaners, crop dusts, disinfectants and flea collars, evaluating the efficacy of pesticides in controlling or repelling insects and other pests in laboratory and field experiments.

Chemists in the Branch are responsible for maintaining quality control of test methods which includes studying and supplying other laboratories with chemical reference standards. They test products to determine active ingredients and check for adulteration, contamination or inaccurate formulation. They also analyze samples furnished by a field team investigating accidents allegedly caused by pesticides.

Both chemists and biologists work cooperatively to provide information necessary for determining the adequacy of pesticide labeling.

The Branch also undertakes special analytical studies on request.

Ecological Monitoring Branch

This Branch in cooperation with other Federal, State and local agencies operates certain of the National Pesticide Monitoring Programs required by the amended FIFRA.

These systems monitor residue levels in various environmental components to determine the concentration, movement, and at times the origin of the residues. EMB at its laboratory facility in Bay St. Louis, Mississippi analyzes residues in surface water, soil, agricultural crops, estuarine fish and shellfish, and ocean fish. Residues in human tissues and air are determined at State laboratories in Michigan and Colorado under contract.

One of the oldest and most active projects is soil monitoring. Thousands of field samples of cropland, noncropland, and urban soils are collected, analyzed and evaluated statistically by computer to determine whether certain areas contain higher residues than others.

Bent on improving monitoring capabilities, the Branch constantly seeks to develop new techniques and equipment for greater accuracy in all aspects of monitoring.

Special monitoring projects are undertaken as needs arise. In 1974, for example, the Branch assisted the Forest Service in monitoring DDT in its emergency use against the Douglas fir tussock moth in the Pacific Northwest.

The information gained from these monitoring activities can form the basis for changes in EPA's labeling and registration requirements, and in cancellation or other administrative procedures.

Human Effects Monitoring Branch

The Human Effects Monitoring Branch, through its Epidemiologic Studies Program (ESP), obtains information concerning the hazardous effects of pesticides on human health. Field studies conducted on individuals who are occupationally or environmentally exposed to pesticides are used to help detect and define any acute or chronic health effects. This field studies program supplies information on poisonings with regard to manner, magnitude, extent, trends, and specific products involved. The information is made available to the medical profession to help in developing more efficient means of recognizing, diagnosing and treating pesticide poisonings.

To accomplish this, investigations are

conducted under contract by universities or State health departments in 12 States. Three locations which also have medical schools offer an especially wide range of services because of the cooperative efforts of the large number of scientists and medical personnel available. The 12 projects are located throughout the country to permit gathering of data which take into account all the regional variations in pesticide use.

One of ESP's special projects is to determine what type of clothing provides applicators and farm workers greatest protection from pesticides. For example, different weaves of cloth are being tested to see which permits the least penetration of pesticides. This is one way ESP attempts not only to safeguard those occupationally exposed to pesticides, but also to provide an early warning of pesticide dangers for the general public.

The Branch also provides diagnostic and therapeutic assistance in cases of acute poisoning.

Systems Support Branch

The Systems Support Branch manages the computer systems of the Office of Pesticide Programs. The Pesticide Analysis Retrieval and Control System (PARCS) is located here. This computer-based information system has stored and is capable of retrieving data on thousands of registrants and their products, distributors, crop tolerances, as well as information on applications for registration of new products. A subsystem designed primarily for regional use can answer queries using either product name or registration number. In addition, PARCS has a cross-reference which identifies all products containing a specific ingredient and their manufacturers.

The computer systems in the Systems Support Branch have shortened the time spent on petition and registration processes; provided data on specific pesticide products or classes of products; located information in the areas of toxicology and environmental safety; and provided an improved ability for locating all types of pesticide information.

The Systems Support Branch also provides the computer power for the Pesticide Episode Review System, which stores information on pesticide accidents or episodes. Information is collected nationally from EPA regional offices, government agencies, and private individuals on accidents related to pesticide misuse, disposal or storage.

The Systems Support Branch has several other data banks; a major one being developed will support the re-registration of all pesticides, which must be completed by October 1976.

Information Branch

Gathering and disseminating technical information is the job of the Information Branch. The Branch, which has at its disposal an automated information retrieval system and a well-developed library, compiles bibliographies, conducts literature searches, and organizes pesticide documents for publication in the *Federal Register.*

The Branch organizes, publishes and distributes the Pesticides Monitoring Journal which contains pesticide residue data collected from various Federal, State and university monitoring programs; and the *Pesticides Abstracts* which summarizes the world literature on pesticides. It also prepares the *EPA Compendium of Registered Pesticides,* a compilation of all uses found on the labeling of registered pesticide products ranging from herbicides to disinfectants.

For further information about Technical Services Division and the services it offers, write

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