

Agrochemical Terms:**A**

Accession number - An identification number that used to be assigned (for cataloging purposes) to volumes of studies submitted to OPP. This has been replaced by the Master Record Identification (MRID) system, which identifies each individual study.

Active ingredient (A. I.) - The chemical or substance component of a pesticide product that can kill, repel, attract, mitigate or control a pest or that acts as a plant growth regulator, desiccant, or nitrogen stabilizer. The remainder of a formulated pesticide product consists of one or more "inert ingredients" (such as water, solvents, emulsifiers, surfactants, clay and propellants), which are there for reasons other than pesticidal activity.

Acute effect - An adverse effect on any living organism in which severe symptoms develop rapidly and often subside after the exposure stops.

Acute toxicity - Adverse effects that result from a single dose or single exposure of a chemical; any poisonous effect produced within a short period of time, usually less than 96 hours. This term normally is used to describe effects in experimental animals.

Aggregate exposure - The sum total of all exposure to pesticides through inhalation, or dermal, oral, or optic contact.

Agricultural user sector (or market) - Pesticides applied by owner/operators and custom/commercial applicators to farms and facilities involved in production of raw agricultural commodities, principally food, fiber, and tobacco; includes non-crop and post-harvest use as well as crop/field applications.

Algicide - A pesticide that controls algae in swimming pools and water tanks.

Ambient - Any unconfined portion of the atmosphere; open air; outside surrounding air.

Anti-microbial pesticide - Any chemical substance which can be used to kill microorganisms.

Aquifer - A water-bearing layer of rock (including gravel and sand) that will yield water in usable quantity to a well or spring.

Arthropods: Animals that don't have a backbone or spinal cord. Examples are insects with hard shells and spiders.

Attractants - Attractants are traps containing a pesticide and food to lure insects or rodents inside. However, food is not a pesticide even though it certainly attracts pests...like ants at a picnic.

BMD₁₀ - Benchmark Dose associated with a 10% response adjusted for background.

B

Bactericide - A pesticide used to control or destroy bacteria, typically in the home, schools, or on hospital equipment.

Benchmark Response (BMR) - A designated level or percent of response relative to the control level of response used in calculating a BMD.

Best Management Practices (BMP) - Procedures or controls other than effluent limitations to prevent or reduce pollution of surface water (includes runoff control, spill prevention, and operating procedures).

Bioaccumulation/biomagnification - A process where chemicals are retained in fatty body tissue and increase in concentration over time. Biomagnification is the increase of tissue accumulation in species higher in the natural food chain as contaminated food species are eaten.

Bioassay - A method of testing a material's effects on living organisms.

Biochemicals - Chemicals that are either naturally occurring or identical to naturally occurring substances. Examples include hormones, pheromones, and enzymes. Biochemicals function as pesticides through non-toxic, non-lethal modes of action, such as disrupting the mating pattern of insects, regulating growth, or acting as repellants. Biochemicals tend to be environmentally compatible and are thus important to Integrated Pest Management programs.

Biological pesticide - A chemical which is derived from plants, fungi, bacteria, or other non-man-made synthesis and which can be used for pest control.

Biological pesticide - Certain microorganisms, including bacteria, fungi, viruses, and protozoa that are effective in controlling target pests. These agents usually do not have toxic effects on animals and people and do not leave toxic or persistent chemical residues in the environment.

Blights - Diseases that hurt and sometimes destroy plants. Blights will cause a plant to wither, stop growing, or cause all or parts of it to die.

C

Carcinogen or carcinogenic - Capable of causing cancer. A suspected carcinogen is a substance that may cause cancer in humans or animals but for which the evidence is not conclusive.

Certified applicator - A person who is authorized to apply "restricted-use" pesticides as result of meeting requirements for certification under FIFRA-mandated programs. Applicator certification programs are conducted by states, territories and tribes in accordance with national standards set by EPA. "Restricted use pesticides" may be used only by or under the direct supervision of specially trained and certified applicators.

Certified pesticide applicator - Any individual who is certified under Section 4 of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) as authorized to use or supervise the use of any pesticide which is classified for restricted use. Any applicator who applies registered pesticides, only to provide a service of controlling pests without delivering any additional pesticide supplies, is not deemed to be a seller or distributor of pesticides under FIFRA.

Chlorination - Adding chlorine to water or wastewater, generally for the purpose of disinfection, but frequently for accomplishing other biological or chemical results. Chlorine also is used almost universally in manufacturing processes, particularly for the plastics industry.

Chlorofluorocarbons (CFCs) - A family of chemicals commonly used in air conditioners and refrigerators as coolants and also as solvents and aerosol propellants. CFCs drift into the upper atmosphere where their chlorine components destroy ozone. CFCs are thought to be a major cause of the ozone hole over Antarctica.

Chronic effect - An adverse effect on any living organism in which symptoms develop slowly over a long period of time or recur frequently.

Cleared reviews - OPP Science Reviews may contain information that registrants may claim as confidential, many times they must be cleared of this information before they can be released. Once they are cleared, we keep them on file in case they are requested again. We maintain a collection of 25,260 cleared science reviews collected from the different branches within OPP.

Commercial applicator - A person applying pesticides as part of a business applying pesticides for hire or a person applying pesticides as part of his or her job with another (not for hire) type of business, organization or agency. Commercial applicators often are certified, but need to be so only if they use restricted-use pesticides.

Common mechanism of toxicity - Two or more chemicals or other substances that cause a common toxic effect(s) by the same, or essentially the same, sequence of major biochemical events (i.e., interpreted as mode of action).

Comparative Effect Level (CEL) - Dose by which potency of chemicals may be compared; e.g. the dose causing a maximum of 15% cholinesterase inhibition.

Concentration - The relative amount of a substance mixed with another substance. An example is five parts per million of carbon monoxide in air or 1 milligram/liter of iron in water.

Confidential Business Information (CBI) - Information that contains trade secrets, commercial or financial information, or other information that has been claimed as confidential by the submitter.

Confidential Statement of Formula (CSF) - A list showing the identity of the ingredients (both active and inert) contained in a pesticide formulation.

Consent Decree - A legal document submitted by the Department of Justice on behalf of the EPA for approval by a federal judge to settle a case. A consent decree can be used to formalize an agreement reached between EPA and potentially responsible parties (PRPs) for cleanup at a Superfund site. Consent decrees also are signed by regulated facilities to cease or correct certain actions or processes that are polluting the environment and include payment of penalties. The Clean Water Act, Clean Air Act, Toxic Substances Control Act, and others all use consent decrees.

Conventional pesticides - Pesticides that are chemicals or other substances developed and produced primarily or only for use as pesticides. The term is generally used in reference to active ingredients. An example is DDT, which was developed and used almost exclusively as a pesticide.

Conventional pesticide (vs. biological pesticide) - Any man-made chemical which can be used to kill pests.

Cradle-to-Grave or **Manifest System** - A procedure in which hazardous wastes are identified as they are produced and are followed through further treatment, transportation, and disposal by a series of permanent, linkable, descriptive documents.

Criteria - Descriptive factors taken into account by EPA in setting standards for pollutants. For example, water quality criteria describe the concentration of pollutants that most fish can be exposed to for an hour without showing acute effects.

Cumulative Assessment Group (CAG) - A subset of chemicals selected from a common mechanism group for inclusion in a refined quantitative estimate of risk.

Cumulative risk - The risk of a common toxic effect associated with concurrent exposure by all relevant pathways and routes of exposure to a group of chemicals that share a common mechanism of toxicity.

D

Data Evaluation Reviews (DERs) - OPP's evaluation of data supporting registration of a pesticide.

Dechlorination - Removal of chlorine and chemical replacement with hydrogen or hydroxide ions to detoxify a substance.

Disinfectant - A chemical that destroys vegetative forms of harmful microorganisms, but does not ordinarily kill bacterial spores.

Distributor, distributor product - A registrant may distribute or sell a registered product under a distributor's name. On the label of a distributor product, the EPA Registration Number will be followed by a dash and the distributor's company number (e.g. 1253-79-500.)

Dose - In terms of monitoring exposure levels, the amount of a toxic substance taken into the body over a given period of time.

Dose additivity - The Agency's assumption when evaluating the joint risk of chemicals that are toxicologically similar and act at the same target site. In other words, it is assumed that each chemical behaves as a concentration or dilution of every other chemical in the CAG (or chemical mixture). The response of the combination is the response expected from the equivalent dose of an index chemical. The equivalent dose is the sum of the component doses, scaled by each chemical's toxic potency relative to the index chemical.

Dose response - How an organism's response to a toxic substance changes as its overall exposure to the substance changes. For example, a small dose of carbon monoxide may cause drowsiness; a large dose can be fatal.

E

Ecology - The study of the relationships between all living organisms and the environment, especially the totality or pattern of interactions; a view that includes all plant and animal species and their unique contributions to a particular habitat.

Economic user sectors (or markets) - Estimates of quantities used and user expenditures for pesticides are broken out separately for the three general economic user sectors (or markets) as follows: agriculture, industrial/commercial/governmental, and home/garden.

Ecosystem - The interacting synergism of all living organisms in a particular environment; every plant, insect, aquatic animal, bird, or land species that forms a complex web of interdependency. An action taken at any level in the food chain, use of a pesticide for example, has a potential domino effect on every other occupant of that system.

Effluent - Wastewater discharged from a point source, such as a pipe.

Effluent guidelines - Technical documents developed by EPA which set discharge limits for particular types of industries and specific pollutants.

Effluent limitations - Limits on the amounts of pollutants which may be discharged by a facility; these limits are calculated so that water quality standards will not be violated even at low stream flows.

Emission - The release or discharge of a substance into the environment. Generally refers to the release of gases or particulates into the air.

Endangered species - Animals, plants, birds, fish, or other living organisms threatened with extinction by man-made or natural changes in the environment.

Environmental audit - An independent assessment (not conducted by EPA) of a facility's compliance policies, practices, and controls. Many pollution prevention initiatives require an audit to determine where wastes may be reduced or eliminated or energy conserved. Many supplemental environmental projects that offset a penalty use audits to identify ways to reduce the harmful effects of a violation.

Environmental equity - Equal protection from environmental hazards for individuals, groups, or communities regardless of race, ethnicity, or economic status.

Environmental justice - The fair treatment of people of all races, cultures, incomes, and educational levels with respect to the development and enforcement of environmental laws, regulations, and policies. Fair treatment implies that no population should be forced to shoulder a disproportionate share of exposure to the negative effects of pollution due to lack of political or economic strength.

Environmental Response Team (ERT) - EPA's group of highly trained scientists and engineers based in Edison, NJ and Cincinnati, OH who back up the federal On-Scene Coordinator. The ERT's capabilities include multimedia sampling and analysis, hazard assessment, hazardous substance and oil spill cleanup techniques, and technical support.

EPA Registration Number (EPA Reg. No) - A two-part number assigned by EPA to identify each pesticide product registration (e.g., 1253-79). The first number is company number, the second number (after the dash) is the product number. This registration number must appear on the product's label.

Epidemiologist - A medical scientist who studies the various factors involved in the incidence, distribution, and control of disease in a population.

Erosion - The wearing away of soil by wind or water, intensified by land-clearing practices related to farming, residential or industrial development, road building, or logging.

Estuary - A complex ecosystem between a river and near-shore ocean waters where fresh and salt water mix. These brackish areas include bays, mouths of rivers, salt marshes, wetlands, and lagoons and are influenced by tides and currents. Estuaries provide valuable habitat for marine animals, birds, and other wildlife.

Explosive limits (chemical) - The amounts of vapor in air that form explosive mixtures. These limits are expressed as lower and upper values and give the range of vapor concentrations in air that will explode if an ignition source is present.

Exposure - Radiation or pollutants that come into contact with the body and present a potential health threat. The most common routes of exposure are through the skin, mouth, or by inhalation.

F

FDA - U.S. Food and Drug Administration, which is involved in regulation of pesticides in the U.S., particularly enforcement of tolerances in food and feed products.

FFDCA - Federal Food, Drug, and Cosmetic Act is the law which controls pesticide residues in food and feed, along with FIFRA.

FIFRA - The Federal Insecticide, Fungicide, and Rodenticide Act was enacted in June 25, 1947. The Act instructs the EPA to regulate:

- 1) the registration of all pesticides used in the United States,
- 2) the licensing of pesticide applicators,
- 3) re-registration of all pesticide products,
- 4) the storage, transportation, disposal and recall of all pesticide products.

FQPA - The Food Quality Protection Act was enacted on Aug. 3, 1996 to ensure the safety of food in the United States.

Fecal coliform bacteria - Found in the intestinal tracts of mammals, this bacteria in water or sludge is an indicator of pollution and possible contamination by pathogens.

Feedstock - Raw material supplied to a machine or processing plant from which other products can be made. For example, polyvinyl chloride and polyethylene are raw chemicals used to produce plastic tiles, mats, fenders, cushions, and traffic cones.

Flammable - Describes any material that can be ignited easily and that will burn rapidly.

Flash point - The lowest temperature at which evaporation of a substance produces enough vapor to form an ignitable mixture with air.

Floodplain - Mostly level land along rivers and streams that may be submerged by floodwater. A 100-year floodplain is an area which can be expected to flood once in every 100 years.

Fugitive emissions - Air pollutants released to the air other than those from stacks or vents; typically small releases from leaks in plant equipment such as valves, pump seals, flanges, sampling connections, etc.

Fumigants - Produce gas or vapor intended to destroy pests in the house or in the ground

Fungicides - A pesticide used to control or destroy fungi on food or grain crops.

Fungus - Funguses, or fungi, are types of plants that have no leaves, flowers or roots. Both words, funguses and fungi, are the plural of fungus.

G

Garbage - Food waste (animal and vegetable) resulting from the handling, storage, packaging, sale, preparation, cooking, and serving of foods.

Generator - A facility or mobile source that emits pollutants into the air; any person who produces a hazardous waste that is listed by EPA and therefore subject to regulation.

Grab sample - A single sample of soil or of water taken without regard to time or flow.

Ground water - Water found below the surface of the land, usually in porous rock formations. Ground water is the source of water found in wells and springs and is used frequently for drinking.