

How Are Pesticides Classified?¹

Frederick M. Fishel²

This guide explains the classification system used by experts to define how pesticides are classified.

Pesticides are classified according to their function. For example, insecticides control insects and herbicides control weeds. There are pesticides that control more than one class of pests and may be considered in more than one pesticide class. Aldicarb, widely used in Florida citrus production, may be considered an acaricide, insecticide, or nematicide because it controls mites, insects and nematodes, respectively. Another common example is 2,4-D, used as a herbicide for broadleaf weed control, but at low rates is a plant growth regulator. Attractants and repellents are considered as pesticides because of their use in pest control. The following table shows a listing of pesticides classified based on their target pests with some examples.

1. This document is PI-46, one of a series of the Agronomy Department, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. Original publication date June 2005. Reviewed June 2008 and March 2011. Visit the EDIS website at <http://edis.ifas.ufl.edu>.

2. Frederick M. Fishel, Associate Professor, Agronomy Department, and Director, Pesticide Information Office; Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida, Gainesville, FL 32611.

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

The Institute of Food and Agricultural Sciences (IFAS) is an Equal Opportunity Institution authorized to provide research, educational information and other services only to individuals and institutions that function with non-discrimination with respect to race, creed, color, religion, age, disability, sex, sexual orientation, marital status, national origin, political opinions or affiliations. U.S. Department of Agriculture, Cooperative Extension Service, University of Florida, IFAS, Florida A. & M. University Cooperative Extension Program, and Boards of County Commissioners Cooperating. Millie Ferrer-Chancy, Interim Dean

Table 1. Pesticides classified by target pests.

Pesticide class	Primary target/action	Example(s)
Acaricide	Mites	Aldicarb, Bifenazate
Algaecide	Algae	Copper sulfate
Attractant	Attracts wide range of pests	Pheromones
Avicide	Birds	Avitrol (aminopyridine)
Bactericide	Bacteria	Copper complexes, streptomycin
Bait	Wide range of organisms	Anticoagulants
Biopesticide	Wide range of organisms	Bacillus thuringiensis
Defoliant	Removes plant foliage	Tribufos
Desiccant	Removes water	Boric acid
Fumigant	Wide range of organisms	Aluminum phosphide
Fungicide	Fungi	Azoxystrobin, chlorothalonil
Herbicide	Weeds	Atrazine, glyphosate, 2,4-D
Insect growth regulator	Insects	Diffubenzuron
Insecticide	Insects	Aldicarb, Carbaryl, imidacloprid
Molluscicides	Snails, slugs	Metaldehyde
Nematicide	Nematodes	Aldicarb, fenamiphos
Piscicide	Fish	Rotenone
Plant growth regulator	Regulates plant growth	Gibberellic acid, 2,4-D
Predacide	Mammal predators	Strychnine
Repellent	Vertebrates and invertebrates	DEET, methiocarb
Rodenticide	Rodents	Warfarin
Silvicide	Trees	Tebuthiuron
Termiticide	Kills termites	Fipronil