

Ready to use consumer insecticides and their toxicity to bees

Vera Krischik and Emily Tenczar, Sept 25, 2012, Department of Entomology, University of Minnesota, combined from:

List compiled by 2011, Philip L. Nixon, Extension Entomologist, University of Illinois,

http://ipm.illinois.edu/hyg/insects/insecticide_trade_names_for_homeowners.pdf

and 2012, Christian Kruke, Gregory Hunt, and Rick Forester, Beekeeping, Purdue Extension E53W,

<http://extension.entm.purdue.edu/publications/E-53.pdf>

Names of General Use Insecticides

This table lists the trade names of insecticides available to homeowners and other residents. The label on the container always lists these products by the common name or chemical name. The common names of the insecticides are followed by the italicized chemical names and the capitalized commercial trade names; some products may be available under a variety of trade names that are not listed in this table. Be sure to read the label.

Toxicity to bees

1= highly toxic

2= moderately toxic

3= nontoxic to bees

Common name	Chemical and trade names
1 acephate JB adults	<i>O, S-dimethyl acetylphosphoramidothioate</i> Acephate Bonide Systemic Insect Control Orthene
2 acetamiprid	<i>N-[(6-chloro-3-pyridyl)methyl]-N'-cyano-N-methyl-acetamidine</i> Ortho Flower, Fruit & Vegetable Insect Killer Ortho Rose & Flower Insect Killer
3 <i>Bacillus thuringiensis</i> var. <i>kurstaki</i>	<i>bacterial toxin</i> Dipel Green Step Caterpillar Control Safer Caterpillar Killer Safer Garden Dust Thuricide
1 beta-cyfluthrin	<i>reaction mixture of two of the diastereo-isomeric enantiomer pairs of cyfluthrin</i> Bayer Advanced Dual Action Rose & Flower Insect Killer (+ imidacloprid) Bayer Advanced Home Pest Control Indoor/Outdoor Insect Killer Bayer Advanced PowerForce Multi-Insect Killer Granules
1 bifenthrin	<i>(2 methyl [1,1'-biphenyl]-3-yl) methyl 3-(2-chloro-3,3,3-trifluoro-l-propenyl) 2,2-dimethylcyclopropane carboxylate</i> Bonide Eight Insect Control Flower & Vegetable Green Thumb Premium Insect Control Hi-Yield Bug Blaster II Ortho Bug-B-Gon MAX Insect Killer for Lawns Ortho Bug-B-Gon MAX Lawn & Garden Insect Killer Scott's Super Turf Builder with Summerguard
canola oil: 1 contact 3 residual	<i>canola oil</i> Bayer Advanced Natria Multi-Insect Control Earth-tone Horticultural Oil Earth-tone Insect Control (+ pyrethrins) Gardens Alive House Guardian Insect Spray (+ pyrethrins) Ortho Elementals Garden Insect Killer (+ pyrethrins) Gardens Alive Pyola (+ pyrethrins)
1 carbaryl JB adults	<i>1 naphthyl methylcarbamate</i> Bayer Advanced Complete Insect Killer for Gardens Bonide Dragon Dust w Copper (+ copper) Bonide Fruit Spray (+ malathion, captan) Bonide Rose Rx Rose & Flower Dust (+ malathion, captan)

	Ortho® Bug-Geta Plus Snail, Slug & Insect Killer (+ metaldehyde) Sevin
1 chlorantraniliprole JB grubs	<i>3-Bromo-N-[4-chloro-2-methyl-6- (methylcarbamoyl) phenyl]-1-(3-chloro-2-pyridine-2-yl)-1H-pyrazole-5-carboxamide</i> Acelepryn Grub-ex
clove oil: 1 contact 3 residual	<i>clove oil</i> Bonide Mite-X (+ cottonseed oil, garlic extract) EcoSmart Home Pest Control (+ rosemary oil, peppermint oil, thyme oil)
cottonseed oil: 1 contact 3 residual	<i>cottonseed oil</i> Bonide Mite-X (+ clove oil, garlic extract) Gardens Alive Oil-Away Supreme Insecticidal Spray
1 cyfluthrin	<i>cyano (4-f luoro-3-phenoxyphenyl) methyl 3-(2,2-dichloroethenyl)-2,2-dimethylcyclopropanecarboxylate</i> Bayer Advanced Vegetable & Garden Insect Spray Bayer Advanced PowerForce Multi-Insect Killer Liquid
1 deltamethrin	<i>α-cyano-3-phenoxybenzyl (1R, 3R)-3-(2,2-dibromovinyl)-2,2-dimethyl cyclopropanecarboxylate</i> Hi-Yield Kill-A-Bug II Dust Hi-Yield Kill-A-Bug II Indoor/Outdoor Spray Hi-Yield Turf Ranger Insect Control Granules Hi-Yield Vegetable & Ornamental Insect Control Granules
1 diatomaceous earth	<i>silicon dioxide in diatomaceous earth</i> Garden Safe Crawling Insect Killer Natural Guard Crawling Insect Control
1 gamma-cyhalothrin	<i>[1R-[1α(S*),3α(Z)]]-cyano-3-phenoxyphenyl) methyl 3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2- dimethylcyclopropanecarboxylate; (S)-α-cyano-3-phenoxybenzyl (Z)-(1R-3R)-3-(2-chloro-3,3,3-trifluoropenyl)-2-2-dimethylcyclopropanecarboxylate</i> Spectracide Triazicide Once & Done Insect Killer
3 garlic	<i>garlic</i> Bonide Mite-X (+ clove oil, cottonseed oil)
3 halofenozide JB grubs	<i>4-chlorobenzoic acid 2-benzoyl-2-(1,1-dimethylethyl) hydrazide</i> Dow Mach II
3 Heterorhabditis bacteriophora	<i>insect-attacking nematode</i> Gardens Alive Grub-Away Beneficial Nematodes
1 imidacloprid Systemic Very toxic to bees JB adults on plants JB grubs in soil Related neonicotinyls that are very toxic to bees: <ul style="list-style-type: none"> • thiamethoxam (Flagship= ornamentals and Meridian= turf) • clothianidin (Arena= ornamentals and Aloft= turf) • dinotefuran (Safari= ornamentals) • imid+bifenthrin (Allectus) • imid+cyfluthrin (Discus) 	<i>1-[(6-chloro-3-pyridinyl) methyl]-N-nitro-2-imidazolidinimine</i> Merit Bayer Advanced All-in-One Rose & Flower Care (+ tebuconazole) Bayer Advanced Dual Action Rose & Flower Insect Killer (+ beta-cyfluthrin) Bayer Advanced Fruit, Citrus, and Vegetable Insect Control Bayer Advanced Season-Long Grub Control Bayer Advanced 3-in-1 Insect, Disease, & Mite Control (+ tau-fluvalinate, tebuconazole) Bayer Advanced 2-in-1 Systemic Rose & Flower Care Bayer Advanced 12 Month Tree & Shrub Insect Control Bayer Advanced 12 Month Tree & Shrub Protect & Feed Bayer Advanced 2-in-1 Insect Control Plus Fertilizer Plant Spikes Bonide Annual Grub Beater Bonide Annual Tree & Shrub Insect Control Bonide Borer-Miner Killer with Systemaxx Bonide Guard-N-Grow Bonide Rose Rx Systemic Drench (+ tebuconazole) Bonide Systemic Insect Control with Systemaxx Ferti-lome Rose & Flower Food with Systemic Insecticide Ferti-lome Tree & Shrub Systemic Hi-Yield Systemic Insect Granules Ortho Max Tree & Shrub Insect Control Ortho Tree & Shrub Insect Control

insecticidal soap: 1 contact 3 residual	<i>potassium salts of fatty acids</i> Bayer Advanced Natria Insecticidal Soap Bonide Insecticidal Soap Concern Insect Killing Soap Concern Tomato & Vegetable Insect Killer (+ pyrethrins) Earth Options by Raid Insecticidal Soap Earth-tone Insecticidal Soap Garden Safe Insecticidal Soap Ortho Elementals Insecticidal Soap Safer End-ALL Insect Killer (+neem, pyrethrins) Safer Fruit & Vegetable Insect Killer Safer Insect Killing Soap Safer Rose & Flower Insect Killer Safer 3-in-1 Garden Spray (+ sulfur) Safer Tomato & Vegetable Insect Killer (+ pyrethrins) Safer Yard & Garden Insect Killer (+ pyrethrins)
3 iron phosphate	<i>iron phosphate</i> Bayer Advanced Dual Action Snail & Slug Killer Bait Bayer Advanced Snail & Slug Killer Bait Bonide Bug & Slug Killer (+ spinosad) Bonide Slug Magic Ferramol Slug & Snail Bait Ortho Elementals Slug & Snail Killer Sluggo Gardens Alive Escar-Go
3 kaolin	<i>kaolin clay</i> Surround at Home Crop Protectant
1 lambda-cyhalothrin	<i>α-cyano-3-phenoxybenzyl 3-(2-chloro-3,3,3-trifluoroprop-1-enyl) 2,2-dimethylcyclopropanecarboxylate</i> Bonide Beetle Killer Bonide Caterpillar Killer Bonide Colorado Potato Beetle Beater Spectracide Triazicide Once & Done Insect Killer
2 malathion	<i>diethyl mercaptosuccinate, S-ester with O, O-dimethyl phosphorothioate</i> Malathion Bonide Malathion Bonide Fruit Spray (+ carbaryl, captan) Bonide Rose Rx Rose & Flower Dust (+ carbaryl, captan) Ortho Max Malathion Insect Spray
3 metaldehyde	<i>2,4,6,8-tetramethyl-1,3,5,7-tetroxocane</i> Deadline Enforcer Everlast Snail & Slug Bait Hi-Yield Improved Slug & Snail Bait Ortho Bug-Geta Plus Snail, Slug & Insect Killer (+ carbaryl) Ortho Bug-Geta Snail & Slug Killer
2 neem oil	<i>compounds extracted from kernels of neem</i> Bonide Bon-Neem II (+ pyrethrins) Bonide Neem Oil Bonide Rose Rx 3-in-1 Concern Garden Defense Multi-purpose Spray Ferti-lome Fruit Tree Spray (+ pyrethrins) Ferti-lome Triple Action Plus Garden Safe Neem Oil Extract Green Light Fruit Tree Spray (+ pyrethrins) Safer BioNEEM Insecticide & Repellent Safer End-ALL Insect Killer (+ insecticidal soap, pyrethrins)
3 parasitic nematodes JB grubs	Many trade names

3 <i>Paenibacillus popilliae</i> JB grubs	<i>Milky spore disease</i> Many trade names Warning: not very effective
1 permethrin	<i>(3 phenoxyphenyl)methyl (1) cis/trans-ethenyl-2,2-dimethylcyclopropanecarboxylate</i> Bayer Advanced Complete Insect Dust for Gardens Borer-Miner Killer Bonide Eight Garden & Home Insect Control Bonide Eight Insect Control Garden Dust Bonide Eight Insect Control Vegetable, Fruit, & Flower Bonide Eight Insect Control Yard & Garden Bonide Total Pest Control Outdoor Enforcer Outdoor Insect Killer Ferti-lome Indoor – Outdoor Multipurpose Insect Spray Green Thumb Flying Insect Killer (+ d-trans allethrin) Hi-Yield Indoor Outdoor Broad Use Insecticide Hi-Yield Kill-A-Bug II Lawn Granules Hi-Yield Lawn, Garden, Pet, and Livestock Insect Control Hi-Yield Turf, Termite, and Ornamental Insect Control Ortho Bug-B-Gon MAX Garden Insect Killer Dust
petroleum oil: 1 contact 3 residual	<i>petroleum oil</i> Bonide All Seasons Horticultural Spray Oil Bonide All Seasons Spray Oil Horticultural Spray Oil Ortho Volck Oil Spray
1-3 pyrethrins	<i>principally from plant species Chrysanthemum cinariaefolium</i> Bayer Advanced Natria Insect, Disease, & Mite Control (+ sulfur) Bonide Bug Beater Yard & Garden Bonide Citrus, Fruit, & Nut Orchard Spray (+ sulfur) Bonide Garden Dust (+ sulfur, copper) Bonide Japanese Beetle Killer Bonide Pyrethrin Garden Insect Spray Bonide Tomato & Vegetable 3-in-1 (+ sulfur) Concern Tomato & Vegetable Insect Killer (+ insecticidal soap) Earth-tone Insect Control (+ canola oil) Ferti-lome Quick Kill Home, Garden, and Pet Spray Ferti-lome Triple Action Plus II Safer End-ALL Insect Killer (+ neem, insecticidal soap) Safer Tomato & Vegetable Insect Killer (+ insecticidal soap) Garden Safe Fruit & Vegetable Insect Killer Garden Safe Houseplant & Garden Insect Killer Garden Safe Multi-Purpose Garden Insect Killer Garden Safe Rose & Flower Insect Killer Gardens Alive Rose & Ornamental Plant Spray (+ sulfur) Ortho Elementals 3-in-1 Rose & Flower Care (+ sulfur) Gardens Alive Pyola (+ canola oil) Safer Yard & Garden Insect Killer (+ insecticidal soap)
3 sodium ferric EDTA	<i>monosodium ferric ethylenediaminetetraacetate</i> Safer Dr. T Slug & Snail Killer
1-2 spinosad	<i>mixture of Spinosyn A + Spinosyn D produced by the actinomycete, Saccharopolyspora spinosa</i> Bonide Bug & Slug Killer (+ iron phosphate) Bonide Captain Jack's Deadbug Brew Gardens Alive Bulls-Eye Bioinsecticide Conserve Ferti-lome Borer, Bagworm, Leafminer & Tent Caterpillar Spray
3 trichlorfon	<i>dimethyl (2,2,2-trichloro-1-hydroxyethyl) phosphonate</i> Dylox Bayer Advanced 24-Hour Grub Killer Plus