

## Over-the-Counter Insecticides for Home, Yard and Garden Use 2018 Survey, Fort Collins, Colorado

The following is a list of all insecticides found in a survey conducted June 4-11, 2018 in Fort Collins. These are arranged by common name of the active ingredient(s).

The survey included 3 nurseries, 3 hardware stores and 3 box stores. Following each product are indicated the type of store(s) in which it was found (**n** = nursery; **h** = hardware store; **b** = box store).

### **ACEPHATE** (Orthene)

Bonide Systemic Insect Control (h)

Bayer Advanced 2 in 1 Systemic Rose & Flower Care (b)

### **ACETAMIPRID**

Ortho Flower, Fruit & Vegetable Ready-to-Spray (n)

Ortho Rose and Flower Insect Killer Ready-to-Use (h,h,n)

Ortho Rose & Flower Insect & Disease Control Concentrate (with triticonazole) (n)

### **ALLETHRIN/TRANS-ALLETHRIN**

Raid House and Garden (with d-phenothrin) (c)

### **AVERMECTIN/ABAMECTIN**

Maggie's Farm Roach Killer Gel Bait (h,b)

Raid Ant Baits III (h,h,b)

### **AZADIRACTIN (NEEM EXTRACT)**

Safer Grub Killer Ready-to-Spray (n)

### **BACILLUS THURINGIENSIS (var. KURSTAKI)**

ferti-lome Dipel Dust Biological Insecticide (h,n,n,n)

Monterey B.t. Ready-to-Use (h,n)

Natural Guard (ferti-lome) Caterpillar Spray with B.t. (n)

Safer Caterpillar Killer for Trees, shrubs and Vegetables Concentrate (n)

Safer Caterpillar Killer (n)

Safer Garden Dust (h,n)

### **BACILLUS THURINGIENSIS (var. ISRAELENSIS)**

Biological Mosquito Control/Mosquito Dunks (n,n,h,h,b)

Summit Mosquito Bits (n,n)

### **BACILLUS POPILLIAE (Milky Spore)**

St. Gabriel Organics Milky Spore Powder (h)

### **BIFENTHRIN**

Amdro Quick-Kill Home Perimeter Insect Killer Granules (with zeta-cypermethrin) (b)

Eliminator Ant, Flea and Tick Killer Plus Granules (b)

Ortho Home Defense Max Insect Killer for Indoor & Perimeter<sub>1</sub> (with zeta-cypermethrin)

n,h,h,b,b,b)

Ortho Home Defense Max Insect Killer for Lawns & Gardens Ready-to-Spray (with zeta-cypermethrin) (h,h)  
Ortho Home Defense Insect Killer for Lawns (h)  
Ortho Home Defense Max Ant and Roach Killer (n)  
Ortho Home Defense Max Insect Killer Granules (n,h)  
Ortho Bug B Gon Max Insect Killer for Lawns<sup>3</sup> (b)  
Ortho Bug B Gon Insect Killer for Lawns & Gardens Ready-to-Spray (with zeta-cypermethrin) (n,h,b)  
Ortho Bug B Gon Insect Killer for Lawns & Gardens Concentrate (with zeta-cypermethrin) (n)  
Round-Up for Lawns Bug Destroyer (with chlorantraniliprole) (b)

#### **BORIC ACID/BORAX/ORTHOBORIC ACID/SODIUM TETRABORATE TETRAHYDRATE**

Amdro Kill Ants Ant Killer (b)  
Enoz RoachAway Boric Acid (b)  
Eaton's Answer Kills Roaches (h)  
Harris Famous Roach Tablets (h,b)  
Harris Boric Acid Roach Powder with Lure (h)  
Hot Shot Max Attrax Roach Killing Powder (b,b)  
Maggie's Farm No Spill Ant Kill (h,b)  
Terro Ant Killer<sub>II</sub> (n,h,h,b,b)  
Terro Liquid Ant Baits (b)  
Terro Liquid Ant Baits Outdoor (b,h,h)  
Terro Ant Killer<sub>II</sub> Liquid Ant Baits (h,h,b,b)  
Terro Multi-Surface Liquid Ant Baits (b,b)  
Terro Outdoor Liquid Ant Bait Stakes (h,b)  
Terro Multi-Purpose Insect Bait (h,h)

#### **CARBARYL (Sevin)**

Bonide Fruit Tree Spray (with malathion, captan) (h,h,b)  
Garden Tech Sevin Ready-to-Use (n,n,b)  
Garden Tech Sevin Ready-to-Spray (h)  
Garden Tech Sevin Concentrate (n,n,h,h,b)  
Garden Tech Sevin 5 Ready-to-Use 5% Dust (n,h,h,h,b,b,b)

#### **CHLORANTRANILIPROLE**

Scott's GrubEx (b)  
Round-Up for Lawns Bug Destroyer (with bifenthrin) (b)

#### **CHLORPYRIFOS**

Hot Shot MaxAttrax Roach Bait (h,b,b)

#### **CHLOTHIANIDIN**

Bayer Advanced Tree & Shrub Protect & Feed Concentrate II (with imidacloprid) (n,h,b,b)  
Bayer Advanced Tree & Shrub Protect & Feed Ready-to-Use Granules (with imidacloprid) (b,b)  
Bayer Advanced All-in-One Rose and Flower Care Concentrate (with tebuconazole and imidacloprid) (n,h,b)  
Bayer Advanced All-in-One Rose and Flower Care Granules (with imidacloprid, tebuconazole) (b,b)

## **CYFLUTHRIN/BETA-CYFLUTHRIN**

Bayer Advanced Carpenter Ant & Termite Killer Plus Concentrate (b)  
Bayer Advanced Power Force Multi-Insect Killer, Granules (n)  
Bayer Advanced Dual Action Rose & Flower Insect Killer (with imidacloprid) (n,h)  
Bayer Advanced Home Pest Plus Germ Killer Ready-to-Use (with antiseptic) (n,h,b)  
Bayer Advance Home Pest Bed Bug & Flea Killer (with imidacloprid) (h,b)  
Bayer Advanced Home Pest Control Indoor & Outdoor Insect Killer Ready-to-Use (n,b)  
Bayer Advanced Home Pest Insect Killer All-Purpose Continuous Spray (with imidacloprid) (b)  
Bayer Advanced Rose & Flower Insect Killer Ready-to-Use (b,b)  
Bayer Advanced Vegetable & Garden Insect Spray Concentrate (n)  
Bayer Advanced Vegetable Garden Insect Spray Ready-to-Spray (n,h)  
Raid Yard Guard Insect Fogger (with prallethrin) (h)

## **CYHALOTHRIN (gamma-cyhalothrin, lambda-cyhalothrin)**

### **Gamma-cyhalothrin**

Black Flag Flea & Tick Aerosol (with pyriproxifen) (b)  
Spectracide Bug Stop Home Barrier Ready-to-Use (h,h,b,b,b)  
Spectracide Triazicide Insect Killer for Lawns & Landscapes Concentrate (h,h,b,b,b)  
Spectracide Triazicide Insect Killer for Lawns & Landscapes Ready-to-Spray (h,h,b,b)  
Spectracide Triazicide Insect Killer for Lawns Concentrate (b)  
Spectracide Triazicide Insect Killer for Lawns Granules (h,h,b)

### **Lambda-cyhalothrin**

Black Flag Flea & Tick Spray (with pyriproxifen) (b)  
Black Flag Bed Bug Killer (with imiprothrin) (b)  
Black Flag Extreme Lawn Insect Killer Plus Fungus Control Concentrate (with propiconazole) (b)  
Black Flag Extreme Lawn Insect Killer Plus Fungus Control Ready-to-Spray (with propiconazole) (b)  
Bonide Eight Insect Control/Garden and Home, Ready-to-Use (n,n,n)  
Bonide Insect and Grub Control (with imidacloprid) (n)  
Black Flag Spider and Scorpion Killer<sub>3</sub> (with prallethrin) (b,b,b)  
Cutter Backyard Bug Control Spray Concentrate (n,h,b,b,b)  
Hot Shot Bedbug and Flea Insect Killer<sub>2</sub> (b)  
Hot Shot Bed Bug Killer (with imiprothrin) (b,b)  
Raid Wasp & Hornet Killer<sub>3</sub> (with prallethrin) (b)  
Spectracide Triazicide Insect Killer for Lawns & Landscapes Ready-to-Use (b)  
Spectracide Triazicide Insect Killer for Lawns Granules (h)  
Spectracide Ant Shield Insect Killer Aerosol (with prallethrin) (h)  
Spectracide Wasp & Hornet Killer<sub>3</sub> (with prallethrin) (b)  
Spectracide Ant Shield Insect Killer Granules (h)  
Terro Ant Killer (n,h,b)  
Ultra Kill Ant & Roach Killer (with prallethrin) (b)

## **CYPERMETHRIN/ZETA-CYPERMETHRIN**

Ace Wasp & Hornet Killer<sub>4</sub> (with prallethrin) (h)  
Ace Foaming Wasp & Hornet Killer<sub>4</sub> (with prallethrin) (h)  
Ace Ant Roach & Spider Killer<sub>3</sub> (with prallethrin) (h)  
Amdro Quick-Kill Outdoor Insect Killer Concentrate (b)  
Amdro Quick-Kill Outdoor Insect Killer Ready-to-Spray (b)

Amdro Quick-Kill Mosquito Yard Spray (b)  
Amdro Quick-Kill Home Perimeter Insect Killer Granules (with bifenthrin) (b)  
Black Flag Foaming Wasp & Horne Killer (with prallethrin) (b)  
Black Flag Dry Ant & Roach Killer (with imiprothrin) (b)  
Combat Max Ant & Roach Killer Quick Foam Spray (with neo-pynamin) (b)  
Eliminator Insect Fogger (b)  
Eliminator Ant, Roach and Spider Killer<sub>3</sub> (with prallethrin) (b)  
Eliminator Wasp & Hornet Killer<sub>2</sub> (with prallethrin) (b)  
Enforcer Bug Max Fogger (h)  
Enforcer Ant 7 Roach Killer (with neo-pynamin) (h)  
Garden Tech Sevin Ready-to-Spray Bug Killer (n,n,h,h,b)  
Garden Tech Sevin Concentrate Bug Killer (n,b,b)  
Green Thumb Foaming Wasp & Hornet Killer (with prallethrin) (n)  
Green Thumb Wasp & Hornet Killer<sub>3</sub> (with prallethrin) (n)  
Hot Shot Ant & Roach Plus Germ Killer (with prallethrin) (b)  
Hot Shot Fogger with Odor Neutralizer<sub>6</sub> (with tetramethrin) (h,h,b,b)  
Hot Shot Fogger<sub>3</sub> with Neutralizer<sub>3</sub> (with piperonyl butoxide) (b,b)  
Hot Shot Bed Bug Killer with Egg Kill (b,b)  
Hot Shot Pest Control Concentrate (b)  
Ortho Ant & Roach Killer<sub>1</sub> (with pyrethrins) (h,b)  
Ortho Home Defense Max Insect Killer for Indoor & Perimeter<sub>1</sub> (with bifenthrin) (n,h,h,b,b,b)  
Ortho Home Defense Max Insect Killer for Lawns & Gardens Ready-to-Spray (with bifenthrin) (h,h)  
Ortho Bug B Gon Insect Killer for Lawns & Gardens Ready-to-Spray (with bifenthrin) (n,h,b)  
Ortho Bug B Gon Insect Killer for Lawns & Gardens Concentrate (with bifenthrin) (n)  
Raid Wasp & Hornet Killer<sub>33</sub> (with prallethrin) (h)  
Raid Concentrated Deep Reach Fogger (h,h,h,b,b)  
Real-Kill Wasp and Hornet Killer<sub>4</sub> (with imiprothrin) (b)  
Real-Kill Ant & Roach Killer<sub>5</sub> (with prallethrin) (b)  
Real-Kill Indoor Fogger<sub>5</sub> (b)  
Raid Max Foaming Wasp & Hornet Killer (with cypermethrin) (b)  
Ultra-Kill Ant & Roach Killer<sub>2</sub> (with cypermethrin) (b)

## **DELTAMETHRIN**

Bayer BioAdvanced Carpenter Ant & Termite Killer Plus (b)  
Black Flag Home Insect Control Concentrate<sub>2</sub> (b)  
Bonide Termite & Carpenter Ant Killer Ready-to-Use (h)  
Eliminator Home Insect Killer (b)  
Hi-Yield Multi-Purpose Dust (n)  
Ortho Home Defense Insect Killer for Cracks and Crevices (b)  
Ortho Home Defense Bed Bug, Flea, and Tick Killer Powder (b)  
Ortho Insect Killer Rose & Flower (b)  
Raid Max Ant & Roach (with imiprothrin) (h)  
Raid Max Indoor/Outdoor Bug Barrier (b)  
Raid Max Bug Barrier (h,h,b)  
Revenge Ant Killer Dust (h)  
Terro Ant Dust (h)  
Terro Spider Killer<sub>3</sub> (with pyrethrins) (h,b)

## **DIATOMACEOUS EARTH/SILICON DIOXIDE/AMORPHOUS SILICA/SILICA AEROGEL**

Bonide Diatomaceous Earth Crawling Insect Killer (n)  
Garden Safe Crawling Insect Killer (b)  
Harris Bedbug Killer (h)  
Hot Shot Bed Bug Killer Dust (b,b,b)  
Maggie's Farm Bed Bug Killer (amorphous silica) (b)  
Natural Guard (ferti-lome) Diatomaceous Earth Crawling Insect Control (n,n,h)  
Safer Ant & Crawling Insect Killer Diatomaceous Earth (n,n,h,b,b)  
Soil Minder Crawling Insect Killer (n)

## **DICHLORVOS**

Hot Shot No-Pest Strip<sub>2</sub> (h,h,b,b)

## **DINOTEFURAN**

Hot Shot Liquid Roach Bait (b)  
Hot Shot Clear Roach & Ant Gel Bait (b)  
Quick Strike Fly Bait (h)

## **D-LIMONENE/CITRUS EXTRACTS**

Orange Guard (h)  
Safer Ant & Roach Killer (with pyrethrins and insecticidal soap) (h)  
Safer Wasp & Hornet Killer (with pyrethrins and insecticidal soap) (n,n,h)  
Safer Flying Insect Killer (with pyrethrins and insecticidal soap) (n)

## **ESFENVALERATE**

Terro Ant Killer Spray<sub>2</sub> (with prallethrin) (h,h)

## **FIPRONIL**

Combat Ant Killing Bait (h)  
Combat Outdoor Ant Stakes (n)  
Combat Max Ant Killing Gel Bait (h,b)  
Combat Max Roach Killing Gel (b,b,b)  
Combat Max Roach Killing Bait (b,b)  
Combat Roach Killing Bait Strips (h)  
Combat Source Kill Max R<sub>3</sub> Roach (h)

## **GAMMA-CYHALOTHRIN (See Cyhalothrin)**

## **HYDRAMETHYLNON**

Amdro Ant Block Home Perimeter Ant Bait (h,h,b)  
Amdro Kills Ants Ant Killing Bait (h,b,b,b)  
Amdro Fire Ant Bait (h)  
Combat Ant Killing Bait (n,h)  
Combat Roach Killing Bait (h)

## **IMIDACLOPRID**

Bayer Advanced 2-in-1 Systemic Rose & Flower Care Ready-to-Use Granules II (b)  
Bayer Advanced 3-in-1 Insect, Disease and Mite Control Ready-to-Spray (with tau-fluvalinate,

tebuconazole) (n,h,b,b,b)  
Bayer Advanced All-in-One Rose and Flower Care Concentrate (with tebuconazole and chlothianidan) (n,h,b)  
Bayer Advanced All-in-One Rose and Flower Care Granules (with chlothianidan, tebuconazole) (b,b)  
Bayer Advanced All-in-One Rose and Flower Care Ready-to-Use (with tebuconazole) (b)  
Bayer Advanced Dual Action Rose & Flower Insect Killer (with cyfluthrin) (n,h)  
Bayer Advanced Complete Insect Killer for Soil and Turf Ready-to-Spray (with cyfluthrin) (h)  
Bayer Advanced Complete Insect Killer Soil & Turf Concentrate (with beta-cyfluthrin) (b)  
Bayer Advanced Complete Insect Killer for Soil and Turf Ready-to-Spread Granules (with beta-cyfluthrin) (h)  
Bayer Advanced Season-Long Grub Control Ready-to-Spray (h)  
Bayer Advance Home Pest Bed Bug & Flea Killer (with cyfluthrin) (h,b)  
Bayer Advanced Insect Control Plus Fertilizer (n)  
Bayer Advanced Tree & Shrub Protect & Feed Concentrate II (with chlothianidin) (n,h,b,b)  
Bonide Annual Tree & Shrub Control (n)  
Bonide Annual Tree & Shrub Control Ready-to-Spray (n)  
Bonide Insect and Grub Control (with lambda-cyhalothrin) (n)  
Bonide Systemic Houseplant Insect Control (n,n)  
Bonide Systemic Granules Insect Control (n,n)  
ferti-lome Tree & Shrub Systemic Insect Drench (n,n)  
ferti-lome 2-N-1 Systemic (with tebuconazole) (n)  
Hi-Yield Grub Free Zone II (n)  
Hi-Yield Systemic Insect Granules (n,h)

## **IMIPROTHRIN**

Black Flag Dry Ant & Roach Killer (with cypermethrin) (b)  
Raid Ant and Roach Killer<sub>26</sub> (with cypermethrin) (h,h,b,b,b)  
Real-Kill Wasp and Hornet Killer<sub>4</sub> (with cypermethrin) (b)

## **INDOXCARB**

Eliminator Ant Bait (b)  
Hot Shot MaxAttrax Ant Bait<sub>2</sub> (h,h,h,b)  
Spectracide Ant Shield Outdoor Killing Stakes (b)

## **IRON PHOSPHATE/SODIUM FERRIC EDTA**

Bonide Slug Magic (n)  
Bonide Bug & Slug Killer (with spinosad) (n)  
Corry's Slug and Snail Killer (sodium ferric EDTA) (b,b)  
Earth-tone Slug & Snail Control (n)  
Earth-tone Bug & Slug Control (with spinosad) (n)  
Eliminator Snail & Slug Killer (sodium ferric EDTA) (b)  
Garden Safe Slug & Snail Bait (h,b)  
Monterey Ant Control (with spinosad) (n)  
Sluggo (n,n,n)  
Sluggo Plus (with spinosad) (n)

## **LAMBDA-CYHALOTHRIN (See cyhalothrin)**

## **MALATHION**

Bonide Fruit Tree Spray (with carbaryl, captan) (n,h,b)  
Ortho Max Malathion Insect Spray Concentrate (h)  
Spectracide Malathion Insect Spray Concentrate (n,h,h,b,b)

## **METHOPRENE**

Amdro Quick-Kill Mosquito Bombs (b)

## **NAPHTHELENE**

Enoz Old Fashioned Moth Balls (h,h,b)

## **NEEM (see Azadirachtin)**

## **NEEM OIL (see Oil, Neem)**

## **NEO-PYNAMIN**

Combat Max Ant & Roach Killer Quick Foam Spray (with cypermethrin) (b)  
Enforcer Ant 7 Roach Killer (with cypermethrin) (h)

## **NOSEMA LOCUSTAE**

Nolo Bait (n)

## **OILS, ESSENTIAL (mints, clove, cinnamon, garlic, etc.)**

Bonide Mosquito Beater Ready-to-Spray (includes cedar oil, citronella oil, geranium oil, lemongrass oil) (n,n)  
Bonide MiteX (cottonseed oil, clove oil, garlic oil) (n)  
Bug Band Bed Bugs No More (geraniol, citric acid) (b)  
Cutter Natural Bug Control Spray Concentrate (lemongrass oil, potassium sorbate) (b)  
Cutter Natural Bug Control Spray Outdoor Fogger (lemongrass oil) (b)  
Dr. Earth Final Stop Rose & Flower Insect Killer (rosemary, sesame, peppermint thyme, cinnamon, garlic) (h,b)  
Dr. Earth Final Stop Fruit Tree Insect Killer (rosemary, sesame, peppermint thyme, cinnamon, garlic) (h)  
Dr. Earth Final Stop Vegetable Garden Insect Killer (rosemary, sesame, peppermint thyme, cinnamon, garlic) (b)  
Dr. Earth Final Stop Yard and Garden Insect Killer (rosemary, sesame, peppermint thyme, cinnamon, garlic) (n,h)  
EcoLogic Lawn & Yard Insect Killer (lemongrass oil) (b,b)  
EcoLogic Bed Bug Killer (lemongrass oil) (b,b)  
EcoLogic Flying Insect Killer (lemongrass oil) (b)  
EcoLogic Home Insect Control (lemongrass oil) (b)  
EcoLogic Ant and Roach Killer (lemongrass oil) (b,b)  
EcoLogic Lawn & Garden Insect Killer Granules (mint oil, geraniol) (b,b)  
EcoSMART Wasp & Hynet Killer (peppermint oil, 2-phenethyl proprionate) (n)  
IMustGarden All Natural Mosquito, Tick and Flea Control (Cedar oil, leongrass oil, thyme oil, garlic oil, citronella, rosemary oil, geraniol, mint oil) (n)  
Maggie's Farm 3-in-1 Garden Spray (thyme oil, geraniol, cinnamon oil, peppermint oil) (h,b)  
Maggie's Farm flying Insect Killers (cottonseed oil, peppermint oil, thyme oil, lemongrass oil) (b)  
Ortho Home Defense Bed Bug Killer with Essential Oils (sodium laurel sulfate, cinnamon oil,

geraniol, castor oil, corn mint oil, clove oil) (h,b)  
Ortho Home Defense Crawling Bug Killer with Essential Oils (sodium laurel sulfate, cinnamon oil, geraniol, castor oil, corn mint oil, clove oil) (h,b)  
Ortho Home Defense Flying Insects Killer with Essential Oils (sodium laurel sulfate, cinnamon oil, geraniol, castor oil, corn mint oil, clove oil) (h)  
Ortho Home Defense Ant & Roach Killer Aerosol with Essential Oils (sodium laurel sulfate, cinnamon oil, geraniol, castor oil, corn mint oil, clove oil) (h)

#### **OILS, MINERAL/HORTICULTURAL (refined petroleum distillates)**

Bonide All Seasons Horticultural & Dormant Spray Oil (n,n,h,h,b)  
Bonide All Seasons Horticultural & Dormant Spray Oil Ready-to-Use (n)  
Bonide All Seasons Horticultural & Dormant Spray Oil Ready-to-Spray (n,h)  
ferti-lome Horticultural Oil Spray Concentrate (n)  
ferti-lome Horticultural Oil Spray Ready-to-Spray (n,h)  
Hi-Yield Dormant Spray (n)

#### **OIL, NEEM\***

Bonide Bon-Neem (with pyrethrins and piperonyl butoxide) (n)  
Bonide Neem Oil Concentrate (n,h,h)  
Bonide Neem Oil Ready-to-Spray (h)  
Bonide Neem Oil Ready-to-Use (n)  
Bonide Rose Rx 3-in-1 (n,h,b)  
Espoma Organic Neem Oil 3n 1 (n)  
ferti-lome Fruit Tree Spray (with pyrethrins) (n,n)  
ferti-lome Triple Action Plus, Ready-to-Use (with pyrethrins, piperonyl butoxide) (n,n,n)  
ferti-lome Triple Action Plus II (with pyrethrins, piperonyl butoxide) (n)  
ferti-lome Triple Action (with pyrethrins) (n,n,n)  
ferti-lome Triple Action Ready-to-Spray (with pyrethrins) (n,n,n)  
Garden Safe Fungicide<sub>3</sub> Ready-to-Use (h,h,b,b)  
Garden Safe Fungicide<sub>3</sub> Ready-to-Spray (h,b)  
Garden Safe Fungicide<sub>3</sub> Concentrate (b)  
Garden Safe Neem Oil Extract (b,b)  
Natural Guard (ferti-lome) Neem (n,n,n)  
Natural Guard (ferti-lome) Neem Ready-to-Use (n,n)  
Safer EndAll Insect Killer (with pyrethrins and insecticidal soap) (n,n,h,b)  
Safer Neem Oil RTU (b)  
Southern Ag Triple Action Neem Oil (b)

\*All the above products are described as "clarified hydrophobic extract of neem oil". These apparently are the oil fraction of neem seed extracts. *They do not contain as an active ingredient azadirachtin*, the primary insecticidal compound associated with neem seed extracts.

#### **OILS, VEGETABLE (Soybean, cottonseed, canola, sesame)**

Bayer Advanced Natria Multi-Insect Control (canola oil) (h)  
Bonide MiteX (cottonseed oil, clove oil, garlic oil) (n,n)  
Espoma Earth-tone Insect Control (with pyrethrins) (n,n)  
Espoma Insect! Insect Spray (with pyrethrins) (n)  
Ortho ecosense brand indoor insect killer aerosol (soybean oil) (n)  
Maggie's Farm flying Insect Killers (cottonseed oil, peppermint oil, thyme oil, lemongrass oil) (b)  
Organocide Bee Safe 3-in-1 Garden Spray (sesame oil, fish oil) (b)



## **ORTHOBORIC ACID (See Boric Acid)**

### **PARADICHLOROBENZE**

- Enoz Moth Ice Crystals (h)
- Enoz Para Moth Balls (h)

### **PEPPER, HOT/CAPSAICIN**

- Bonide Hot Pepper Wax Insect Repellent Ready-to-Use (n)

### **PERMETHRIN**

- Bengal Roach Spray II (h)
- Bonide Eight Insect Control Yard & Garden Ready-to-Spray (n,n)
- Bonide Eight Insect Control Vegetable, Fruit & Flower Concentrate (n,n,n)
- Bonide Eight Insect Control Garden Dust (h,n,n)
- Bonide Mosquito Beater, Ready-to-Spray (n,n)
- Bonide Spider & Ground Bee Killer (h)
- Eliminator Ant, Flea & Tick Killer<sub>2</sub> (b)
- Enforcer Mosquito and Flying Insect Killer II (h)
- Hi-Yield Garden, Pet, and Livestock Dust (n)
- Hi-Yield Kill-A-Bug II Lawn Granules (n)
- Hi-Yield Turf, Termite and Ornamental 38 Plus (n,n,n)
- Hot Shot Flying Insect Killer<sub>3</sub> (with tetramethrin) (b)
- Raid Fumigator (h,h,b,b,b)
- Spectracide Wasp & Hornet Killer (h,b)
- Spectracide Pro Wasp & Hornet Killer (with tetramethrin) (b,b)
- Terro Ant Killer Outdoor (with tetramethrin) (h)

### **PHENOTHRIN**

- Ace Flying Insect Killer (with prallethrin) (h)
- Ortho Flying Insect Killer<sub>2</sub> (with tetramethrin) (b)
- Cutter Backyard Bug Control Outdoor Fogger (with tetramethrin) (h,b,b)
- Raid Flying Insect<sub>7</sub> (with prallethrin) (h,h,b)
- Raid House and Garden (with allethrin) (c)
- Raid House & Garden<sup>I</sup> (with prallethrin) (h)

## **POTASSIUM SALTS OF FATTY ACIDS (See Soaps, Insecticidal)**

### **PRALLETHRIN**

- Ace Ant Roach & Spider Killer<sub>3</sub> (with cypermethrin) (h,h)
- Ace Wasp & Hornet Killer<sub>4</sub> (with cypermethrin) (h)
- Ace Foaming Wasp & Hornet Killer<sub>4</sub> (with cypermethrin) (h,h)
- Ace Flying Insect Killer (with phenothrin) (h)
- Black Flag Spider and Scorpion Killer<sub>3</sub> (with lambda-cyhalothrin) (b,b,b)
- Black Flag Foaming Wasp & Horne Killer (with cypermethrin) (b)
- Eliminator Ant, Roach and Spider Killer<sub>3</sub> (with cypermethrin) (b)
- Eliminator Wasp & Hornet Killer<sub>2</sub> (with cypermethrin) (b)
- Green Thumb Foaming Wasp & Hornet Killer (with cypermethrin) (n)
- Green Thumb Wasp & Hornet Killer<sub>3</sub> (with cypermethrin) (n)

Hot Shot Ant & Roach Plus Germ Killer (with cypermethrin) (b)  
Raid Flying Insect Killer<sup>7</sup> (with d-phenothrin) (h,h,b)  
Raid Max Foaming Wasp & Hornet Killer (with cypermethrin) (b)  
Raid Wasp & Hornet Killer<sup>33</sup> (with cypermethrin) (h)  
Raid Yard Guard Insect Fogger (with cyfluthrin) (h)  
Raid House & Garden<sup>I</sup> (with phenothrin) (h)  
SLA Reefer-Galler Cedar Scented Spray (with pyrethrins) (h)  
Spectracide Ant Shield Insect Killer Aerosol (with lambda-cyhalothrin) (h)  
Spectracide Wasp & Hornet Killer<sup>3</sup> (with lambda-cyhalothrin) (b)  
Terro Ant Killer Spray<sup>2</sup> (with esfenvalerate) (h,h)  
Ultra-Kill Wasp and Hornet Killer (with lambda-cyhalothrin) (b)  
Ultra-Kill Ant & Roach Killer<sup>2</sup> (with cypermethrin) (b)

## **PYRETHRINS**

Bayer Advanced Natria Insect, Disease & Mite Control Ready-to-Use (with sulfur) (h,b)  
Bonide Garden Dust (with sulfur, copper) (n)  
Bonide Tomato and Vegetable Ready-to-Spray (with sulfur) (b)  
Bonide Eight Insect Control Home & Garden Ready-to-Use (with sulfur) (n)  
Bonide Tomato and Vegetable Ready-to-Use (with sulfur) (n)  
Bush Doctor Force of Nature (with piperonyl butoxide) (n)  
Country Vet Metered Fly Spray (h)  
Espoma Earth-tone 3-in-1 Disease Control (with sulfur) (n,n)  
Espoma Earth-tone Insect Control (with canola oil) (n,n)  
Espoma Insect! Insect Spray (with canola oil) (n)  
Enforcer Bed Bug and Flea Fogger (h)  
ferti-lome Fruit Tree Spray (with neem oil) (n,n)  
ferti-lome Triple Action Plus, Ready-to-Use (with neem oil, piperonyl butoxide) (n,n,n)  
ferti-lome Triple Action Plus II (with neem oil, piperonyl butoxide) (n)  
ferti-lome Triple Action (with neem oil) (n,n,n)  
ferti-lome Triple Action Ready-to-Spray (with neem oil) (n,n,n)  
Fox Farms Don't Bug Me (n,n)  
Garden Safe Houseplant & Garden Insect Killer Ready-to-Use (n,h,b)  
Garden Safe Multipurpose Garden Insect Killer (b)  
Hot Shot Kitchen Bug Killer<sup>2</sup> (b)  
Hot Shot Bedbug and Flea Fogger (b,b,b)  
J T Eaton Kills Bedbugs, Fleas, Brown Dog Ticks (h)  
Miracle-Gro Nature's Care Garden Insect Control (b)  
Ortho Bug B Gon 3-in-1 Rose & Flower Care (with sulfur) (h)  
Ortho 3-in-1 Rose & Flower Care (with sulfur) (b)  
Safer EndAll Insect Killer (with insecticidal soap and neem oil) (n,n,h,b)  
Safer Tomato and Vegetable Insect Killer II (with insecticidal soap) (n,h)  
Safer Flying Insect Killer (with insecticidal soap and d-limonene) (n)  
Safer Wasp & Hornet Killer (with insecticidal soap and d-limonene) (n,n,h)  
Safer Ant & Roach Killer (with d-limonene and insecticidal soap)(h)  
SLA Reefer-Galler Cedar Scented Spray (with permethrin) (h)  
Spectracide Triazicide Insect Killer Outdoor Fogger (b,b)  
Terro Spider and Ant Killer (b)

## **PYRETHROIDS, NO COMMON NAME**

### **3-henoxybenzyl (1RS, 3RS, 1RS, 3RS)-2, 2-dimethyl-3 (2methyl prop-1-nyl) cyclopropane carboxylate**

Raid Bed Bug and Flea Killer (b)

Cutter Backyard bug Control Fogging Insecticide (plus piperonyl butoxide) (b)

Black Flag Fogging Insecticide (plus piperonyl butoxide) (h)

Ortho Home Defense Bed Bug, Flea & Tick Killer (plus n-octyl bicycloheptane dicarboxamide and imidacloprid) (b)

Ortho Home Defense Dual-Action Bed Bug Killer (plus n-octyl bicycloheptane dicarboxamide and imidacloprid) (b)

### **(S)-cyano (3-phenoxyphenyl) methyl-(S)-4-chloro-alpha-(1methylethylbenzeneacetate)**

Bonide Termite & Carpenter Ant Killer<sup>II</sup> (h)

Do it Best Ant & Roach Killer (h)

## **PYRIPROXIFEN**

Black Flag Flea & Tick Spray (with lambda-cyhalothrin) (b)

Black Flag Flea & Tick Aerosol (with gamma-cyhalothrin) (b)

## **SEVIN (See Carbaryl)**

## **SILICON DIOXIDE (See Diatomaceous Earth)**

## **SOAP, INSECTICIDAL (Potassium Salts of Fatty Acids)**

Bayer Advanced Natria Insecticidal Soap (h)

Bonide Insecticidal Soap Ready-to-Use (n,n)

Earth-tone Insecticidal Soap (n)

Garden Safe Insecticidal Soap Insect Killer (h,h,b)

Natural Guard Spinosad Soap Ready-to-Use (with spinosad) (n)

Safer 3-in-1 Garden Spray (with sulfur) (n,h)

Safer EndAll Insect Killer (with pyrethrins and neem oil) (n,n,h,b)

Safer Insect Killing Soap Concentrate (n,h,h)

Safer Insect Killing Soap with Seaweed Extract (n,n,h)

Safer Rose & Flower Insect Killer II (h)

Safer Fruit & Vegetable Insect Killer II (h)

Safer Tomato and Vegetable Insect Killer II (with pyrethrins) (n,h,b)

Safer Wasp & Hornet Killer (with pyrethrins and d-limonene) (n,n,h)

Safer Ant & Roach Killer (with pyrethrins and insecticidal soap) (h)

Safer Flying Insect Killer (with pyrethrins and d-limonene) (n)

## **SODIUM TETRABORATE TETRAHYDRATE (See Boric Acid)**

## **SPINOSAD**

Bonide Bug and Slug Killer (with iron phosphate) (n)

Bonide Captain Jack's Dead Bug Brew Flower & Vegetable Insect Dust (n,n,b)

Bonide Captain Jack's Dead Bug Brew Concentrate (n,n,h,h)

Bonide Captain Jack's Dead Bug Brew Ready-to-Use (n,n,n,b)

Bonide Captain Jack's Dead Bug Brew Ready-to-Spray (n,n)

Earth-tone Bug & Slug Control (with iron phosphate) (n)

ferti-lome Borer, Bagworm, Leafminer & Tent Caterpillar Spray

Monterey Ant Control (with iron phosphate) (n)  
Natural Guard Spinosad Bagworm, Tent Caterpillar and Chewing Insect Control (n)  
Ortho Liquid Ant Bait (b)  
Ortho Insect Killer Tree & Shrub Concentrate (h)  
Sluggo Plus (with iron phosphate) (n)

### **SPINOSYNS (See Spinosad)**

### **SULFUR**

Bayer Advanced Natria Insect, Disease & Mite Control Ready-to-Spray (with pyrethrins) (h)  
Bayer Advanced Natria Insect, Disease & Mite Control Ready-to-Use (with pyrethrins) (h,b)  
Bayer Advanced Natria Fruit & Vegetable Ready-to-Use (h)  
Bonide Tomato and Vegetable Ready-to-Spray (with pyrethrins) (n)  
Bonide Garden Dust (with pyrethrins, copper) (n)  
Bonide Sulfur Plant Fungicide (n)  
Bonide Eight Insect Control Home & Garden Ready-to-Use (with pyrethrins) (n)  
Bonide Eight Insect Control Home & Garden Ready-to-Use (with pyrethrins) (n)  
Bonide Tomato and Vegetable Ready-to-Use (with pyrethrins) (n)  
Bonide Tomato and Vegetable Concentrate (with pyrethrins) (n)  
Espoma Earth-tone 3-in-1 Disease Control (with pyrethrins) (n,n)  
Lilly Miller Sulfur Dust (b)  
Ortho Bug-Geta Snail & Slug Killer<sub>2</sub> (n,h,b,b)  
Safer 3-in-1 Garden Spray (with insecticidal soap) (n,h)

### **SUMITHRIN**

ferti-lome Wasp & Hornet Killer (with tetramethrin) (n)  
Ortho Hornet and Wasp Killer<sub>6</sub> (with tetramethrin) (n,b)

### **TAU-FLUVALINATE**

Bayer Advanced All-in-1 Rose and Flower Spray Concentrate (with tebuconazole) (b,b)  
Bayer Advanced 3-in-1 Insect, Disease and Mite Control Ready-to-Spray (with tebuconazole) (n,h,b,b,b)

### **TETRAMETHRIN**

Amdro Quick Kill Mosquito Fogger (with etofenprox) (b)  
Cutter Backyard Bug Control Outdoor Fogger (with phenothrin) (h,b,b)  
ferti-lome Wasp & Hornet Killer (with sumithrin) (n)  
Hot Shot Fogger with Odor Neutralizer (with cypermethrin) (b)  
Hot Shot No Mess Fogger<sub>3</sub> with Neutralizer (with cypermethrin) (b)  
Hot Shot Flying Insect Killer<sub>3</sub> (with permethrin) (b)  
Ortho Hornet and Wasp Killer<sub>6</sub> (with sumithrin) (n,b)  
Ortho Flying Insect Killer<sub>2</sub> (with phenothrin) (b)  
Spectracide Pro Wasp & Hornet Killer (with permethrin) (b,b)

### **TRICHLORFON**

Bayer Advanced 24 Hour Grub Killer Plus Granules (h)

### **ZETA-CYPERMETHRIN (See Cypermethrin)**

## Stores Visited in 2018 Survey (Date of Survey)

Fort Collins Nursery June 4	Bath Nursery June 4
Gulley's Greenhouse June 4	Lowe's June 5
Walmart, June 7	Home Depot, June 7
Poudre Valley Coop, June 8	Downtown Ace, June 11
Joseph's Hardware and Home Center, June 11	

**Summary.** There were 330 different products used for control of insects/mites/slugs found on the shelves of the nine surveyed stores. Several products were found at multiple locations, resulting in a 570 items recorded from the store shelves (average 63/store).

Pyrethroids were, by far, the most commonly encountered type of insecticide, found in 35% of the products on shelves; pyrethrins were active ingredients in another 9.8%. Products containing various mineral/vegetable/neem oils constituted 11%, essential oils 5.8%, and neonicotinoids 8% of the total.

Some types of products were broadly offered by all types of retail outlets but there were differences between what tended to be displayed at a nursery vs. hardware stores vs. box stores. For example, most insect control products sold at nurseries were for use on plants; only at nurseries could one find a product that could be used to spray trees for borers and bark beetles, or a systemic insecticide for houseplant insects. Box stores tended to be heavily stocked with products used for general insect control in and around homes - including an enormous range of wasp and hornet sprays and most of the essential oil products. The location of where the individual products were recorded is indicated in the list above.

**Changes in products since 2015 survey.** Most of the changes in incidence of products between the 2015 survey and the 2018 survey involved pyrethroids. In particular there was a sharp increase (+57%) in products containing cypermethrin found in 60 products on shelves, up from 38. This included the most perplexing formulation change noted during the survey, which involved some of the Garden Tech Sevin products. Prior to 2018 all of these contained carbaryl as the active ingredient; in 2018 over half of the Ready-to-Spray and many of the Concentrate formulations had switched to zeta-cypermethrin and in two stores identically branded products, containing carbaryl and cypermethrin, respectively, were displayed together. Other products that showed substantial increase in incidence on shelves since 2015 were boric acid, prallethrin, and essential oil products.

The product with greatest decline of incidence on store shelves was acetamiprid (-79%). This appeared to be an emerging retail option in the 2015 survey, providing an alternative to acephate and imidacloprid as a sprayable systemic insecticide with lower hazard to honey bees. Other products with notably sharp declines in incidence as retail options were carbaryl (-52%), imidacloprid (-44%), tetramethrin (-44%), pyrethrins (-23%), and permethrin (-23%). The very low incidence of products for control of white grubs (chlorantraniliprole, imidacloprid) reflects the absence of white grubs as significant problems in this part of the state; it is not likely representative of what would be present elsewhere (e.g., Denver, Pueblo, Grand Junction) where these insects are of greater concern.

June 17, 2018 Version  
Whitney Cranshaw