

2015 Directory of Least-Toxic Pest Control Products

The 2015 Directory is a gateway to more than two thousand useful pest control items (for Quick Access see Box A on page 2 and the Index on page 40). Many of these products, services, or beneficial organisms have come to our attention in connection with articles published in BIRC's *IPM Practitioner* or the *Common Sense Pest Control Quarterly*, through IPM programs designed by our staff, or via recommendations from colleagues.

This Directory is unique because it is compiled by IPM technical experts, includes specific product descriptions, and is organized in concert with the IPM decision-making process (see *The IPM Practitioner* 13(11/12):1-9). All information is current, and is constantly updated on BIRC's computerized database system. It is divided into four management sections: Insects, Plant Disease, Vertebrates, and Weeds. Within each section, information is listed in alphabetical order by specific pest grouping. The IPM decision-making steps used to organize individual pest listings include Identification & Monitoring plus a consideration of Physical, Horticultural, Biological, and Least-Toxic Chemical Control methods.

For each product, specific descriptions are included when applicable, followed by the company name and the product name when available (in parentheses). Addresses and phone numbers of manufacturers and suppliers are listed alphabetically by company name at the end of the Directory. An Index to the Directory follows the List of Addresses.

Feedback and Disclaimer

Two caveats apply to this information. First, to the best of our know-



This predatory lady beetle, *Hippodamia convergens*, and many other commercially available biological controls, as well as traps, baits, pheromones, and other products needed for organic production and IPM can be found in this Directory.

ledge, these products, services, and beneficials are effective and are produced by reputable companies. However, they are used at your own risk, and BIRC makes no guarantees or warranties regarding any listing. To help us maintain quality control, we encourage you to contact us about your experiences, both positive and negative, with any of these companies or resources.

Secondly, all information was current at press time. However, pest control is a rapidly changing field: products come and go, and companies change hands and locations on a regular basis. Therefore, if you fail to reach any of the companies listed here, contact us at P.O. Box 7414, Berkeley, CA 94707; 510/524-2567; birc@igc.org.

Beneficial Insects

Both domestic and international producers of beneficials found in the Directory are listed by alphabetical order in the List of Addresses at the end of the Directory. Names and addresses of Biobest distributors are listed separately in Box B at the beginning of the List of Addresses, and Koppert distributors are listed in Box C.

Note to Quarterly Members

Because it was necessary to limit Quarterly production this year, Quarterly subscribers are receiving this Directory as a membership bonus.

The *IPM Practitioner* is published six times per year by the **Bio-Integral Resource Center (BIRC)**, a non-profit corporation undertaking research and education in integrated pest management.

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Manuscripts

The IPMP welcomes accounts of IPM for any pest situation. Write for details on format for manuscripts or email us, birc@igc.org.

Citations

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Subscriptions/Memberships

A subscription to the IPMP is one of the benefits of membership in BIRC. We also answer pest management questions for our members and help them search for information. Memberships are \$60/yr (institutions/libraries/businesses); \$35/yr (individuals). Canadian subscribers add \$15 postage. All other foreign subscribers add \$25 airmail postage. A Dual membership, which includes a combined subscription to both the *IPMP* and the *Common Sense Pest Control Quarterly*, costs \$85/yr (institutions); \$55/yr (individuals). Government purchase orders accepted. Donations to BIRC are tax-deductible.
FEI# 94-2554036.

Change of Address

When writing to request a change of address, please send a copy of a recent address label.

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To obtain speedy delivery and receive advice from experienced sources, we recommend that you order directly from producers. Most of the producers listed rear at least one beneficial, but may distribute organisms produced by other companies.

Some producers may refer you to a distributor for small quantities. Whether the company is a producer or a distributor can be determined when a company representative is contacted. Since space limitations preclude listing all retail distributors of beneficial insects, only a select few are included.

International Orders of Beneficials

U.S. purchasers of natural enemies from Canada or other foreign countries must secure an import permit prior to ordering. Permit form #526 (for Canada) and forms for importing from other countries are available from: USDA-PPQ/APHIS, Federal Center Bldg., Hyattsville, MD 20782. Canadians purchasing from U.S. pro-

ducers need form #720, available from: Agriculture Canada, PPQD, Permit Office, Ottawa K1A 0C6.

Quantities of Beneficials

Questions about quantities to order, timing, and procedures for releasing the natural enemies can be answered by the producers. BIRC members/subscribers can also obtain advice from our technical staff. When making inquiries, please specify pest species, approximate number of plants (e.g., acreage, bench space, etc.), estimate of numbers of pests (e.g., number per sample leaf or percent of crop infested), and life stage of pest (adult, larva, etc.).

Acknowledgement

The *IPM Practitioner* would like to thank all the companies who supplied us with information, our advertisers, and the generous support of BIRC members and StopWaste.Org that made this Directory possible. Thanks also to William Quarles, Jennifer Bates, Matthew Feucht, Erin Berg and our printer Inkworks.

Box A. Quick Access

If you are looking for a specific item, see the Index on pages 40 and 41. To find a remedy for your pest problem, look in one of the four major sections according to whether the pest is an insect (arthropod), plant disease pathogen, vertebrate, or a weed. Except for the weed section, pests are listed by alphabetical order in each of the major categories. When you have found the pest listing, there are separate sections for Identification and Monitoring, and for Physical, Horticultural, Biological, or Least-Toxic Chemical Controls. For instance, to find a parasitoid to control aphids, look in the Insect Management section under Aphids, then under Biological Controls, then under Parasitoids. To find a trap for a raccoon, look in the Vertebrate section under Raccoons, then under Physical Controls until you find a listing of traps. Brand name items are enclosed in parentheses, and are attached to a series of suppliers. The first supplier on the list is the manufacturer.

If the product you are seeking is not in the Index, you must know how the product is used, and for which pests, in order to immediately find the

listing. If the item you are seeking is hard to categorize, each of the four main divisions has a Miscellaneous section. If you are looking for a specific item such as insecticidal soap, diatomaceous earth, or silica gel, and do not know which pest category you should look at, browse major pest sections such as Ants and Aphids first, then browse Miscellaneous.

Beneficials

To find beneficial insects or arthropods, look first in the Index.

If there is no listing in the Index, find the appropriate major section, then the alphabetical listing of the pest you are trying to control. When you have found the pest listing, then look under **Biological Controls**.

Parasitoids available to fight your pest are listed first, followed by effective predators.

Beneficials are listed in alphabetical order by scientific name.

A list of suppliers follows every item in the Directory. To find the addresses and phone numbers for the suppliers listed, look up each supplier by alphabetical order in the List of Addresses at the end of the Directory.



INSECT MANAGEMENT

ANTS

Physical Controls

Ant Proof Bowl:

The Antser

High Performance Vacuum:

Proteam (Sierra, Optimus)

Repellent Mulch: Green Light (CedarCide)

Sticky Barrier:

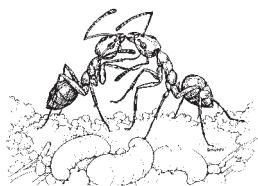
Tanglefoot, Planet Natural, Charley's, Gardens Alive!, Great Lakes, Harmony, Phero Tech (Tanglefoot) • Peaceful Valley • Phero Tech (Stikem Special)

Solar-powered Ant Trap (for fire ants):

Heitman Labs (Solar Ant Charmer)

Teflon Barrier:

Check local hardware store in plumbing supplies



Tree Wrap:

Olson (Stiky Tree Guards) • Peaceful Valley

Least-Toxic Chemical Controls

Abamectin Bait (for fire ants):

Whitmire, Planet Natural (Ascend)

Abamectin Bait (for carpenter and household ants): Whitmire (Advance)

Fenoxycarb Bait (for fire ants):

Syngenta (Award, Logic)

Hydramethylnon Bait (for fire ants):

BASF (Amdro) • Bayer ES (Maxforce)

Methoprene Bait (for fire ants): Zoecon (Extinguish)

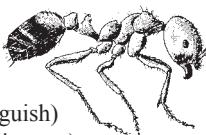
Pyriproxyfen Bait (for fire ant): Valent USA (Distance)

Spinosad Bait (for fire ant): Dow, Green Light (Conserve)

Spinosad Ant Bait: Monterey • Certis (Seduce)

Fipronil Bait (for fire ant): Bayer

Indoxacarb Bait (for fire ant): Dupont (Advion)



Botanical Sprays:

Liquid Fence (EcoLogic) • EcoSmart (herbal oils) • Orange Guard (Orange Oil) • JH Biotech (Ant Out) • Zoecon (Essentria) • Zoecon (EcoExempt, EcoPCO)

Borate-Based Insecticides:

Waterbury (Mop-Up) • Whitmire (PT 249 Perma-Dust) • Waterbury, Planet Natural (Borid) • NISUS (Nibor)

Borate liquid ant baits (1%):

Waterbury, Gardener's Supply, (Drax) • Peaceful Valley • Woodstream (Victor) • JT Eaton (Dr. Moss) • Whitmire • Innovative • Nisus (Terro PCO)

Ant Cafe for Liquid Baits:

Innovative Products

Borate liquid bait (5%): Senoret, Harmony (Terro) • Roxide (Roxo)

Borate gel bait: Blue Diamond (ProJoeS, 4.5% DOT) • Innovative (Gourmet, 6% DOT) • A Safe (Uncle Albert's, 5% DOT) • Rockwell (Intice) • Whitmire (Advance) • Rockwell (Invict)

KM Ant Pro Bait Station: KM Ant Pro

Borate granular ant bait: NISUS, Target (Niban, Niban FG) • Rockwell (Intice) • BASF (Mother Earth)

Borate rods (for carpenter ants):

Pole Care (Impel Rods)

Borate-treated lumber (for carpenter ants):

Osmose

Borate treatments (for carpenter ants):

NISUS, Target, Univar (Bora-Care) • Permachink (Guardian, Shellguard) • Sashco (Penetreat) • NISUS (TimBor)

Diatomaceous Earth (DE) (ants, crawling insects, stored products. Permaguard, Diafil, Crop Guard, and Protect-It are for stored products use. Baited DE and DE with pyrethrin is used for crawling insects such as ants, roaches, and others):

Celite (100% freshwater DE, Diafil) • Eagle Picher (100% freshwater DE, Crop Guard, MN-53) • Hedley (Protect-It) • Whitmire (Mother Earth) • Permaguard, Nitron, (100% freshwater DE, Permaguard) • Woodstream (Concern) • Harmony • Nature's Control • Peaceful Valley • JT Eaton (Answer) • Gardener's Supply • Diacore

With pyrethrin (fire ant):

Permaguard, Nitron (Permaguard Household) • Woodstream (Concern)

Indoxacarb (Advion) Stations, Gels:

Dupont

Dinotefuran Bait: BASF (Alpine)

Hydramethylnon Bait Station and Granular Bait:

Bayer ES (Maxforce, Combat)

Fipronil Bait Station and Gels:

Bayer ES (Maxforce, Combat)



Integrated PerimeterBait Station:

B & G (Perimeter Patrol) • Maxforce • Whitmire (ACE)

Sulfluramid Bait Stations:

Whitmire (Advance)

Thiamethoxam (Optigard) Gels:

Syngenta

Insecticidal Soap:

Woodstream, Planet Natural, Gardens Alive!, Harmony, Nitron, Johnny's, Smith & Hawken, Peaceful Valley, Charley's (Safer Insecticidal Soap, Concern) • Certis (DES-X) • Peaceful

With pyrethrin:

Woodstream, Harmony, Planet Natural (Safer Yard and Garden, Safer Tomato and Vegetable) • Peaceful (Safer)

Pyrethrin:

Roxide • Whitmire (PT 175 microencapsulated, PT-565, PT-505 XLO) • Neogen (Formula 66, LD 44Z) • Monterey (Bug Buster O, w/o PBO) • Bayer (Harmonix)

Repellent Garlic Spray:

Garlic Research Labs, (Garlic Barrier) • Harmony • Peaceful Valley • Soil Technologies (Garlic Gard)

Silica Aerogel:

100% Pure:

Cabot (Cab-O-Sil) (Must order 10 pound minimum) • Degussa (Wessalon S., Aerosil 380) (Must order 25 pound minimum)

With pyrethrin:

Bayer ES, Target (Drione) • Whitmire (PT 239 Tri-Die) • Univar

APHIDS

Identification & Monitoring

Monitoring Traps:

Gardens Alive!, Great Lakes, Olson, Gemplers, Trécé (Pherocon) • Consep, Harmony, Gemplers • Natural Insect Control • Peaceful Valley • Phero Tech

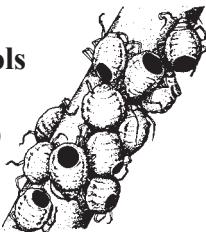
Physical Controls

Barriers & Exclusion Devices:

Gardens Alive! • Planet Natural (Bug Blaster)

Reflective mulch:

Mipco • Peaceful



Row Covers:

Gardener's Supply • Gardens Alive! (Super-Light) • Great Lakes (Fiberweb) • Harmony (Harvest Guard, Tufbell) • Peaceful Valley (Tufbell, AgGro) • Shepherd's (AgGro) • Mipco • Fiberweb • Natural Insect Control

Screening:

Green-Tek • Hydro-Gardens (Fly Barr) • Tipper, Harmony (Tie-Net)

Sticky Adhesive:

Seabright, Charley's, Great Lakes, Harmony, Phero Tech, (Stickem Special) • ARBICO, Planet Natural, Great Lakes, Harmony, Natural Insect Control, Gemplers, Tanglefoot (Tangle-Trap) • Peaceful Valley

Sticky Trap/Tape:

ARBICO • Gardens Alive • Great Lakes, Olson, Gemplers (Yellow Sticky Traps & Tapes) • Seabright (Sticky Traps) • Phero Tech • Great Lakes, ARBICO, Planet Natural, Gemplers (Versagard) • Peaceful Valley • Harmony • Springstar • Nature's Control • Woodstream

Traps:

ARBICO • Planet Natural • Gardens Alive! • Great Lakes • Harmony • IPM Labs • Natural Insect Control • Gemplers • Peaceful Valley • Greenmethods • Olson • Phero Tech

Biological Controls

Habitat:

Greenhouse banker plants: IPM Labs

Beneficial Seed Blend (for plants that attract beneficial insects):

Harmony • Peaceful Valley • Lockwood • Rincon-Vitova • Cornflower Container-grown beneficial plants: Cornflower

Attractant for lady beetles:

Woodstream, Harmony, ARBICO, Peaceful Valley, Great Lakes, The Natural Gardening (SureFire) • Greenmethods (Ladybug lure) • Springstar • Gardens Alive • AgBio (Magnet)

Microbial Insecticides:

Beauveria bassiana (fungus for aphid control): Troy, Gardener's Supply, Hydrogardens (Naturalis O, L, ES) • Laverlam, Bioworks (Mycotrol, Botanigard) • Harmony (Botanigard)

Burkholderia A396 (Venerate): Marrone

Chromobacterium (Grandev): Marrone

Paecilomyces sp. (fungus for aphid control): Bio Pré • HydroGardens • BioBest • Certis (PFR-97)

Verticillium lecanii (fungus for greenhouse use):
Koppert (Mycotal, Vertalec)

Parasitoids:

Aphelinus abdominalis: Biobest • Duclos • Koppert • Natural Insect Control • Rincon Vitova • Greenmethods • Biobest Canada • Arbico
Aphidius colemani: (for cotton aphid): Biological Control • Biobest • Biobest Canada • Syngenta Bioline • International Technology • IPM Labs • Koppert • Natural Insect Control • W. Neudorff • Greenmethods • BioBee • Martin Grima • Rincon Vitova • Garta • Florikan • Katz • Arbico

Aphidius ervi (for potato aphid): Bio Pre • Biobest • Koppert • W. Neudorff • IPM Labs • Natural Insect Control • Garta • Greenmethods • Arbico • Rincon-Vitova

Aphidius matricariae: Evergreen • Syngenta Bioline • Gartnerei • IPM Labs • Koppert • Nature's Control • W. Neudorff • Rincon Vitova • Natural Insect Control

Aphidius sp.: Biological Crop • Greenmethods • Biobest Canada

Episyrphus balteatus: Flora • Katz

Lysiphlebus testaceipes: • Flora • Katz

Praon myziphagum: Biowise

Tamarixia triozae (for psyllids): International Technology

Predators:

aphid midge, *Aphidoletes aphidimyza*: ARBICO • Applied Bionomics • Biobest • Biological Crop • Bio Pre • Evergreen • Planet Natural • Budai • Syngenta Bioline • Biowise • Gartnerei • Hydro-Gardens • International Technology • IPM Labs • Koppert • Natural Insect Control • Nature's Control • Rincon-Vitova • Sautter & Stepper • Greenmethods • W. Neudorff • Flora • BioBee • Katz • Biobest Canada • Ecosolutions

Lacewings:

Chrysoperla carnea or *Chrysopa carnea*: A-1 Unique • Biological Crop • Bioplanet • Gartnerei • Gardens Alive • Koppert • Kuida • Natural Insect Control • Natural Pest Controls • Organic Control • Peaceful Valley • Sautter & Stepper • W. Neudorff • American Insectaries • Katz • TipTop • Nature's Control • Bugological

Chrysoperla rufilabris or *Chrysopa rufilabris*: ARBICO • Biofac • Planet Natural • IPM Labs • Kuida • Natural Insect Control • Nature's Control • Peaceful Valley • Rincon-Vitova • Western Farm • Greenmethods • American Insectaries

Chrysoperla spp.: Beneficial Insectary • International Technology • Kunafin • Flora

Mallada signata: Bugs for Bugs

Micromerus variegatus: Applied Bionomics

Sympherobius sp.: FAR

Lady beetles:

Convergent lady beetle, *Hippodamia convergens*: A-1 Unique • ARBICO • Evergreen • Planet Natural • Gardens Alive • Hydro-Gardens • International Technology • IPM Labs • Koppert • Natural Insect Control • Natural Pest Controls • Nature's Control • Peaceful Valley • Rincon-Vitova • Greenmethods • The Ladybug Company • EcoSolutions • Applied Bionomics

Lady beetle, *Coleomegilla maculata*: Florikan

Lady beetle, *Harmonia axyridis*: Biobest, Koppert, Rincon Vitova, Greenmethods, Bioplanet
Lady beetle, *Adalia bipunctata*: Andermatt • Biobest Canada • Natural Insect Control • Biobest USA
Lady beetle, *Scymnus creperus*: IPM Labs

Predatory bugs:

Anthocorid, *Anthocoris nemoralis* (pear psyllids): Biobest Canada

Insidious flower bug, *Orius insidiosus*: IPM Labs • Syngenta Bioline • Gartnerei • Nature's Control • Rincon Vitova • Katz • Flora
Orius laevigatus: Bioplanet
Orius spp.: Biobest • Duclos • Natural Insect Control • Syngenta Bioline

Minute pirate bug, *Orius tristis*: ARBICO • Planet Natural
Mirid bug, *Deraeocoris brevis*: Applied Bionomics

Least-Toxic Chemical Controls

Clove Oil, Garlic, Cottonseed Oil:

JH BioTech, Harmony (Pest Out) • Safer Gro

Aphid Alarm Pheromone:

ARBICO

Diatomaceous Earth: See Ants

Enzyme Soap: Charley's (Agrizyme)

Essential Oils: Brandt (Ecotec) • Liquid Fence • EcoSmart

Insect Growth Regulators:

Zoecon (Enstar)

Insecticidal Oil:

Highly refined oil (from fish):

Organic Labs (Organocide, 95% fish, 5% sesame)

Highly refined oil (from petroleum):

Monterey, (Monterey) • Valent USA, Harmony (Volck) • Sun, Gardens Alive!, Peaceful Valley, Charley's (Sunspray) • Florikan (Target Oil) • Gardens Alive (Eco-Oil) • Summit • Peaceful Valley • Harmony (Stylet Oil)

Highly refined oil (from plants):

Stoller, Peaceful Valley (Natur'l Oil 93% soybean) • ARBICO (Spreadall 93% cottonseed) • Gardens Alive • Planet Natural, Harmony, Monterey (Erase, jojoba oil) • Soil Technologies (jojoba)

Insecticidal Soap:

Harmony (M-Pede) • Agricola El Sol (ACT-92) • Woodstream (Concern) • Woodstream (Safer Rose and Flower, Insecticidal Soap, Fruit and Vegetable) • St. Gabriel (Sharpshooter) • Certis (DES-X) • Peaceful Valley • Gowan (M-Pede)

With pyrethrin:

Woodstream (Concern) • Woodstream, Gardens Alive!, Harmony, Nitron (Safer Yard and Garden, Tomato and Vegetable) • Peaceful Valley (Safer)

Neem Products:

Certis, Harmony (Azatin) • Woodstream, (Safer's BioNeem, Japanese Beetle Repellent) • Certis, Planet Natural, Peaceful Valley, Harmony (Neemix, Trilogy) • Green Light • San Jacinto (Organica) • PBI (Azatrol) • Agro (AZA Direct, EcoSense, EcoSide) • Gowan (AZA) • Bioworks • Certis (Neemazad) • Agro, Peaceful (DeBug) • Garden Essentials, Harmony (100% neem oil) • Parry (AzaMax)

Pyrethrin:

Johnny's, Peaceful Valley (Pyrenone) • Whitmire (microencapsulated PT-175 MicroCare, PT 565, PT 505) • Neogen (Formula 66, LD-44Z) • Peaceful Valley (Py-Rin, w/o PBO) • Monterey, (Bug-Buster O, w/o PBO) • MGK, Peaceful, Monterey, Harmony (PyGanic)

Pyrethrin and Oil:

Gardens Alive (Pyola) • Harmony (Pyola)

Pyrethrin, rotenone, copper, sulfur:

Bonide, Gardener's Supply (Bonide Garden Dust)

Pyrethrin and Neem:

MGK (Azera)

Pyrethrum Powder:

Planet Natural • Nichols Garden

Repellent Garlic Spray:

Garlic Research Labs, Chemical-Free, Planet Natural, (Garlic Barrier)

• Soil Technologies (Garlic Gard) • Peaceful Valley • Vegetable Juices (Pure Garlic Oil) • JH Biotech • Safer Gro • Harmony

Repellent Mustard Oil:

Soil Technologies

Repellent Hot Pepper Wax:

Charley's • Harmony (Hot Pepper Wax) • Peaceful Valley • St. Gabriel

Sabadilla Powder:

Gardens Alive! • MGK, Harmony, Peaceful Valley (Veratran) • Nichols Garden • MGK

BEES

(See Yellow Jackets)

BEETLES

(Crop and Stored Product Pests)

Identification & Monitoring

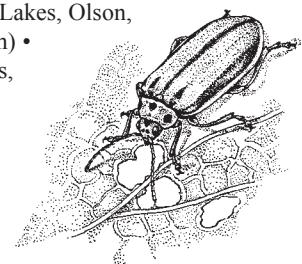
Attractant for Cucumber Beetle:

Sigma Chemical (eugenol) • Trécé (CIDETRAK CRW)

Pheromones & Traps:

For agricultural & horticultural insects:

Woodstream, Gardens Alive! (Safer Japanese Beetle Trap, Surefire) • Gemplers, Great Lakes, Phero Tech (Wing Trap I and II, Unitrap, Delta Traps) • Scentry, Gemplers, Great Lakes, ARBICO, Planet Natural (Scentry) • Phero Tech (Phero Tech Lures) • Scentry, Great Lakes, ARBICO, Planet Natural, Gemplers, Natural Insect Control (Delta & Wing Trap) • Trécé, Gardens Alive!, Great Lakes, Olson, Gemplers (Pherocon) • Harmony (Catch-em) • Suterra, ARBICO, Insects Ltd., Great Lakes, Intagra, Harmony, Gemplers (BioLure) • Hercon, Great Lakes (Luretape) • Tomagro (TomaAttract) • AgBio (Oriental, Cucumber Beetle)



For forestry insects:

Phero Tech (Phero Tech Lures)

For Japanese beetle:

Trécé, Gardens Alive, Great Lakes, Olson, Harmony • Phero Tech • Sterling • Woodstream, Harmony, Great Lakes (Safer) • Tanglefoot • Springstar

For pepper weevil:

Trécé, Gardens Alive, Great Lakes, Olson, Harmony (Pherocon PEW)

For stored product insects:

Great Lakes (Trappit Insect Probe) • Woodstream, ARBICO, Great Lakes, Necessary, Gemplers (Safer) • Trécé, Gardens Alive, Great Lakes, Olson, Harmony, Gemplers (Storgard, WB Probe II for weevils) • Trécé (Dome for confused flour beetle) • Trécé (Dome for cigarette beetle) (Storgard II and III) • Insects Ltd.

Physical Controls

Controlled Atmosphere System (for stored grains):

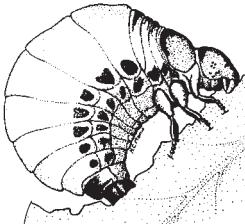
The Aerogen • Air Products (Prism System)

Row Covers:

Great Lakes (Fiberweb) • Gardener's Supply, Gardens Alive! (Floating Row Covers) • Gardens Alive! (Super-Light Insect Barrier) • Harmony (Harvest Guard, Tufbell) • Peaceful Valley (Tufbell, AgGro) • Mipco

Spiked lawn aerator sandals (for white grub control):

Gardener's Supply • Planet Natural



Traps and Sticky Tape:

Sterling Intl. (Japanese Beetle Trap)

• Phero Tech (Chroma) • Scentry, Great Lakes, ARBICO, Gemplers (Scentry)

Peaceful Valley • AgBio (oriental beetle)

• Gardener's Supply (Asian LB Trap) • Woodstream (Surefire Japanese Beetle Trap)

Biological Controls

Seed mix to attract beneficial insects:

Lockwood, Harmony, Peaceful Valley, Rincon-Vitova

Syringe for nematode injection (for borers):

Gardens Alive

Insect-Attacking Nematodes:

Heterorhabditis bacteriophora: BioLogic • IPM Labs • Andermatt • Natural Insect Control • Plant Health Care • Koppert • Peaceful Valley
Heterorhabditis megidis: Andermatt • Biological Crop • Biobest • International Technology • W. Neudorff • Plant Sciences • Rincon-Vitova

Heterorhabditis spp.: Syngenta Bioline • Biowise • Hydro-Gardens • Natural Insect Control • Nature's Control • W. Neudorff • Peaceful Valley • Rincon-Vitova

Heterorhabditis marelatus: Evergreen • BioLogic

Steinernema carpocapsae: Biological Crop • Sierra Biological • BioLogic • Planet Natural • Gardens Alive! • Hydro-Gardens • IPM Labs • Natural Insect Control • Peaceful Valley • Rincon-Vitova

Steinernema feltiae: BioLogic • International Technology • IPM Labs • Koppert • Natural Insect Control • W. Neudorff

Steinernema feltiae and *Heterorhabditis* sp. (mix): North Country (Grub Gard)

Steinernema riobravis: Harmony • Sierra Biological

Steinernema kraussei: Becker Underwood • Rincon-Vitova

Microbial Insecticides:

Bacillus thuringiensis (BT) for beetle larvae:

Bonide, Gardener's Supply (Bonide) • Johnny's, Harmony (Colorado Potato Beetle Beater)

BT galleriae (for adult Japanese beetles):

Phyllum

Bacillus thuringiensis tenebrionis (BTT):

Valent USA, Peaceful Valley (Novodor) • Gardens Alive (Potato Shield)

Bacillus popilliae (milky spore disease):

St. Gabriel, Gardener's Supply, North Country (Milky Spore)

Beauveria bassiana (fungus for grubs):

Troy, Hydrogardens, Planet Natural, Peaceful Valley (Naturalis T)

Metarhizium anisopliae (black vine weevil): NovoZymes (MET52)

Chromobacterium (beetle grubs): Marrone (Grandevio)

Insecticidal oil spreader-sticker used with BT:

Monterey (Nature's Own)

Parasitoids:

Anaphes spp. (for cereal leaf beetle): Rincon-Vitova

Anisopteromalus calandrae (stored product beetles): ARBICO • Biofac

Pediobius foveolatus (for Mexican bean beetle): ARBICO • IPM Labs •

Rincon Vitova • Green Methods

Predators:

spined soldier bug, *Podisus maculiventris* (for CO potato beetle):

ARBICO • Bug Factory • Rincon-Vitova • Greenmethods

warehouse pirate bug, *Xylocoris flavipes* (for stored product beetles):

• Biofac • Natural Insect Control

Least-Toxic Chemical Controls

Borate-Based Insecticides:

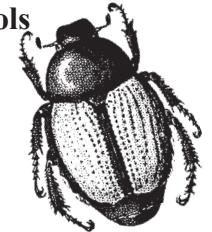
Whitmire (PT 249) • Nisus (Niban, Niban FG)

Diatomaceous Earth: See ANTS

Epazote (*Chenopodium ambrosioides*)

for protection against stored product beetles:

Nichols Garden • J.L. Hudson



Garlic Repellents:

Garlic Research Labs, Chemical-Free (Garlic Barrier) • Soil Technologies (Garlic Gard) • Harmony (Guardian) • Vegetable Juices (pure garlic oil) • JH Biotech (Bio Repel)

Mustard and Chili Oil Repellent:

Soil Technologies (Valoram, Armorex)

Insect Growth Regulators (for beetle grubs):

Dow Agro (halofenzimide, Mach-2) • O.M. Scott (Grub-EX)

Insecticidal Soap (for flea beetle):

Woodstream, Peaceful Valley, Harmony (Concern, Safer) • Certis (DES-X) • Gowan (MPede)

With pyrethrin:

Woodstream, Gardens Alive!, Harmony, Nitron (Safer Yard and Garden) • Peaceful Valley

Neem Products:

Certis, Planet Natural (Azatin) • Woodstream, Gardener's Supply, Peaceful Valley, The Natural Gardening (Surefire Japanese Beetle Repellent) • Woodstream, Peaceful Valley (Safer's BioNeem) • Certis, Harmony, Peaceful Valley (Neemix, Trilogy) • Gardens Alive (Neem-Away) • Green Light, Harmony (Rose Defense) • San Jacinto (Organica) • PBI (Azatrol) • Agro, Peaceful Valley (DeBug) • Gowan (AZA) • Bioworks (Molt-X) • Parry (AzaMax) • Garden Essentials, Harmony (100% neem oil)

Pyrethrin and Neem: MGK (Azera)

Pyrethrin:

Roxide • Whitmire (microencapsulated PT-175 MicroCare, PT 565, PT 505) • Johnny's, Peaceful Valley (Pyrenone) • Neogen (Formula 66, LD-44Z) • Peaceful Valley (Py-Rin, w/o PBO) • Monterey, (Bug Buster O, w/o PBO) • MGK, Peaceful, Harmony (PyGanic)

Pyrethrin, rotenone, copper, sulfur:

Bonide, Gardener's Supply (Bonide Garden Dust)

Pyrethrum Powder:

Nichols Garden • Harmony • Planet Natural

Rotenone:

Bonide

Sabadilla:

MGK, Harmony (Veratran) • Peaceful Valley

Silica Aerogel: See ANTS

Spinosad Microbial Isolate (leaf beetles):

Dow Agro (Entrust) • Gardens Alive (Bulls-eye) • Monterey • Harmony

BEETLES

(Structural Pests)

Identification & Monitoring

Trained Dogs (for detection):

American K-9 • Florida Canine

Physical Controls

Electrical Treatment (for drywood termite & boring beetles):

ETEX (Electrogun)

Heat Treatment:

TPE/Thermapure (Call for local practitioners) • In Denmark (Tanaco) • In England (Thermo Lignum) • Topp (Heaters)

Microwave Treatment:

Bio-Integral Resource Center (Call for local referrals)

Microwave Equipment:

Professional Equipment

Least-Toxic Chemical Controls

Borate Rods:

Pole Care, Nisus (Impel Rods)

Borate Termicide & Wood Preservative:

NISUS, Target, Univar (Bora-Care) • Permachink (Guardian, Shellguard) • Sashco (Penetreat) • NISUS (TimBor) • NovaGuard

Borate Treated Lumber and Building Material:

Osmose

Borate Treated Logs:

Appalachian • Lok-N-Logs

BLACKFLY

(See Mosquitoes)

BORERS

(See Beetles)

BUGS

(Hemipterans)

Identification & Monitoring

Pheromones & Traps:

Trécé, Gardens Alive!, Great Lakes, Olson, Gemplers (Pherocon) • Phero Tech • Peaceful Valley • AgBio (stink bug trap) • Sterling (Stink Bug Trap)

Physical Controls

Asian ladybug traps: Springstar • Gardens Alive

Bed Bug Traps:

Susan McKnight • BioSensory • Termite Detection

Screening:

Tipper, Harmony, Peaceful Valley (Tie-Net)

Row Covers:

Great Lakes (BBA) • Gardens Alive (Super-Light) • Gardener's Supply, Gardens Alive (Floating Row Covers) • Harmony (Tufbell, Harvest Guard) • Peaceful Valley (Tufbell, AgGro) • Mipco • Gemplers

Heat for Bedbugs:

Thermapure • PestHeat • Tempair (Thermal Remediation)

Vacuum:

BioQuip • Proteam (Sierra)

Horticultural Controls

Beneficial Seeds and Plants:

Cornflower • Harmony • Lockwood

Insect-Resistant Turfgrass:

Endophytic Ryegrass (repels billbugs & caterpillars):

Pennington (Repell, Repell II, Yorktown III, Palmer II, Prelude II) • Turf Seed (Citation II, Birdie II, Omega II, CBS II, Manhattan II, Charger, Quickstart, 246 Sunrye) • Turf Seed (Sunrye) • Gardens Alive (Turf-Alive) • Turf Seed (Citation III, Bright Star, Catalina, Navajo, Road Runner) • Peaceful Valley

Endophytic tall fescue (repels billbugs):

Turf Seed (Apache, Tomahawk) • Pennington (Jamestown II, Reliant) • Peaceful Valley

Biological Controls

Stink Bug Attractant (Sterling)

Microbial Insecticides:

Chromobacterium (stinkbug): Marrone (Grandevlo)

Entomopathogenic fungus:

Beauveria bassiana (for chinch bugs): Troy, Hydrogardens, Gardener's Supply (Naturalis T) • Laverlam, BioWorks (Botanigard) • Peaceful Valley

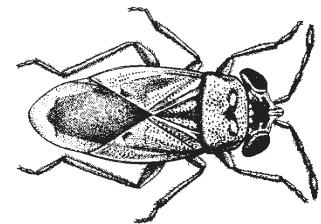
Metarhizium anisopliae (for meadow spittlebug, coffee leafminer):

Agricola El Sol • Bio Pre

Parasitoids:

Peristenus relictus (for lygus bug):

Rincon-Vitova



Predators:

spined soldier bug, *Podisus maculiventris* (for CO potato beetle, bugs general, caterpillar general): ARBICO • Gardens Alive! • Natural Insect Control • Bug Factory • Rincon-Vitova • Greenmethods

predatory bug, *Deraeocoris brevis* (for lygus bug): Applied Bionomics

Least-Toxic Chemical Controls

Borate-Based Insecticides:

Whitmire (PT 249 Perma-Dust) • Nisus (Niban bait)

Diatomaceous Earth: See ANTS

Essential Oil (for Bed Bugs): Renotech (EcoRaider)

Garlic-based repellent:

Soil Technologies (Garlic Gard) • Harmony, Peaceful Valley (Guardian) • Garlic Research (Garlic Barrier)

Insecticidal Soap:

Woodstream (Concern) • Woodstream (Safer) • Certis (DES-X) • Gowan, Harmony (M-Pede)

With pyrethrin:

Woodstream (Safer Yard and Garden, Safer Tomato and Vegetable) • Woodstream (Concern Multi-purpose) • Peaceful Valley

Silica Gel (for Bed Bugs): Rockwell (CimeXa)

Hydroprene IGR for bedbugs:

Zoecon (Gentrol)

Neem for Bedbugs: Terramera (Cirkil)

Neem Products:

Certis, Planet Natural, Nitron, Johnny's (Azatin) • Woodstream (Safer's

BioNeem) • Certis, Peaceful Valley, Harmony (Neemix, Trilogy) • Green Light (Rose Defense) • PBI (Azatrol) • Agro (EcoSense) • Gowan (AZA) • Bioworks (Molt-X) • Agro (DeBug) • Parry (AzaMax) • Garden Essentials, Harmony (100% neem oil)

Pyrethrin:

Whitmire (PT 175 microencapsulated, PT-565, PT-505 XLO) • Johnny's, Peaceful Valley, (Pyrenone) • Neogen (Formula 66, LD-44Z) • Bayer ES (Kicker, Drione) • Peaceful Valley (Py-Rin, w/o PBO) • Monterey, Harmony (Bug Buster O, w/o PBO) • MGK (PyGanic)

Pyrethrin and Oil:

Gardens Alive (Pyola) • Harmony (Pyola) • Monterey (Take Down)

Pyrethrin, rotenone, copper, sulfur:

Bonide, Gardener's Supply (Bonide Garden Dust)

Pyrethrin and Neem:

MGK (Azera)

Sabadilla:

Planet Natural • Peaceful Valley • MGK, Harmony (Veratran)

Silica Aerogel:

See ANTS

CATERPILLARS

Identification & Monitoring

Pheromones & Traps:

For agricultural & horticultural insects: delta, dome, diamond, funnel, jackson, and wing traps

Great Lakes, Gemplers (Multi-Pher, Unitrap, Delta Traps) • Phero Tech, Great Lakes (Unitrap) • Scentry, Gemplers, Great Lakes, ARBICO, Planet Natural (Scentry) • Suterra, Harmony, Planet Natural, Gardens Alive, Peaceful Valley, The Natural Gardening (BioLure) • Phero Tech (Phero Tech Lures) • Scentry, Great Lakes, ARBICO, Planet Natural, Natural Insect Control (Delta & Wing Trap, Heliothis Trap) • Trécé, Gardens Alive!, Great Lakes, Olson, Gemplers (Pherocon) • ARBICO, Harmony (Catch-em) • Peaceful Valley • Hercon • San Jacinto • Tanglefoot (Codling Moth) • Tomagro • Isca Technologies • Trece (Pherocon, codling moth and others)

For forestry insects:

Phero Tech (Phero Tech Lures)

For stored product insects:

Woodstream, ARBICO, Peaceful Valley, Great Lakes, Necessary, Gemplers (Pheromone Traps, Safer) • Phero Tech (Phero Tech Lures) • Trécé, Gardens Alive, Olson, Great Lakes, Harmony, Peaceful Valley (Storgard) • Woodstream (Clothes Moth Pheromone) • Springstar • Certis, Harmony (Clothes Moth) • Woodstream (Pantry Pest Pheromone) • Springstar (Clothes Moth) • Insects Ltd. • Trece (Storgard Quick Change Dome) • Trece (Storgard II) • Trece (Storgard III)

Physical Controls

Controlled Atmosphere System (for stored grains):

The Aerogen • Air Products (Prism System)

Mineral Coating to Protect Fruit: BASF, Peaceful Valley, Gardens Alive (Surround) • Certis

Row Covers:

Great Lakes (Fiberweb) • Gardens Alive! (Super-Light) • Gardener's Supply, Gardens Alive, (Floating Row Covers) • Harmony (Harvest Guard, Tufbell) • Peaceful Valley (Tufbell, AgGro) • Mipco

Sticky Barrier:

Tanglefoot, Planet Natural, Gardens Alive!, Great Lakes, Harmony, Phero Tech, Peaceful Valley (Tanglefoot)

Sticky Trap/Tape:

For stored product insects:

Peaceful Valley • Agro Biotech • Phero Tech • Springstar • Trece

For agricultural & horticultural insects:

Scentry, Great Lakes, ARBICO, Planet Natural, Gemplers (Scentry Gypsy Moth Trap) • Peaceful Valley • Phero Tech • Tomagro • Tanglefoot • Crop Production (Hopper Finder) • Trece

Traps:

Woodstream, Harmony, Peaceful Valley, The Natural Gardening (Gypsy Moth Trap) • Ladd, Planet Natural (Red Sphere Fruit Fly) • Woodstream, Harmony, Great Lakes, The Natural Gardening (SureFire Codling Moth) • Sterling (Smart) • Springstar • Trece

Tree Wrap:

Olson (Stiky Tree Guards) • Planet Natural, Peaceful Valley (Bug Belt) • Phero Tech • Tanglefoot

Horticultural Controls

Insect-Resistant Turfgrass:

Endophytic Ryegrass (repels billbugs & caterpillars):

Pennington (Repell, Palmer II, Prelude II, Yorktown III) • Turf Seed (Citation II, Birdie II, Omega II, CBS II, Manhattan II, Charger, Quickstart, 246 Sunrye) • Gardens Alive (Turf-Alive) • Peaceful

Endophytic Tall Fescue (repels caterpillars):

Turf Seed (Apache II, Tomahawk, Coronado Gold, Tarheel) • Peaceful

Biological Controls

Attractant for soldier bugs that attack pest caterpillars:

Sterling, Planet Natural, Natural Insect Control (Rescue!)

Seed Mix to Attract Beneficials:

Harmony • Peaceful Valley • Lockwood • Planet Natural • Gardens Alive • Rincon-Vitova • Cornflower (also plants)

Seeds for plants to repel pest Lepidoptera:

Shepherd's (sweet basil) • Nichols Garden, J.L. Hudson (epazote) • Park Seed (holy basil)

Seeds for California Native Plants:

Pacific Coast Seed

Bat Houses to Attract Moth-Eating Bats:

Natural Insect Control • Peaceful Valley • Planet Natural • Arbico

Insect-Attacking Nematodes:

Heterorhabditis bacteriophora: BioLogic • IPM Labs • Natural Insect Control • Andermatt

Heterorhabditis marelatus: BioLogic

Steinerema carpocapsae: BioLogic, IPM Labs, Natural Insect Control, Peaceful Valley, Sierra Biological

Steinerema feltiae: BioLogic, IPM Labs, Natural Insect Control

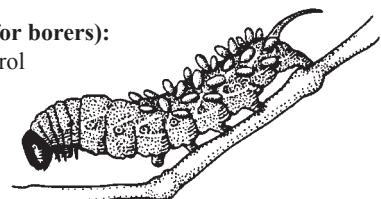
Steinerema riobravis: Harmony • Sierra Biological

Syringes for nematode injection (for borers):

Gardens Alive • Natural Insect Control

Microbial Feeding Stimulant:

Peaceful Valley



Microbial Insecticides:

Bacillus thuringiensis (BT):

Valent USA, Harmony, Johnny's, Greenlight (Dipel, Dipel 4L, 2X, 10G, ES, Xentari WDG) (Topside Dipel) • Koppert(Bactospeine) • Nitron (Caterpillar Killer) • ARBICO • Planet Natural • Agricola El Sol (BST-88, BST-88A) • Certis (Foil)

Bacillus thuringiensis aizawai (BTA):

Valent USA (Xentari, Florbac) • Certis (Agree)

Bacillus thuringiensis kurstaki (BTK):

Certis (Condor, flowable) • Valent USA (Biobit, Foray) • Peaceful Valley, Harmony (Caterpillar Attack, Vegetable Insect Attack) • Certis, Peaceful Valley, Harmony (Javelin WG, CoStar) • Planet Natural • Plant Health Care, Certis (Crymax) • Monterey

BT protein encapsulated in *Pseudomonas*:

Certis, Gardens Alive (M-Peril, M-Trak, Mattch, MVP-II)

***Beauveria bassiana* for soil and turf (sod webworm):**

Troy, Hydro-Gardens, Gardener's Supply (Naturalis-T) • Laverlam, Bioworks (Botanigard) • Peaceful Valley

***Chromobacterium* (Grandev): Marrone**

***Burkholderia* A396 (Venerate): Marrone**

Insecticidal spreader-sticker oil for BT:

Monterey (Nature's Own)

***A. orana* granulosis virus (for leafroller):**

Andermatt (Capex)

Codling moth granulosis virus:

Andermatt (Madex) • Certis (Cyd-X)

NPV (from alfalfa looper or celery looper):

Certis (call for availability)

NPV from *H. zea* (for caterpillars):

Certis (Gem-Star)

NPV (nucleopolyhedrosis virus) (for gypsy moth):

Agricola El Sol (VPN-80, VPN-82) • U.S. Forest Service, USDA

NPV (nucleopolyhedrosis virus) (for beet armyworm):

Certis (Spod-X)

Parasitoids:

Anisopteromalus calandrae (stored product): Biofac

Blepharipa schineri (parasitic fly for gypsy moth): USDA Rearing Lab

Bracon hebetor (for stored product moth): Biofac • Arbico • Natural Insect Control

Cotesia plutellae (for diamondback moth): ARBICO

Goniozus legneri (for navel orangeworm, omnivorous leafroller):

ARBICO • Beneficial • California BioWorks • Kuida

Orgilus lepidus (for potato tuber moth): Bugs for Bugs

Pentalitomastix plethoricus (for navel orangeworm):

California BioWorks

Trichogramma brassicae: Beneficial • IPM Labs • Koppert • Nature's Control • Rincon Vitova • Greenmethods

Trichogramma carverae: Bugs for Bugs

Trichogramma evanescens (for moth): Koppert

Trichogramma minutum (for Eastern U.S. orchards): ARBICO •

Beneficial Insectary • Biofac • Planet Natural • International

Technology • IPM Labs • Nature's Control • Peaceful Valley • Rincon Vitova • Greenmethods

Trichogramma ostriniae: Beneficial Insectary • IPM Labs

Trichogramma platneri (for Western U.S. orchards): ARBICO • Beneficial • Planet Natural • Kuida • Rincon-Vitova • Peaceful Valley • International Technology • FAR

Trichogramma pretiosum (for moth eggs in vegetable & field crops):

ARBICO • Beneficial • Biofac • Planet Natural • FAR • Gardens Alive! • Kuida • Nature's Control • Rincon-Vitova • Peaceful Valley •

Greenmethods • Bugs for Bugs

Trichogramma spp. (for moth eggs in vegetable & field crops):

Beneficial Insectary • Conrad Appel • KWS • Kunafin • Natural Insect Control • Natural Pest Controls • Organic Control • Peaceful Valley • Natural Enemy • Hydrogardens

Trichogrammatoides bactrae (for moth egg in fields & orchards, pink bollworm): Greenmethods

Predators:

predatory bug: *Deraeocoris brevis*: Applied Bionomics • Natural Insect Control

spined soldier bug, *Podisus maculiventris*: ARBICO • Natural Insect Control • Bug Factory • Rincon Vitova • Greenmethods

warehouse pirate bug, *Xylocoris flavipes*: (for stored product moths): ARBICO • Planet Natural • Biofac • Natural Insect Control

Least-Toxic Chemical Controls

Botanical Repellents:

Renee's (sweet basil seeds) • Park Seed (holy basil) • Nichol's Garden, J.L. Hudson (epazote) • Soil Technologies (Garlic Gard) • Gardens Alive (Herbal Moth Repellent) • Garlic Research, Harmony, San Jacinto (Garlic Barrier) • JH Biotech • Brandt (Ecotec) • EcoSmart • Liquid Fence

Diatomaceous Earth: See ANTS

Insecticidal Soap: See APHIDS

Insect Growth Regulators (IGRs):

Syngenta (fenoxycarb, Comply, Precision) • Rohm and Haas (tebufenozide, Confirm)

Microbial Isolate (Spinosad):

Dow, Green Light (Entrust) • Gardens Alive (Bulls-Eye) • Harmony • Peaceful Valley • Monterey (Insect Spray)

Neem Products:

Certis, Planet Natural (Azatin) • Woodstream (Safer's BioNeem) • Certis, Harmony, Peaceful Valley (Neemix, Trilogy) • Green Light, Gardener's Supply (Green Light) • Agro (Agroneem) • Gowan (AZA) • Bioworks (Molt-X) • Garden Essentials, Harmony (100% neem oil) • Parry (AzaMax)

Pheromone Mating Disruptants:

Checkmate for codling moth, tomato pinworm, oriental fruit moth, pink bollworm, peach tree borer; Puffer or Paramount aerosols for NOW, OFM, codling moth; Isomate for codling moth, oriental fruit moth, greater and lesser peach tree borer, oblique-banded leafroller, pandemis leafroller, pink bollworm; NoMate for tomato pinworm, pink bollworm, tufted apple bud moth, oriental fruit moth, codling moth, omnivorous, obliquebanded, and pandemis leafrollers; Disrupt for peach twig borer, oriental fruit moth, codling moth, and gypsy moth.

Manufacturers and suppliers are:

Suterra, Harmony, Great Lakes, Harmony, ARBICO, Peaceful Valley (Checkmate) • Suterra (Puffer, Paramount) • Pacific Biocontrol, Great Lakes, Harmony, Peaceful Valley (Isomate) • Scentry, Great Lakes, ARBICO, Planet Natural (NoMate) • Scentry, Great Lakes, ARBICO, Planet Natural, Gemplers (Attract & Kill, NoMate PBW-MEC for pink bollworm) • Hercon, Great Lakes (Disrupt) • Trece (Cidetrak, Codling Moth, OFM) • Trece (Cidetrak, Indianmeal moth)

Pheromone Lures for many Lepidoptera:

Trécé (Pherocon) • Tomagro (TomaAttract) • Great Lakes IPM •

Suterra (BioLure) • Phero Tech • Isca Technologies • Suterra (Scenturion) • AgBio

Pyrethrins:

Roxide • Whitmire (PT 175 microencapsulated, PT-565, PT-505 XLO) • Waterbury (Purge III) • Monterey (Bug-Buster-O, w/o PBO) • MGK, Peaceful, Harmony (PyGanic) • Woodstream (Safer)

Pyrethrum powder:

Nichol's Garden • Harmony

Rotenone:

Bonide

Sabadilla:

MGK, Harmony, Peaceful Valley (Veratran)

Silica Aerogel: See ANTS

COCKROACHES

Identification & Monitoring

Flashlight with Red Filters:

Streamlight

Pheromone Trap:

Woodstream (Victor)

Physical Controls

Caulk:

Hardware Store

Teflon barrier protects pet food bowls:

See hardware store for Teflon tape

Traps:

Woodstream (Victor, sticky) • Great Lakes (AgriSense)

Pheromone Trap:

Woodstream

Glue board trap:

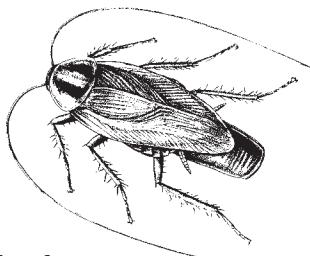
Bell (Trapper) • Woodstream

Trap & attractant:

Woodstream, Harmony, ARBICO, Peaceful Valley, Great Lakes (The Dungeon) • Seabright (Safe Stop) • Woodstream (Victor, pheromone) • Springstar

Vacuums:

Proteam (Sierra, Optimus)



Biological Controls

Parasitoids:

Anastatus tenuipes: Rincon-Vitova

Aprostocetus hagenowii: Bio Pre • Rincon-Vitova

Comperia merceti: Rincon-Vitova

Least-Toxic Chemical Controls

Baits:

Abamectin dust or spray:

Whitmire (Avert PT-300, PT-310) • Gardens Alive!

Abamectin gel bait:

Whitmire (Avert 320)

Borate-based bait:

NISUS (NIBAN Granular Bait, Niban FG) • Blue Diamond Manufacturing (for bait gun) • Seabright (Roach Free) • Waterbury

(50% boric acid, CB Attrax) • Blue Diamond (ProJoe) • Nisus (Magnetic)

Dinotefuran bait: BASF (Alpine)

Indoxacarb bait: Dupont (Advion)

Hydramethylnon bait stations (child-resistant):

Bayer ES (Maxforce, Combat)

Fipronil bait stations (child resistant):

Bayer ES (Maxforce)

Hydramethylnon gel bait:

TopPro, Target, Univar (Siege) • Zoecon (Matrix)

Sulfluramid bait station:

S.C. Johnson (Raid Max)

Bait Attractant:

Rockwell (Invite)

Bait gun: Specialty Products • Target • Whitmire

Botanical Sprays:

Orange Guard, Univar, Target (orange oil) • Woodstream (Mint Oil) • EcoSmart (herbal oil) • Zoecon (Essentria)

Drain Cleaner, Degreaser Microbial to Remove Cockroach Food:

American Bio-Systems (Bio-Mop) (Drain Gel)

Dust applicators:

Parker Pest (Pest Machine) • Peaceful Valley (Pest Pistol)

Borate-Based Insecticides:

Organic Control (Ant-T-Roach) • Enforcer (Roach Ridd) • Waterbury (Mop-Up, Roach-Kil, Borid) • Whitmire (PT 249) • Copper Brite, Harmony (Roach Prufe) • Woodstream (Victor) • J.T. Eaton • NISUS (Nisor) • Nisus (Boracide)

Diatomaceous Earth:

Natural Insecto, Natural Insect Control (Insecto w 10% food bait) • Woodstream (SureFire) • Hedley Technologies (Insecolo w 3% food bait) • Hedley Technologies (Protect-It w 10% silica gel) • Celite • Eagle Picher • Peaceful Valley • JT Eaton (Answer) • Diacore

With pyrethrin:

Permaguard, Nitron (Permaguard) • The Natural Gardening (Insectigone) • Gardens Alive • Organic Solutions

Hydroprene IGR:

Zoecon (Gentrol)

Hydroprene IGR Controlled Release Station:

Zoecon (Point Source)

Pyriproxyfen IGR: MGK (NyGard)

Pyrethrins:

Roxide • Whitmire (PT-175 microencapsulated, PT 505, PT 565) • Neogen (Formula 66, LD-44Z) • Bayer (Harmonix)

Silica Aerogel:

100% Pure:

Cabot (Cab-O-Sil) (Must order 10 pound minimum) • Degussa (Wessalon S., Aerosil 380) (Must order 25 pound minimum)

With pyrethrin:

Bayer ES, Target (Drione) • Whitmire (PT 239 Tri-Die) • Univar

CRICKETS

(See Grasshoppers)

EARWIGS

Physical Controls

Least-Toxic Chemical Controls

Diatomaceous Earth: See ANTS

Insecticidal Soap: See APHIDS

FLEAS

Physical Controls

Combs:

Gardens Alive!

Vacuums:

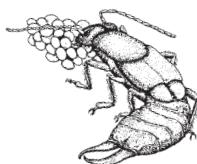
Proteam (Sierra, Optimus)

Sticky light traps:

Enforcer Products (Over Nite Flea Trap) • Happy Jack •
Gardens Alive • Springstar (Flea Trap) • Woodstream (Victor)
• Natural Insect Control • Peaceful Valley

Sticky Traps and Tape:

Bell (Trapper) • Olson • Gempfers



Biological Controls

Insect-Attacking Nematodes (outside treatment):

Peaceful Valley • Organic Control • Gardens Alive • Hydrogardens •
Planet Natural • Biologic

Least-Toxic Chemical Controls

Sodium octaborate (carpet treatment):

The Ecology Works (Flea and Mite Control)

Insecticidal Oil:

Citrus or herbal oil extract:

Gardens Alive! (Flea Stop Shampoo) • Orange Guard, Univar, Target
(Orange Guard) • Woodstream (Poison Free) • EcoSmart • Zoecon
(Essentria, EcoExempt, EcoPCO)

Diatomaceous Earth (minimize exposure to dust, use material with low crystalline silica content):

Natural Animal (EcoZone) • Woodstream • Peaceful Valley • Eagle
Picher (MN-53) • Cellite (Diafil) • Permaguard (food grade) • JT
Eaton (Answer)

With pyrethrin (do not use on cats):

Permaguard, Nitron (Permaguard)

Spot-On Treatments for Pets:

Fipronil flea adulticide:

Merial (Frontline) • Drs. Foster and Smith

Fipronil adulticide with methoprene:

Merial (Frontline Plus) • Drs. Foster and Smith

Nicotine analog flea adulticide:

Bayer Animal (Imidacloprid, Advantage) • Veterinarians

Selamectin flea adulticide:

Pfizer (Revolution)

Insect Growth Regulators:

Lufenuron (oral formulation for pet):

Syngenta (Program) • Drs. Foster and Smith

Methoprene (collars or sprays):

Zoecon (Precor) • Enforcer (FGR)

Methoprene (with permethrin) for fleas (do not use on cats):

Zoecon, Gardens Alive! (Precor)

Pyriproxyfen (collars or sprays):

MGK (Nylar) • Bayer (Fleegard)

Insecticidal Soap:

With pyrethrin (do not use on cats):

Woodstream, Planet Natural, Gardens Alive!, Harmony (Flea & Tick Attack) • Woodstream, Gardens Alive!, Harmony, Nitron (Safer Yard and Garden) • Peaceful Valley

Pyrethrin (do not use on cats):

Del (Lice, Tick & Flea Spray) • Roxide • Whitmire (PT 175 microencapsulated, PT-565, PT-505 XLO) • Enforcer (Flea & Tick Spray, Powder, Shampoo) • Neogen (Formula 66, LD-44Z) •

Pyrethrum powder (do not use on cats):

Natural Animal (EcoZone), Planet Natural

Repellent (Herbal Flea Collar):

Planet Natural

Silica Aerogel: See ANTS

FLIES

(Nuisance)

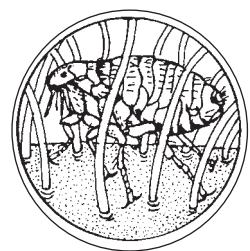
Identification & Monitoring

Pheromones & Traps for Agricultural Pests:

Phero Tech, Great Lakes (Unitrap) • Trécé, Gardens Alive!, Great Lakes, Harmony, Olson, Peaceful Valley, Gempfers (Pherocon) • Hercon

Test Kit for Insecticide Resistance:

Silver Lake



Physical Controls

Bag to Seal Caskets against Phoridae:

Ensure-A-Seal (Tyvek)

Fly bonnet for horses:

WF Young (Fly Bonnet) • Stateline (Ultra Shield)

Screening:

Hydro-Gardens (Fly Barr) • Tipper, Harmony, Peaceful Valley (Tie-Net)

Sticky Adhesive:

Tanglefoot, ARBICO, Planet Natural, Great Lakes, Gempfers, Harmony, Natural Insect Control, Charley's (Tangle-Trap) • Phero Tech • Seabright

Cone-Type Solar Traps:

ARBICO • Great Lakes (Musca Terminator) • Olson (Stiky) •

Tanglefoot (Aeroxon) • Great Lakes • Peaceful Valley • Natural Insect Control

Jar-Type and Disposable:

Woodstream, Great Lakes, Peaceful Valley, Natural Insect Control (Victor Fly-In-Saucer, Fly Magnet) • Sterling Intl. (Rescue!) • Stateline • Harmony • Sterling (with attractant)

Horse Fly Trap:

Newman (Horse Pal)

Electrocution Black Light Fly Traps:

Gilbert Industries (Electrocuting Light Traps) • B & W (Mantis) • Actron

Adhesive Black Light Traps:

Great Lakes, Gempler's (blacklight, sticky) • Whitmire (Vector) • Whitmire (Actron, programmable) • Actron

Solar-powered electrocution traps:

Great Lakes, Gempler's (Tower of Doom, Dungeon of Doom, solar electrocution)

Sticky trap/tape:

Springstar (fly strip) • Natural Insect Control • Loveland (Sticky Roll) • Crop Production (Hopper Finder) • Phero Tech (Chroma) • Tanglefoot (Aeroxon, window trap) • Zoecon (Fly Inn, Fly Stop, Big Stik)

Biological Controls

Insect-Attacking Nematodes:

Heterorhabditis megidis: Andermatt • Biological Crop • BioBest • Koppert • International Technology • W. Neudorff

Heterorhabditis sp.: Novartis BCM • Biowise • Hydro-Gardens • Koppert • Natural Insect Control • Nature's Control • Peaceful Valley • Gardens Alive

Steinernema carpocapsae: BioLogic • Hydro-Gardens • IPM Labs • Natural Insect Control • Peaceful Valley • Harmony • Sierra Biological

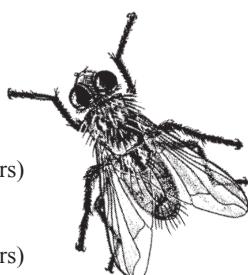
Steinernema feltiae: BioLogic • BioBest • Biological Crop • IPM Labs • Natural Insect Control • Koppert • W. Neudorff • International Technology • Harmony • Planet Natural • Sierra Biological

Steinernema sp.: English Woodlands • Natural Insect Control • Nature's Control

Microbial Drain Cleaner (drain flies): American BioSystems

Sterile flies for release (onion maggot):

De Groene



Microbial Insecticides:

Ivermectin for bot flies, etc.:

Bayer Animal (Ivomec Pour-On)

(Sold only to veterinarians & licensed suppliers)

Ivermectin and cloresulon:

Bayer Animal (Ivomec-F Injection)

(Sold only to veterinarians & licensed suppliers)

Parasitoids:

Muscidiifurax raptor: IPM Labs • Kunafin • Natural Insect Control

Muscidiifurax raptorellus: IPM Labs • Greenmethods • Rincon-Vitova • Natural Insect Control • Kunafin • Spalding

Muscidiifurax sp.: Beneficial Insectary • Peaceful Valley • Spalding

Muscidiifurax zaraptor: ARBICO • Planet Natural • Kunafin • Natural Pest Controls • Nature's Control • Greenmethods • Spalding

Nasonia vitripennis or *Mormoniella vitripennis*: ARBICO • Natural Pest Controls • Bioplanet

Spalangia cameroni: Kunafin • Spalding • Arbico • Rincon Vitova

Spalangia gemini: Kunafin

Spalangia endius: Kunafin • Natural Pest Controls • Rincon-Vitova • Greenmethods • Bugs for Bugs

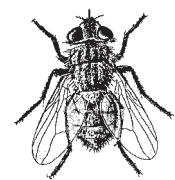
Spalangia nigroaenea: Kunafin

Spalangia sp.: Beneficial Insectary • Peaceful Valley • Spalding • Kunafin

Sphegigaster sp.: Peaceful Valley

Trichomalopsis spp.: Beneficial Insectary

Urolepis rufipes: Kunafin



Parasitic mites:

Stratiolaelaps: Applied Bionomics

• Koppert • Garta • Florikan • Evergreen

Predators:

Histerid beetle, *Carcinops pumilio*: IPM Labs • Rincon Vitova

Dung beetle, *Onthophagus* spp.: Rincon Vitova

Predatory fly, *Hydrotaea aenescens*: IPM Labs

Least-Toxic Chemical Controls

Botanical Fly Repellents:

Planet Natural, Natural Insect Control, Gardener's Supply (Skeeter Shoo, citronella) • Woodstream, Gardens Alive (Bite Blocker, geranium oil) • Stateline (Horse Shoo, citronella fly repellent) • ARBICO (Aloe Herbal Spray) • EcoSmart (Bioganic) • WF Young (UltraShield) • Liquid Fence

Diatomaceous Earth: See ANTS

Pyrethrin:

Roxide, Harmony (Revenge) • Whitmire (PT 175 microencapsulated, PT-565, PT-505 XLO) • Waterbury (Purge III) • Neogen (Formula 66, LD-44Z) • Peaceful Valley (Py-Rin, w/o PBO) • Monterey, Harmony (Bug Buster O, w/o PBO) • Bayer (Harmonix) • MGK, Harmony (PyGanic)

Silica aerogel: See ANTS

FRUIT FLIES

Identification & Monitoring

Pheromones & Traps:

ARBICO, Harmony (Catch-em) • Great Lakes, Gemplers (Multi-Pher, Unitrap, Delta) • Trécé, Gardens Alive!, Great Lakes, Olson, Gemplers (Pherocon) • Suterra (Biolute)

Physical Controls

Traps:

Woodstream, Great Lakes, Peaceful Valley, Natural Insect Control (Victor Fly-In Saucer, Fly Magnet) • Biobest • Planet Natural • Phero Tech • Springstar • Biobest (Droso)

Apple maggot red sphere trap:

Ladd, Gemplers, Harmony, Tanglefoot, Natural Insect Control (Ladd) • Harmony (SureFire) • Peaceful Valley • Phero Tech • Springstar

Light traps:

Gilbert Industries (Professional Light Traps) • Gemplers

Sticky trap/tape:

Phero Tech (Chroma) • Scentry, Great Lakes, ARBICO, Planet Natural, Gemplers (Jackson Fruit Fly Trap) • Olson • Peaceful Valley

Least-Toxic Chemical Controls

Pyrethrin: (see nuisance flies)

Spinosad Bait: Dow, Harmony (Naturlyte), GF-120

FUNGUS GNATS

Physical Controls

Screening:

Hydro-Gardens (Fly Barr) • ATI (Greenhouse screen) • Tipper (Tie-Net) • Green-Tek

Sticky Adhesive:

Seabright, Great Lakes, Harmony, Phero Tech (Stickem Special) • Tanglefoot, ARBICO, Planet Natural, Great Lakes, Gemplers, Harmony, Natural Insect Control, Charley's (Tangle-Trap) • Peaceful Valley

Traps:

ARBICO • Natural Insect Control • Woodstream (Safer Flying Insect) • Phero Tech (Chroma) • Olson, Great Lakes, Gemplers (Stiky Stuff, Stiky Traps) • Peaceful Valley • Springstar • IPM Labs

Biological Controls

Insect-Attacking Nematodes:

Heterorhabditis megidis: Koppert • W. Neudorff

Heterorhabditis sp.: Hydro-Gardens • Koppert • Nature's Control • Natural Insect Control • W. Neudorff • Peaceful Valley • Gardens Alive • Florikan

Steinernema bibionis: W. Neudorff

Steinernema carpocapsae: BioLogic • Biobest • Planet Natural • Gardens Alive! • Hydro-Gardens • IPM Labs • Natural Insect Control • Sierra Biological

Steinernema feltiae: BioLogic • BioBest • IPM Labs • Koppert • Natural Insect Control • W. Neudorff • International Technology • Plant Sciences • Andermatt • Garta • Sierra Biological • EcoSolutions

Steinernema riobravis: Harmony • Sierra Biological

Steinernema spp.: Beneficial • Biowise • Harmony • Hydro-Gardens • Johnny's • Koppert • Natural Insect Control • Nature's Control • BioLogic

Microbial Insecticides:

Bacillus thuringiensis (BT):

Valent USA, Gardens Alive!, Harmony, IPM Labs, Peaceful Valley (Gnatrol) • Gardens Alive (Knock-Out)

Spreader-Sticker Oil for BT Products: Monterey (Nature's Own)

Predators:

Predatory mite, *Geolaelaps* spp.: Rincon-Vitova • Natural Insect Control

Predatory mite, *Gaeolaelaps gillespiei*: Applied Bionomics

Predatory mite, *Stratiolaelaps scimitus*: ARBICO • Applied Bionomics

• BioBest • BioBest Canada • Biological Crop • Biowise • IPM Labs •

Koppert • Natural Insect Control • Bug Factory • International

Technology • Jorgen Reitzel • Plant Sciences • Greenmethods •

Nature's Control • Evergreen • Peaceful Valley •

Eco Solutions • Beneficial • Rincon-Vitova

Predatory beetle, *Atheta* or *Dalotia coriana*: Syngenta Bioline • International Technologies • Biobest Canada • IPM Labs • Natural Insect Control • Rincon Vitova • Greenmethods

Least-Toxic Chemical Controls

Diatomaceous Earth: See ANTS

Insect Growth Regulators:

Methoprene:

Zoecon (Enstar)

Insecticidal Oil: See APHIDS

Neem Products:

Certis, Planet Natural, Harmony (Azatin) • Woodstream, Harmony (Safer's BioNeem) • Certis, Harmony, Peaceful Valley (Neemix, Trilogy) • PBI (Azatrol) • Agro (EcoSense) • Gowan (AZA) • Agro (DeBug) • Parry (AzaMax)

Pyrethrins:

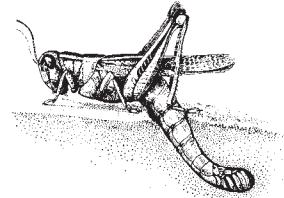
Whitmire (PT 175 microencapsulated, PT-565, PT-505 XLO) • Peaceful Valley (Py-Rin, w/o PBO) • Monterey (Bug Buster O, w/o PBO) • MGK, Harmony (PyGanic)

GRASSHOPPERS

Physical Controls

Row Covers:

- Great Lakes (Fiberweb) • Gardener's Supply, Gardens Alive! (Floating Row Covers)
- Gardens Alive! (Super-Light)
- Harmony (AgGro, Tufbell) • Peaceful Valley (Tufbell, AgGro) • Shepherd's (Agrofabric)
- Mipco • Fiberweb



Biological Controls

Insect-Attacking Nematodes (for mole crickets):

Steinernema carpocapsae: BioLogic • IPM Labs

• Natural Insect Control • Harmony • Andermatt

Steinernema feltiae: BioLogic • IPM Labs • Natural Insect Control • Harmony • Sierra Biological

Steinernema scapterisci: Gardens Alive • Becker Underwood

Steinernema riobravis: Sierra Biological • Harmony

Microbial Insecticides:

Protozoan pathogen:

Nosema locustae (for grasshoppers): Harmony • Hydro-Gardens

• M & R Durango (Nolo Bait) • Nitron, Planet Natural, Gardens Alive! (Semispore Bait) • Peaceful Valley

Fungal pathogen:

Beauveria bassiana (for grasshopper, crickets): Troy, Hydrogardens, Gardener's Supply (Naturalis-T) • BioWorks (Mycotrol)

Least-Toxic Chemical Controls

Borate-Based Insecticides:

NISUS, Target (NIBAN Granular Bait for crickets) • Whitmire (PT 249 Perma-Dust)

Diatomaceous Earth: See ANTS

Insecticidal Soap:

Woodstream (Concern) • Peaceful Valley • Woodstream (Safer)

With pyrethrins:

Peaceful Valley • Woodstream, Gardens Alive!, Harmony, Nitron (Safer Yard and Garden Insect Attack)

Neem Products (Act as Repellents): See APHIDS

Repellent Garlic Spray:

Garlic Research Labs, (Garlic Barrier) • Soil Technologies (Garlic Gard) • Harmony • Peaceful Valley

Rotenone:

Bonide • Peaceful Valley

Sabadilla:

Planet Natural • MGK, Harmony (Veratran) • Peaceful Valley

GRUBS

(See Beetles)

LEAFHOPPERS

Identification & Monitoring

Sticky trap/tape:

Scentry, Great Lakes, ARBICO, Planet Natural (Versagard) • Phero Tech

Physical Controls

Barriers & Exclusion Devices:

Planet Natural • Gardens Alive!

Plastic film to attract leafhoppers:

Crop Production (HopperFinder)

Sticky Adhesive:

Seabright, Great Lakes, Harmony, Phero Tech

(Stikem Special) • Peaceful Valley

Traps and Sticky Tape:

ARBICO • Planet Natural • Gardens Alive • Harmony • IPM Labs
• Woodstream (Safer) • Peaceful Valley • Phero Tech (Chroma)

Biological Controls

Parasitoids:

Anagrus atomus: Biowise • BioBest

Anagrus spp.: Biological Crop

Least-Toxic Chemical Controls (see Aphids)

LEAFMINERS

Physical Controls

Sticky Adhesive:

Seabright, Great Lakes, Harmony, Phero Tech (Stikem Special) •
Tanglefoot, ARBICO, Planet Natural, Great Lakes, Harmony, Natural
Insect Control, Charley's (Tangle-Trap) • Peaceful Valley

Sticky Trap/Tape:

Olson • Gemplers • Phero Tech • Trécé, Great Lakes (Pherocon) •
Harmony • Peaceful Valley • Planet Natural • Gardens Alive

Biological Controls

Parasitoids:

Dacnusa sibirica: ARBICO • Biobest • Biobest Canada • Biological
Crop • Duclos • Biowise • Gartnerei • Koppert • Natural Pest
Controls • Sautter & Stepper • W. Neudorff • Greenmethods •
Natural Insect Control • International Technology • Rincon-Vitova
• Garta

Diglyphus isaea: • ARBICO • Azienda • BioBee • Biobest •
Bioplanet • Biological Control • Syngenta Bioline • Duclos •
Biowise • Gartnerei • Koppert • Natural Pest Controls • Plant
Sciences • Sautter & Stepper • W. Neudorff • Natural Insect

Control • Greenmethods • International Technology • Rincon-
Vitova

Opius pallipes: Bio Pre

Microbial Insecticides:

BT (for citrus leafminer):

Valent USA, Peaceful Valley, Planet Natural, Biowise (Dipel)

Entomopathogenic Fungus:

Metarhizium anisopliae (for meadow spittlebug, coffee leafminer):
Agricola El Sol • Bio Pre

Least-Toxic Chemical Controls

Abamectin:

Bayer Agricultural, Planet Natural (Avid)

Insecticidal Oil:

Florikan (Target Oil) • (See Aphids for a More Complete Listing)

Neem Products:

Certis, Planet Natural, Harmony, Peaceful Valley, Greenmethods
(Azatin for ornamentals, Neemix for food crops) • Woodstream,
Harmony, Peaceful Valley (Safer's BioNeem) • Gardens Alive (Neem-
Away) • Green Light • PBI (Azatrol) • Agro (EcoSense) • Gowan(AZA)

Repellent Hot Pepper Wax:

Charley's • Harmony (Hot Pepper Wax) • St. Gabriel

LICE

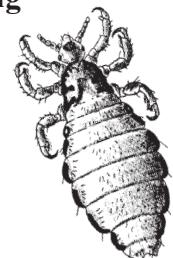
Identification & Monitoring

Head lice detection kit:

Insight (Pronto Lice Detection Kit, for home use)

Head lice prevention, management and educational products:

National Pediculosis Association



Physical Controls

Head lice comb:

Health Enterprises (Acu-Life) • National Pediculosis Association
(LiceMeister)

Least-Toxic Chemical Controls

Enzyme Shampoos:

Safe Effective (Lice-B-Gone)

Pyrethrin shampoo, for head lice: Insight (Pronto) • Bayer (RID)

MAGGOTS

(See Flies)

MEALYBUGS

Physical Controls

Screening:

Hydro-Gardens • Tipper, Harmony (Tie-Net) • Peaceful Valley

Biological Controls

Parasitoids:

Anagyrus fusciventris: Bio Pre

Anagyrus pseudococcii: Amos Rubin • Bio Bee • Biological Control • Associates • FAR

Leptomastidea abnormis: Amos Rubin • Bio Pre • W. Neudorff • Natural Insect Control

Leptomastix dactylopii: Amos Rubin • Azienda • Biobest • Bioplanet • IPM Labs • Koppert • W. Neudorff • Rincon-Vitova • Flora • Katz • Biobest Canada • Biobest USA

Leptomastix epona: Bio Pre

Pseudaphycus flavidulus: Bio Pre

Pseudaphycus maculipennis: Bio Pre

Predators:

Lacewing, *Sympherobius sanctus*: Amos Rubin • Bio Bee • Bio Pre

Lacewing, *Micromus variegatus*: Applied Bionomics

Lady beetles:

Mealybug destroyer, *Cryptolaemus montrouzieri*: Amos Rubin • ARBICO • Azienda • Bio Bee • Biobest • Biobest Canada • Bioplanet • Biological Control • Biological Crop • Bio Pre • Planet Natural • Bugs for Bugs • Biowise • Hydrogardens • IPM Labs • Koppert • Natural Insect Control • Natural Pest Controls • Bug Factory • Nature's Control • Organic Control • Rincon-Vitova • W. Neudorff • Greenmethods • EcoSolutions • Associates • FAR

Hyperaspis polita: Amos Rubin

Nephus reunioni: Amos Rubin • Bio Pre

Scymnus bipunctatus: Amos Rubin

Least-Toxic Chemical Controls

Citrus Mealybug Pheromone: Syngenta Bioline

Chromobacterium: Marrone (Grandev)

Diatomaceous earth: See ANTS

Insecticidal Oil:

Highly refined oil (from fish):

Organic Labs

Highly refined oil (from petroleum):

Monterey, Harmony (Saf-T-Side) • Valent USA, Harmony, Peaceful Valley (Volck) • Sun Oil, Gardens Alive!, Harmony (Sunspray) • Gardens Alive (Eco-Oil) • Summit • Brandt (Tritec) • Monterey

Highly refined seed oil:

Stoller, Peaceful Valley

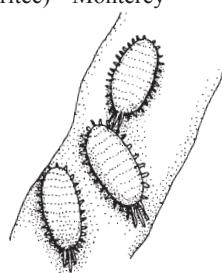
(Natur'l Oil, 93% soybean)

• ARBICO (Spreadall 93% cottonseed)

Insecticidal Soap: See APHIDS

Neem Products:

See LEAFMINERS



MITES

Identification & Monitoring

Traps:

Phero Tech (Varroa Mite Trap)

Physical Controls

Furniture covers for dust mites:

Allergy Control Products

Mattress Covers (to exclude dust mite):

Puritans Pride • Allergy Control

Mattress Cleaning Machine:

Hygienitech

Vacuums:

Proteam (Sierra, Optimus)

Kaolin Crop Protection:

BASF, Peaceful (Surround)

Biological Controls

Microbial Insecticides:

Beauveria bassiana: Troy, Hydrogardens, Gardener's Supply (Naturalis-O and L) • Laverlam, Bioworks, Harmony (Botanigard) • Peaceful Valley • BioWorks (Mycotrol)
Burkholderia (Venerate): Marrone

Predators:

Lady beetle, *Stethorus punctillum* (for European red spider mite): Applied Bionomics • Evergreen • Rincon Vitova • Nature's Control • Natural Insect Control • Greenmethods • ARBICO • EcoSolutions

Predatory bugs:

Orius insidiosus: Syngenta Bioline • Gartenbau • Gartnerei • International Technology • IPM Labs • Koppert • Nature's Control • The Bug Store • ARBICO • Rincon Vitova

Orius laevigatus: Koppert • Biological Crop

Orius majusculus: Biological Crop • Sautter & Stepper • W. Neudorff

Orius spp.: Biobest • Bioplanet • Bio Pre • Duclos • Natural Insect Control

Orius tristicolor: ARBICO • Planet Natural

Predatory gall midge (the mite midge):

Feltiella acarisuga: Bio Pre • Biobest • Biobest Canada • Biological Crop • Biowise • Koppert • Natural Insect Control • Rincon-Vitova • Bug Factory • Greenmethods • Nature's Control • ARBICO • EcoSolutions

Predatory mites:

Amblyseius andersonii (for spider mites): Syngenta Bioline • EcoSolutions • International Technology • Greenmethods

Amblyseius californicus (for two-spotted spider mite): Bio Pre • BioBest • Biotactics • Planet Natural • Hydro-Gardens • International Technology • IPM Labs • Koppert • Kuida • Natural Insect Control • Natural Pest Controls • Nature's Control • Rincon-Vitova • FAR • Greenmethods

Amblyseius cucumeris (for two-spotted spider mite): Applied Bionomics • ARBICO • Evergreen • Syngenta Bioline • Gartnerei • Hydro-Gardens • International Technology • IPM Labs • Bug Factory • Natural Insect Control • Natural Pest Controls • Rincon-Vitova • W. Neudorff • Bio Bee

Amblyseius degenerans (for mites): Evergreen • Syngenta Bioline

Amblyseius fallacis (for two-spotted spider mite, European red mite): Applied Bionomics • Evergreen • IPM Labs • Natural Insect Control • Biotactics • ARBICO • Rincon-Vitova

Galendromus annectans (for persexa mite): ARBICO • Biotactics • Rincon-Vitova

Galendromus helveolus (for persexa mite): ARBICO • Biotactics • Rincon-Vitova

Hypoaspis aculeifer (for bulb mite): Biobest
Mesoseiulus longipes or *Phytoseiulus longipes* (for two-spotted spider mite): ARBICO • Biotactics • Planet Natural • Hydro-Gardens • IPM • Natural Insect Control • Nature's Control • Peaceful Valley • Greenmethods • Rincon-Vitova

Metaseiulus occidentalis or *Galendromus occidentalis*: ARBICO • Biological Control • Biotactics • Planet Natural • Florikan • Gartenbau • IPM Labs • Koppert • Kuida • Natural Insect Control • Natural Pest Controls • Nature's Control • Peaceful Valley • Rincon-Vitova • Greenmethods

Neoseiulus setulus (for cyclamen mite): ARBICO

Phytoseiulus macropilis (spider mite): Biotactics • Rincon-Vitova • Beneficial Insectary

Phytoseiulus persimilis (for two-spotted spider mite): Applied Bionomics • ARBICO • Azienda • Bio Bee • Biobest • Biobest Canada • Bio Pre • Bioplanet • Biological Control • Biological Crop • Biotactics • Planet Natural • Syngenta Bioline • CO. DEA • Central Coast • Duclos • Evergreen • Biowise • Florikan • Gartenbau • Gartnerei • Hydro-Gardens • International Technology • IPM Labs • Koppert • Kuida • Natural Insect Control • Natural Pest Controls • Bug Factory • Nature's Control • Peaceful Valley • Rincon-Vitova • Sauter & Stepper • W. Neudorff • Zaklad • Greenmethods • EcoSolutions • Flora • Katz • Natural Enemies

Scolothrips sexamaculatus (predatory thrips): Rincon Vitova

Typhlodromus athiasae (for red mite): Amos Rubin

Least-Toxic Chemical Controls

Abamectin (Isolated from *Streptomyces avermitilis*):

Bayer Agricultural, Planet Natural (Avid)

Cedar Oil (Cedar Gard):

NRG

Herbal Oils (Zero Tol): Natural Gardening Solutions

Clove oil, garlic extract:

JH Biotech, Safer Gro, Harmony (Pest Out)

Essential Oils:

Liquid Fence (EcoLogic) • Brandt (Ecotec) • EcoSmart • Monterey

Organic Neem Extract:

Parry (AzaMax)

Insecticidal Oil:

Highly refined oil (from fish):

Organic Labs (95% fish, 5% sesame, Organocide)

Highly refined oil (from petroleum):

Monterey, Harmony (Saf-T-Side) • Valent USA, Harmony, Peaceful Valley (Volck Supreme Spray) • Sun Oil, Charley's, Gardens Alive!, Harmony (Sunspray) • Gardens Alive (Eco-Oil) • Summit • Brandt (Tritec)

Highly refined seed oil:

ARBICO (Spreadall, 93 % cottonseed) • Stoller, Peaceful Valley (Natur'l Oil) • Monterey (Erase)

Insecticidal Soap: See APHIDS

Neem Products: See APHIDS

Pyrethrin:

Neogen (microencapsulated, Capsul-Ban, Formula 66, LD 44Z) •

Roxide • Whitmire (PT 175 microencapsulated, PT-565, PT-505 XLO) • Peaceful Valley (Py-Rin, w/o PBO) • Monterey, Harmony (Bug Buster-O, w/o PBO) • MGK, Peaceful, Harmony (PyGanic) • Bayer (Harmonix, w/o PBO)

Pyrethrin, rotenone, sulfur and copper (garden mites):
Bonide, Gardner's Supply (Bonide Garden Dust)

Pyrethroid (fluvalinate):

Zoecon, Miller Bee (Apistan Strips for bee mites)

Pyrethroid (permethrin-soaked cotton balls given to laboratory rodents to kill ectoparasite vectors):

Ecohealth (Mite Arrest)

Repellent Garlic Spray (for spider mite):

Garlic Research Labs, (Garlic Barrier) • Soil Technologies (Garlic Gard) • Peaceful Valley • Safer-Gro

Repellent Hot Pepper Wax:

Harmony • Peaceful Valley • St. Gabriel

Borates: Ecology Works (Flea and Dust Mite Control)

Tannic acid (for house dust mites):

Allergy Control Products

MOSQUITOES

Identification & Monitoring

Mosquito Traps:

BioQuip (CDC, EVS, New Jersey) • Gempler's • Woodstream (Mosquito Magnet) • Biosensory (Dragonfly) • Envirosafe (Megacatch) • Peaceful Valley (Lentek) • Flowtron • Springstar

Attractant for Mosquito Traps:

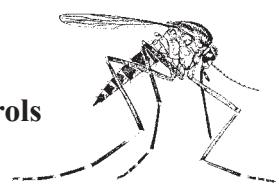
Flowtron (Octenol controlled release)

• Sigma Chemical (Octenol) • Biosensory

Mosquito larvae collection devices:

Clarke Mosquito Control (Dippers)

• BioQuip • Ben Meadows



Physical Controls

Screening and Netting:

BioQuip • REI • Apex Medical

Monomolecular Films to Stop Larvae:

Cognis (Agnique) • Univar

Biological Controls

Habitat:

Bat Houses: Harmony, Natural Insect Control, Peaceful Valley

Purple martin bird houses: Nature House (Trio)

Microbial Insecticides:

Bacillus sphaericus (for Culex larvae): Valent Bio (VectoLex, Spherimos)

Bacillus thuringiensis israelensis (BTI) for mosquito & blackfly larvae: Valent Bio, Peaceful Valley (Vectobac) • Valent Bio, Peaceful Valley (Bactimos) • Zoecon (Teknar) • Summit, Harmony, Nitron, Sutton, Natural Insect Control (Mosquito Dunks) • Ecological (Microbe Lift) • Harmony (Mosquito Bits)

Predators:

mosquito fish, *Gambusia affinis*: J. Reilly (Fish shipped May-July) • Natural Pest Controls • Richmond

Least-Toxic Chemical Controls

Insecticidal Oil: See APHIDS

Insect Growth Regulators:

Methoprene pellets, Zoecon (Altosid)

Repellents (Botanical):

Planet Natural, Natural Insect Control (Skeeter Shoo Botanical) • San Jacinto (Mosquito Beater) • S.C. Johnson, Planet Natural (citronella candles) • Woodstream, Gardens Alive (Bite Blocker, geranium oil) • Tender, A.M. Leonard (Natrapel citronella) • Woodstream, Garlic Research (Mosquito Barrier Area Repellent) • Dr. T's • Charley's • EcoSmart (Shoo Bug) • HOMS (Bite Blocker) • Gardens Alive (Sting Free, geranium oil) • WPC (Repel lemon eucalyptus) • Liquid Fence

Seeds or Mosquito-Repelling Plants:

Renee's (sweet basil) • Park Seed (holy basil) • J.L Hudson (seeds for repellent plants)

DEET repellent:

REI (Cutter's, Jungle Juice) • BioQuip • 3M (Ultrathon)

Pyrethrin repellent (not for use on skin):

WPC (Permanone) • Waterbury (Purge III)

MOTHS

(See Caterpillars)

NEMATODES

Biological Controls

Beneficial Nematodes:

Steinernema spp.: Nitron, Johnny's • BioLogic • Hydro-Gardens

Biocontrol bacteria:

Burkholderia cepacia: Soil Technologies

Bacillus chitiniosporus: Rincon-Vitova (Activate)

Pasteuria usage: Pasteuria BioScience

Biocontrol Fungi:

Arthrobotrys sp. (Europe only): Bio Pre

Dactylorella sp. (Europe only): Bio Pre

Myrothecium verrucaria: Valent USA, Peaceful Valley (DiTera)

Paecilomyces lilacinus: Bio Pre • Prophyta • Certis (MeloCon)

Experimental Fungus: International Mycological Institute

Chitin: Planet Natural • Peaceful (Shrimp Shells)

Botanical nematicide: Soil Technologies (Nemastop) • Monterey (Nema Q)

Sesame: Poulenger (Dragonfire, oil; Ontrol, liquid) • Natural Organic (Nemastop, groundup plant) • Brandt (Nemax, sesame oil)

Neemcake: Agro

SAWFLIES

Physical Controls

Traps and Sticky Tape:

Great Lakes

Least-Toxic Chemical Controls

Insecticidal Soap: See APHIDS

Spinosad: Dow • Harmony • Monterey

Neem Products: Certis, Planet Natural, Harmony (Azatin) •

Woodstream, Harmony, (Safer's BioNeem) • PBI (Azatrol) • Agro

(EcoSense) • Certis, Harmony, Peaceful Valley (Neemix, Trilogy)

SCALES

(See Beetles)

Identification & Monitoring

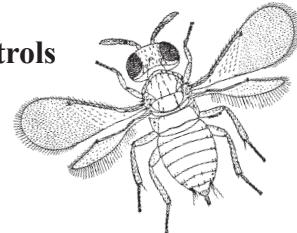
Pheromones & Traps:

ARBICO, Harmony (Catch-em) • Trécé, Great Lakes, Gemplers, Harmony, Peaceful Valley (Pherocon, Multi-Pher, Unitrap, Delta Traps) • Scentry, Great Lakes, ARBICO, Planet Natural, Gemplers, Natural Insect Control (Delta & Wing Trap) • Phero Tech • Woodstream (SureFire)

Sticky Trap/Tape:

ARBICO • Planet Natural • Great Lakes • Olson • Gemplers • Scentry • Peaceful Valley • Phero Tech

Physical Controls



Barriers & Exclusion Devices:

Planet Natural • Gardens Alive!

Screening:

Hydro-Gardens (Fly Barr)

Sticky Adhesive:

Seabright, Great Lakes, Harmony, Phero Tech (Stickem Special)

Traps and Sticky Tape:

Planet Natural • Gardens Alive! • Harmony • IPM Labs • Phero Tech (Chroma) • Peaceful Valley

Biological Controls

Parasitoids:

Aphytis lingnanensis (for California red scale): Amos Rubin • Bugs for Bugs

Aphytis melinus (for red scale): ARBICO • Bio Pre • FAR • IPM Labs • Kuida • Natural Insect Control • Natural Pest Controls • Organic Control • Rincon-Vitova • Sespe Creek • Greenmethods • Ecosolutions

Coccophagus lycimnia: Bio Pre

Encyrtus lecaniorum: Bio Pre

Metaphycus zebratus (for soft scale): Bio Pre

Microterys flavus (for brown scale): Bio Pre • Natural Pest Controls • W. Neudorff • Natural Insect Control

Predators:

Lady beetles:

Chilocorus baileyi (for armored scale): Bugs for Bugs • W. Neudorff

Chilocorus circumdatus (for citrus snow scale, armored scale): Bugs for Bugs • W. Neudorff

Chilocorus nigritus (for hard scale): Bio Pre • W. Neudorff

Harmonia axyridis: Rincon Vitova

Lindorus lophantheae: ARBICO • Bio Pre • Planet Natural • Bugs for Bugs • Natural Insect Control • Rincon-Vitova • Ecosolutions

Scymnus sp. (for soft scale): Bio Pre

Gardening (Safer Yard and Garden) • Peaceful Valley

Pyrethrin:

Bayer (Harmonix)

Pyrethroid (permethrin-soaked cotton balls taken to rodent nests to kill ectoparasite vectors):

Ecohealth, Harmony (Damminix)

Silica Aerogel: see ANTS

TMS Tick Management System: Bayer ES

Vertalec)

Codacide oil to use with fungal spray: Microcide

Parasitoids:

Encarsia deserti: Hydro-Gardens

Encarsia formosa (for greenhouse whitefly): ARBICO • Applied Bionomics • Biobest • Bioplanet • Biological Crop • Budai • Syngenta Biolane • CIE • CO. DEA • Duclos • Biowise • Evergreen • Gartnerei • Hydro-Gardens • IPM Labs • Koppert • Natural Insect Control • Natural Pest Control • Natural Pest Controls • Nature's Control • Organic Control • Planet Natural • Rincon-Vitova • Sautter & Stepper • W. Neudorff • Zaklad • Greenmethods • Flora • International Technology • Biobest Canada • Katz

Encarsia mundus: Bioplanet, Biobest, International Technology

Eretmocerus californicus (for sweetpotato or silverleaf whitefly): Beneficial • Bio Pre • Florikan • International Technology • IPM Labs • Plant Sciences • Rincon-Vitova

Eretmocerus eremicus: Syngenta Biolane • Hydrogarden • Biobest Canada • Greenmethods • Natural Insect Control • Koppert • Biological Crop • Rincon-Vitova • International Technology • Greenmethods

Predators:

Lacewing (greenhouse use),

Chrysoperla carnea or *Chrysopa carnea*: See APHIDS for suppliers

Lacewing (greenhouse use),

Chrysoperla rufilabris: See APHIDS for suppliers

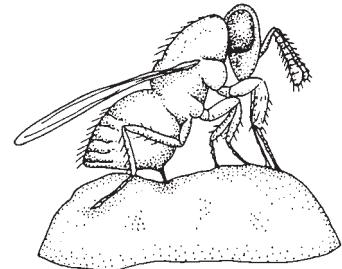
Lacewing (greenhouse use),

Mallada signata: Bugs for Bugs

Lacewing, *Micromus variegatus*:

Applied Bionomics

Lady beetle, *Delphastus pusillus* (for sweetpotato or silverleaf whitefly): Amos Rubin • Biobest • Biological Crop • Evergreen • Planet Natural • Hydro-Gardens • International Technology • IPM Labs • Natural Insect Control • Nature's Control • Greenmethods • Peaceful Valley • Organic Control



Lady beetle, *Delphastus catalinae*: Applied Bionomics • IPM Labs • Rincon-Vitova

Predatory bug, *Macrolophus caliginosus*: Biobest • Bioplanet • Biowise • Koppert

Predatory bug, *Dicyphus hesperus*: Applied Bionomics • Natural Insect Control • Biobest Canada

Least-Toxic Chemical Controls

Diatomaceous Earth: See ANTS

Insect Growth Regulators: Zoecon (Enstar)

Insecticidal Oil:

Highly refined oil (from petroleum):

Monterey, Harmony (Monterey)

• Sun Oil, Gardens Alive!, Harmony,

Peaceful Valley (Sunspray) • Florikan

(Target Oil) • Gardens Alive (Eco-Oil) • Brandt (Tritec)

Highly refined seed oil:

Stoller, Peaceful Valley (Natur'l Oil) • Gardens Alive (Oil Away)

Insecticidal Soap: See APHIDS

Neem Products:

Certis, Planet Natural (Azatin) • Woodstream, Peaceful Valley (Safer's BioNeem) • Certis, Harmony, Peaceful Valley (Neemix, Trilogy) • San Jacinto (Organica) • PBI (Azatrol) • Agro (EcoSense, AZA Direct) • Gowan (AZA) • Monterey • Agro (DeBug) • Parry (AzaMax)

Biological Controls

Microbial Insecticides:

Beauveria bassiana fungus: Troy, Hydro-Gardens, Gardener's Supply, Planet Natural (Naturalis O, L, ES) • Laverlam, Bioworks, Hydro-Gardens, Harmony, Rincon-Vitova (Mycotrol, Botanigard)

Burkholderia (Venerate): Marrone

Paecilomyces fumosoroseus fungus (call for availability in the U.S.): Certis (PFR-97) • Natural Industries (No Fly) • Rincon Vitova

Verticillium lecanii fungus (for greenhouse use): Koppert (Mycotal,

Pyrethrin:

Monterey (Bug Buster-O w/o PBO) • MGK, Harmony, Peaceful (PyGanic) • Bayer (Harmonix)

Repellent Garlic Spray:

Garlic Research Labs, (Garlic Barrier) • Soil Technologies (Garlic Gard) • Peaceful Valley • Safer Gro

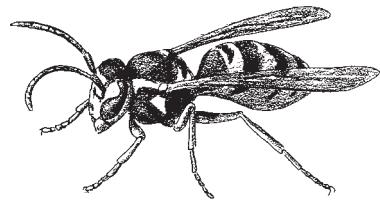
Essential Oils:

Zoecon (Essentria, EcoPCO) •

Sterling (WHY) • Ecosmart

Mint Oil:

Liquid Fence (Mint Oil Wasp Killer)

**Resmethrin plus components****that “freeze” wasps:**

Roxide (Revenge Wasp & Hornet Killer)

Silica Aerogel (with pyrethrin): See ANTS

Sting Stop (for pain): Nature's Way

Wasp/Bee Sting Medication:**Self-injected epinephrine:**

Verus (Twinject) • Dey Labs (EpiPen)

First-aid for bee stings:

Miller Bee (Sting Aid)

WORMS

(See Caterpillars)

YELLOWJACKETS and BEES**Identification & Monitoring****Pheromones & Traps:**

Woodstream, Planet Natural, Peaceful Valley, Harmony, Great Lakes (SureFire) • Phero Tech (Phero Tech Lures) • Phero Tech, Great Lakes (Unitrap) • Trécé, Gardens Alive!, Great Lakes, Olson, Gemplers (Pherocon) • San Jacinto (for Africanized bees)

Physical Controls**Beekeeping equipment for use on bee swarms, yellowjacket nest removal:**

Miller Bee (bee veil, gloves, suits) • Dadant & Sons (Bee veils & coveralls) • BioQuip

Bee swarm traps: Scentry, Great Lakes, ARBICO, Planet Natural (Swarm Trap) • San Jacinto • Gemplers

Bee Pheromone Lure: Miller Bee • Phero Tech • San Jacinto

Bee Pheromone Spray to

attract bees: Phero Tech (Fruit Boost) • Isca

Bee Varroa Mite Trap:

Phero Tech

Yellowjacket Traps:

Sterling Intl. (Rescue! Yellowjacket) • Woodstream, Great Lakes, Peaceful Valley, Natural Insect Control (Victor Fly-In-Saucer) • Woodstream, Harmony, ARBICO, Peaceful Valley, Great Lakes, The Natural Gardening (SureFire) • Woodstream (Safer Pheromone Trap) Yellowjacket Attractant (Sterling)

Least-Toxic Chemical Controls**Boric acid:**

Whitmire (PT 249 35% boric acid)

Diatomaceous Earth (with pyrethrin): See ANTS

Insect Repellent Garbage Bags: Pest Guard

Insecticidal Soap:

For Africanized Bees:

Gowan, Harmony (M-Pede)

Pyrethrin:

Neogen (Capsul-Ban microencapsulated, Formula 66, LD-44Z) • Roxide • Whitmire (PT 175 microencapsulated, PT-565, PT-505 XLO) • Gardener's Supply (Pyrethrin and Rotenone) • Bayer (Harmonix) • Woodstream (Safer Flying Insect)

MISCELLANEOUS**Educational Materials****Databases (Pest Management):**

Bio-Integral Resource Center (Online Organic) • University California Statewide IPM Program (IMPACT Database) • World Wide Web

On-line, CD-ROM database of registered pesticide products, chemical fact sheets, MSDS sheets:

NPIRS User Services (Pest Bank) • World Wide Web

Pest Management Publications & AV Products:

Books on agriculture, horticulture, pest management:

Jack and the Beanstalk

Integrated Pest Management publications:

Bio-Integral Resource Center (BIRC)

Slides on biological control:

BCW

Slides, reference library, training manuals:

Univar

Videos introducing IPM in agriculture, landscaping, & greenhouses, two pest ID slides kits:

San Luis Video

Identification & Monitoring**Computers & Software:****Apple scab forecasting equipment:**

Gemplers (PSAOC consultant software)

Compost maturity test kit: Woods End (Solvita)**Portable data recording equipment:**

Wescor (Biophenometers)

Information/Identification Services & Supplies:

Entomological specimens (10,000 species): Combined Scientific Supplies, Great Lakes, Gemplers, BioQuip

Equipment, supplies & books: BioQuip • Gemplers

Ichneumonid identification service: American Entomological Institute

Identification and information service for pests and beneficial insects: CAB Biosci• BioNet

Pheromone Monitoring Traps: Trece (Storgard, Pherocon)

Identification of Entomopathogenic Nematodes: CAB Biosci

Information, identification of agricultural, urban insects: Cooperative Extension Service (local offices)

Information service on biological control: CAB Biosci • Bio-Integral Resource Center (BIRC)

Information on Pesticide Toxicity: <http://ace.orst.edu/info/extoxnet> • <http://www.pesticideinfo.org> • Bio-Integral Resource Center

Information on BIRC Publications: <http://www.birc.org>

Information on Biocontrol Insectaries: ANBP

Sustainable Agriculture Website: <http://www.sarep.ucdavis.edu/grants/database>

Monitoring Devices:

Data Logger: Onset Computer (Hobo)

Electronic insect counter: Automata (Data-Lynx BUGCOUNT)

Flashlight with red filters: (Streamlight)

Flashlight Helmet: Streamlight (Cyclone)

Inspection mirror: Applied Bionomics, Harmony Farm (Magnifier hand lenses, headband magnifiers) • Professional Equipment

Microscopes: Gemplers (Donegan Optical) • RF Inter-Science, Gemplers (MacroScope 25, MacroScope 45, MacroScope 18-36 Zoom)

Microwave Termite Detectors: Termatrac (Termatrac)

Moisture meters: Delmhorst (Delmhorst) • Jim Simmons • Professional Equipment

Termite Sniffers: Professional Equipment

Radon Test Kits: Professional Equipment

Infrared Cameras (for termites): Professional Equipment

Sweep nets: Oakfield Apparatus • BioQuip • Great Lakes

Trap for Asian Ladybeetles: Gardener's Supply

Temperature monitor: Gempler's

Maximum-Minimum Thermometer: BioQuip

Degree-day Calculators: Gemplers • BioQuip

Vacuums: ARBICO (Bug Sweep) • BioQuip Products (Insect Vacs) • D-VAC Company (D-VAC) • Gardener's Supply (Bug Vacuum) • Proteam (Sierra, Optimus) • Peaceful Valley

Water bacteria analysis kits: Professional Equipment • Idexx • Neogen

Weather monitor & disease forecasting system: Automata (Data-Lynx Degree Day) • Neogen (EnviroCaster) • Gemplers (Pessl Metos Products)

Pesticide Residue Detection:

Aquatic sampling equipment: Wildlife Supply

Detection of carbamate, organophosphate & thiophosphate residues in air, water, soil or surfaces: Neogen (Veratox, Ticket) • Silverlake

Lead testing kit: Professional Equipment • Planet Natural

Lead, pesticides, nitrates test kit: Silverlake

Physical Controls

Asian Ladybug Trap: Springstar

Row Covers: Charley's (Harvest-Gard) • See Beetles (crop pests)

Plum Curculio Traps: Great Lakes

Varroa Mite Traps: Great Lakes

Stinkbug Trap: Sterling • AgBio

Biological Controls and Supplies

Artificial Diets:

For lacewings & lady beetles:
Rincon-Vitova • The Ladybug Company • Greenmethods (Biodiet) • Oliver • Planet Natural • Gardens Alive (Bug Pro)

Wheat for lacewings & lady beetles:
Planet Natural • Peaceful Valley, Charley's (Good Bug) • Natural Insect Control

Teflon Insect Barrier:
Local Hardware Store (see Plumbing Supplies)

Habitat:

Bat house to encourage insect predation by bats:
Gardener's Supply (Bat House) • Peaceful Valley • Natural Insect Control • Harmony • Planet Natural

Seed mixture for beneficial insect habitat:
Gardens Alive! (Haven Flowering Herbs, Haven Cover Crop) • Peaceful Valley (Good Bug Blend, Border Patrol) • Lohse Mills • Gardner's Supply • W. Atlee Burpee • Renee's

California Native Grass and Flower Seeds: Pacific Coast Seeds

Soil analysis test kits: BioQuip • Great Lakes • Peaceful Valley

Transplants for beneficial insect habitat:
Cornflower Farms

Insect and Microbial Rearing Supplies:

Autolyzed yeast (rearing medium, fruitfly attractant, baiting control): Bugs for Bugs

Sitotroga cerealella (moth eggs for Trichogramma rearing medium): Kunafin

Supplies for rearing insect pathogens: International Mycological Institute • Oliver • Life Technologies

Pollination aids:
Phero Tech (Fruit Boost)

Pollinators: bumble bee, *Bombus* spp.: W. Neudorff • Biobest • Koppert • Natural Insect Control • Bio Bee

Mason bee lodge: Arbico

Predators:
Chinese praying mantid, *Tenodera aridifolia sinensis*: ARBICO • Planet Natural • Natural Insect Control • Natural Pest Controls • Peaceful Valley • A-1 Unique • Nature's Control • Greenmethods

Red hybrid earthworms, *Lumbricas* sp.:
A-1 Unique • Rincon-Vitova • Natural Insect Control

Earthworm cocoons: Gardens Alive

Pesticide Application Equipment

Application equipment for structural pest control:
B & G • Harmony • Peaceful Valley • Professional Equipment • Univar

Bait applicator:
Specialty Products (BaitGun) • Whitmire • Blue Diamond

Dusters:
B&G Equipment (B&G Dusters) • AgrEvo (Actisol) • Planet Natural, Nitron, Peaceful Valley, Gardens Alive, Charley's (Earth Duster) • Technicide • Univar (Getz Gun) • Parker (P.E.S.T. Power Applicator) • Woodstream, Peaceful Valley (Pest Pistol)

Electrostatic sprayers/dusters:
Electrostatic Spraying Systems • Bee Tee

Sprayers:
Planet Natural • Bee Tee • Gardener's Supply

(Spraydoc) • Green Pro • Harmony • Univair • Gempler's • Lesco

Tool for Injecting Wall Voids: Paragon • B & G

Protective Skin Coating: Gloves in a Bottle

Respirators:

BWS • Harmony • Lab Safety Supply (full hood respirator) • Sperian (Series 86 Disposable APR) (Call Sperian for local distributors) • Univair

Production Supplies

Irrigation Equipment: Harmony

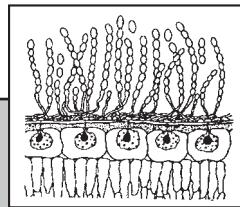
Organic Fertilizer: Gardener's Supply • San Jacinto • Harmony

• Peaceful Valley • New Era

Recycling Resources

Compost, Used Materials: Calmax • New Era

Portable Bailer to Recycle Solarization Plastic: Kennco



PLANT DISEASE MANAGEMENT

CROWN GALL DISEASE

Biological Controls

Microbial Fungicides:

Agrobacterium radiobacter strain K84: AgBioChem, Necessary, Harmony (Galltrol-A, Gallex) • New BioProducts, IPM Labs (NoGall K1026)

PATHOGENS

of Flowers, Foliage and Fruit

Identification & Monitoring

Apple scab forecasting equipment:

Harmony (Qualimetrics Hygrothermograph) • Automata (Scab Off software) • Automata (Grapemold)

Lettuce downy mildew prediction software: Automata (Let Down)

Indicator plant (Summer Madness petunia) for tomato spotted wilt: Ball Seed

Tomato spotted wilt virus detection kit: Agdia

Plant disease detection kits: Neogen (Reveal) • Hydros

Physical Controls

Fungal Barriers:

Antitranspirants:

Green Pro (Vita Coat) • Miller (Vapor Gard) • PBI/Gordon (Transfilm) • Wilt-Pruf (Wilt-Pruf) • Better Flora (Wilt Pruf) • Harmony

Kaolin coating: BASF, Peaceful, Gardens Alive (Surround)

Horticultural Controls

Disease-Resistant Roses:

Heritage Rosarium • High Country • Hortica • Heirloom • Jackson and Perkins • Vintage Gardens • Rose Catalog • American Rose Society

Biological Controls

Microbial Fungicides:

Aureobasidium pullans: Westbridge

Bacillus amyloliquefaciens: Certis • Novozymes

Bacillus pumilis (biofungicide): AgraQuest (Sonata) • Rincon-Vitova (Activate) • Harmony (Sonata)

Bacillus subtilis (Serenade, Rhapsody): AgraQuest, Gardens Alive • BioWorks (Cease)

Coniothyrium minitans (for Sclerotinia): Prophyta

Compost tea brewers: Growing Solutions • SoilSoup • Microb Brewer • Sustainable

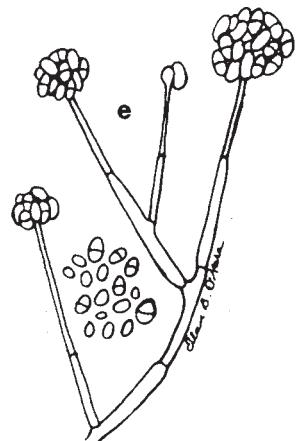
Pseudomonas fluorescens (for fire blight): NuFarm (Blight Ban)

Pseudomonas solanacearum (non-pathogenic for bacterial wilt control): Natural Plant Protection

Pseudomonas syringae (for postharvest): Jet Harvest (BioSave)

Trichoderma harzianum (for grey mold): Makhteshim-Agan (Trichodex) • Bioworks (Plant Shield) • Borregaard • Binab (Plant Gard)

Trichoderma sp. (for chlorotic vine leaf curl): Binab (Binab-T)



Least-Toxic Chemical Controls

Agents for Induced Resistance: Syngenta (Actigard) • Garden's Alive (harpin, Green Guard) • JH Biotech (Fosphite) • Organic Labs (Plant Doctor) • Plant Health Care (Harpin)

Bicarbonate with sticker: Gardener's Supply (Remedy) • Monterey • Bioworks (Milstop) • Harmony (Bicarb)

Calcium Foliar Spray: Bonide (Rot-Stop) • Monterey

Essential Oil: EcoSmart (Sporan) • Monterey (PhytoGard) • Soil Technologies (Fungastop) • Brandt (Sporatec)

Garlic and Oil: JH Biotech, Safer Gro, Harmony (Mildew Cure)

Giant Knotweed Extract: Marrone (Regalia)

Copper & Sulfur Fungicides:

Monterey, Harmony (Liqui-Cop) • Monterey (Nordox, Copper Count N, Micronized Sulfur) • Harmony, Peaceful (Copper Hydroxide) • Bonide, Gardener's Supply (Bonide Garden Dust) • Gardens Alive, Planet Natural (copper soap) • Woodstream (Rose and Flower) • Stoller (TopCop)

Flowable sulfur formulation:

Woodstream, Harmony, Charley's, (Safer Garden Fungicide) • Peaceful Valley • Stoller (That) • Harmony (Kumulus)

Fungicidal Soap (copper and soap): Gardens Alive (Soap Shield)

Peroxide Oxidants: Biosafe (Oxidate, Zero Tol)

Oil and Lime-Sulfur:

Best Sulfur Products

Calcium Thiosulfate:

Best Sulfur Products (Thiocal)

Highly refined oil (from petroleum) & sulfur: Peaceful Valley
Neem Products (for mildew, botrytis, rust): Certis, Harmony, Peaceful Valley (Trilogy, Triact) • Greenlight • San Jacinto (Organica)
Potassium Phosphate (Fosphite): JH Biotech • AgBio (AgriFos) • Organic Labs (Plant Doctor)

Horticultural Oil: See APHIDS

ROOT PATHOGENS

Identification and Monitoring

Detection kit for pathogens:

Neogen (Reveal) • Agdia • Hydros

Physical Controls

Heat, Steam and Hot Water:

Heat (electric soil sterilizer):

Great Lakes, Gempfers

Solarization Plastic:

Mipco • Peaceful Valley

Portable Bailer to Recycle Solarization Plastic:

Kennco Manufacturing

Steam Machines and Boilers:

Sioux • Saskatoon

Biological Controls

Microbial Fungicides:

Burkholderia cepacia: Soil Technologies

Fusarium oxysporum (non pathogenic): Natural Plant Protection

Gliocladium virens (for pythium, rhizoctonia): Certis, Harmony, Gardens Alive, Peaceful (SoilGard) • AgBio (Primastop)

Gliocladium sp. (for fusarium, pythium): Kemira Oy, Hydro-Gardens (Gliomix)

Microbial Antagonists: San Jacinto (MicroGro) • Rincon-Vitova • Novozymes

Pythium oligandrum: Gowan (Polyversum)

Pseudomonas cepacia: Soil Technologies (Bac-Pack)

Pseudomonas solanacearum (non-pathogenic): Natural Plant Protection

Streptomyces griseoviridis strain K61 (for fusarium, damping off,

pythium, phytophthora, etc.): Kemira, Hydro-Gardens (Mycostop) •

AgBio (Mycostop) • Peaceful Valley • Rincon-Vitova • Harmony •

Plant Health Care • Planet Natural

Streptomyces sp.: Spray-N-Grow (RootGuard)

Streptomyces lydicus (for fusarium, rhizoctonia, pythium):

Natural Industries, Harmony (Actinovate)

Trichoderma harzianum (soil treat-

ment for root pathogens): BioWorks (Rootshield, T-22) • Binab •

Borregaard • Harmony

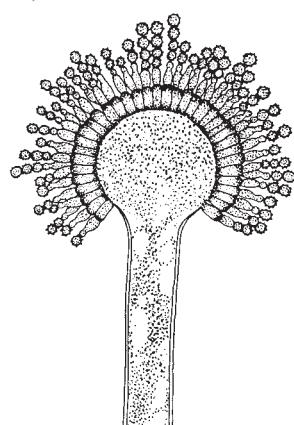
Trichoderma atroviride (cold toler-
ant): AmPac (Plant Helper)

Trichoderma gamsii: Isagro (Tenet)

AgraQuest (BioTam)

Trichoderma spp. mix: BioWorks

(Rootshield Plus)



Disease-Suppressive Seed or Soil Treatment:

Bacillus subtilis: Rincon-Vitova

(Activate) • Gardens Alive • Growth Products (Companion) • Bayer

(Kodiak) • Harmony (Serenade)

Bacillus uniflagellus: Rincon-Vitova (Activate)

Bacillus spp. (mixture): Rincon-Vitova

Burkholderia cepacia: Soil Technologies

Induced Resistance Seed Treatment: Heads Up

Trichoderma harzianum (seed treatment for root pathogens): BioWorks (Rootshield, T-22) • Agricola Mas Viader

Trichoderma gamsii: Isagro (Tenet) • AgraQuest (BioTam)

Neemcake Soil Amendment: Peaceful Valley • Agro

Disease-suppressive container mixes or compost:

Earthgro (Scotts) • Sun-Gro • Louisiana Pacific • O.M. Scotts (Hyponex) • Paygro

Micronutrients:

Spray-N-Grow

Compost Tea Brewing Equipment: Growing Solutions • SoilSoup •

Microp Brewer • Sustainable • Willamette

Endomycorrhizae to increase plant nutrition and help protect against disease:

Glomus sp. (VAM fungus): Bioscientific (Mycorise) • BioOrganic •

Mikro-Tek • Biological Crop • Natural Fertilizer • Rincon-Vitova •

AgBio • Novozymes • Mycorrhizal Applications • Peaceful Valley

Ectomycorrhizae (forest nurseries, urban trees):

Pisolithus tinctorius: Rincon-Vitova • Peaceful Valley • Plant Success • AgBio • Mycorrhizal Applications

Pisolithus, Rhizopogon mixtures: Novozymes

Myconate (stimulates mycorrhizae): Plant Health Care

TREE WOUND PATHOGENS

Biological Control

Trichoderma sp.: Binab (Binab-T), to treat tree wounds

TURF DISEASES

Identification & Monitoring

Detection kit for turf diseases:

Neogen(Reveal) • Neogen (Alert) • Hydros

Compost maturity test kit:

Woods End (Solvita)

Physical Controls

Turf Aerator:

Harmony, Peaceful Valley (Gorilla Core Aerator)

Horticultural Controls

Brown patch resistant turfgrass:

Turf Seed (Tar Heel, Wolfpack, Coronado Gold, Olympic Gold)

Biological Controls

Microbial Soil Amendments:

New Era Farm Service (composted soil amendments) • Jade Mountain (composting toilet) • NRG (Activate)

Beneficial microorganisms that attack turf pathogens:

Gardener's Supply (Green Magic) • Peaceful Valley (Restore) •

Bioworks (Turfmate) • Soil Technologies (BacPack) • Natural

Fertilizer • Novozymes (Green Releaf) • NRG (Slap, Nemaguard)

MISCELLANEOUS

Educational Materials

Pest Management Publications & AV Products:

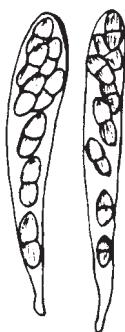
Integrated Pest Management publications, videos:

Bio-Integral Resource Center (BIRC)

Identification & Monitoring

Apple scab forecasting equipment:

Automata (Scab Off)



Information/Identification Services:

Fungal identification service and supplies:

CAB Biosci

Information, identification of agricultural, urban insects: Cooperative Extension Service (local offices)

Information service on biological control using microbes: CAB Biosci

Miscellaneous Compost Aids: Charley's (Compost Thermometer) • Natural Insect Control (Earthworms) • Woods End (Compost Maturity Test Kit)

Compost Tea Brewing Equipment: Growing Solutions • SoilSoup • Microb Brewer • Sustainable • Willamette • Peaceful Valley

Composting Toilet: Real Goods

Mycotoxin Detection Kits: Neogen

Nematode identification service: CAB Biosci

Plant Disease Detection Kits (for fusarium mold, pythium, phytophthora, rhizoctonia, sclerotina, brown patch, dollar spot): Neogen Corp. (Alert, Agri-Screen, Reveal) • Hydros • Agdia

Plant Disease Detector: Automata Inc. (Leaf Moisture Sensor)

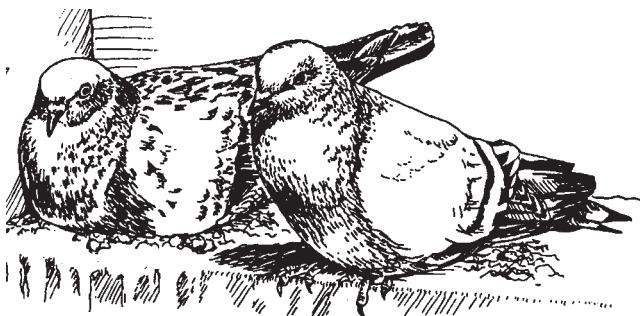
Plant Disease Prediction Software (for general fungal disease, apple scab, botrytis, powdery mildew): Automata Inc. (GET WELL) • Automata (Scab Off) • Automata (GrapeMold)

Recycler for Solarization Plastic (Portable Bailer): Kennco

Soil Testing Kits, pH Meters: BioQuip • Ben Meadows • Harmony • Peaceful Valley • Gemplers • Woods End (Soil Respiration) • Arbico

Soil Testing, Microbials and Minerals: Earthfort

Soil Test Strips (pH, NPK): Peaceful Valley • Harmony • Charley's



VERTEBRATE MANAGEMENT

BATS

Educational Materials

Bat House Construction Booklet:

Bat Conservation International, Peaceful Valley, Harmony

Bat Houses: Natural Insect Control • Harmony • Peaceful Valley

Identification & Monitoring

Flashlight with red filters:

Streamlight (Streamlight)



Physical Controls

Copper mesh hole filler:

Allen Special Products (Stuf-Fit)

Netting:

Wildlife Control (Bat Kit, Swallow & Woodpecker Kit for home-made bat check valve, Wildlife Net) • Gemplers (Wildlife Net)

BIRDS

Physical Controls

Barriers & Exclusion Devices:

Wildlife Control (Pigeon Barrier) • Birdbarrier (Daddi Long Legs)

Copper mesh hole filler:

Allen Special Products (Stuf-Fit)

Metal projectors:

Wildlife Control • Bird-X • Nixalite (Nixalite) • Birdbarrier (Birdpoint) • Nixalite (E-Spike)

Netting:

Wildlife Control, Gemplers (Wildlife Net) • Bird-X • JT Eaton • Industrial, Great Lakes (Internet) • Animal Repellents • Peaceful Valley • Nichols Net • Nixalite (Netting) • Sterling Marine • Sutton • Tenax (Ornex) • Tipper, Harmony, Peaceful Valley (Tie-Net) • Birdbarrier, Birdbusters (Birdnet, Stealth Net) • BioCare • Margo

Wire exclusion systems:

Birdbarrier (Birdwire, Birdcoil) • Birdbusters • Nixalite (Flight Line)

Deterrents:

Alarms & detonators:

Bird-X (BirdGard, Transonic IX-L, Ultrason ET) • Birdbusters (Birdwailer) • Reed-Joseph (Electronic Scare Away, Scare Away

Tree Wrap:

Gempler's (T&G Plastic Tree Shields) • Peaceful Valley (Spiral Tree Guard)

Least-Toxic Chemical Controls

Repellents: Woodstream, Peaceful Valley, Trident (Deer Away) • Shake Away, Harmony (Shake Away) • Peaceful Valley (Ropel)
 • Gardener's Supply (Champon's) • Wildlife Management • Envirodyne (Meat Meal) • Liquid Fence • Tree World, Harmony, Peaceful (Plantskydd)

LIVESTOCK PREDATORS

Biological Controls

Donkeys to Protect Sheep:

American Donkey

Physical Controls

Alarms & Detonators:

Reed-Joseph (Scare Away Pyrotechnics, Multi Bang Automatic Cannon, Rotomat Revolving Platform) • Critter Control • Margo

Electric Fencing:

Gallagher Power Fence (Gallagher) • Gardener's Supply

Live Traps:

Tomahawk (Tomahawk) • Woodstream, Harmony, Peaceful Valley, Gardener's Supply (Havahart)

Least-Toxic Chemical Controls

Repellents:

Peaceful Valley • Planet Natural • Harmony

RABBITS

Physical Controls

Electric Fencing:

Gallagher Power Fence (Gallagher) • Gardener's Supply

Live Traps:

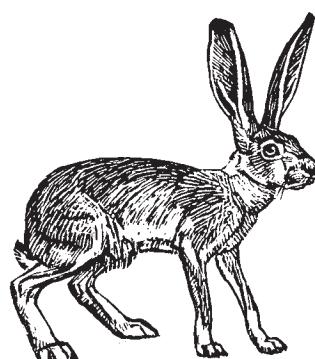
Wildlife Management • Tomahawk, Peaceful Valley • Woodstream, Harmony • Margo

Netting:

Wildlife Control, Gempler's (Wildlife Net)

Tree Wrap:

Gempler's (T&G Plastic Tree Shields) • Peaceful Valley (Spiral Tree Guard)



Least-Toxic Chemical Controls

Repellents:

Gardens Alive (Hinder Deer & Rabbit Repellent) • Peaceful Valley (Ropel) • Envirodyne (Green Screen) • Gardener's Supply, Gardens Alive, Harmony, Peaceful Valley (Get Away) • Woodstream

RACCOONS

Physical Controls

Barriers & Exclusion Devices:

Stromberg's (Catcher-Holder Poles for animal restraint) • Tomahawk (catch poles)

Electric fencing:

Gallagher Power Fence (Gallagher) • Gardener's Supply

Wireless Fence (for guard dogs):

Drs. Foster and Smith

Heat Activated Alarm:

Drs. Foster and Smith

Live Traps and Carrying Cages:

Safeguard (Safeguard) • Tomahawk (Tomahawk) • Wildlife Control

• Woodstream, Great Lakes, Harmony, Peaceful Valley, Gardener's Supply (Havahart, Victor) • Wildlife Management • Margo

Wildlife Removal/Relocation Services:

Critter Control (for small animals only)

Least-Toxic Chemical Controls

Repellents:

Nixalite, Peaceful Valley (Ropel) • Gardener's Supply (Champon's) • Gardener's Supply, Gardens Alive, Harmony, Peaceful Valley (Get Away) • Woodstream (Critter Ridder) • Shake Away

RATS and MICE

Identification & Monitoring

Flashlight with red filters:

Streamlight (Streamlight)

Rodent contamination detection devices:

BioQuip (Spectronics, Blacklight Kits) • Professional Equipment

Physical Controls

Copper mesh hole filler:

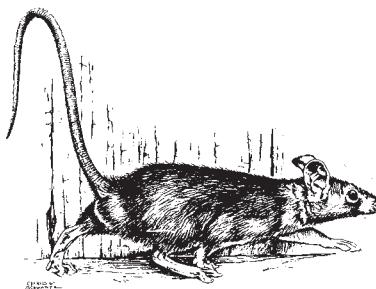
Allen Special Products (Stuf-Fit)

Traps (for rats and mice):

Sterling Intl. (Rescue! Dispose-A-Mouse) • Seabright, Phero Tech (Smart Mouse Trap) • Tomahawk (Tomahawk) • Woodstream, Harmony, Peaceful Valley, Gardener's Supply, Havahart, Victor) • Woodstream (Victor Holdfast) • Woodstream (Victor Tin Cat, Terminator) • Wildlife Management • Natural Insect Control

Glue board trap:

Woodstream (Victor Holdfast) • Bell (Trapper products) • JT Eaton (Eaton's Stick-em) • Enforcer (Enforcer Rat & Mouse Glue Traps)



Electrocutor trap:

A Trap • Professional Equipment • Woodstream

Live Trap:

Seabright • Tomahawk

Least-Toxic Chemical Controls**Tool to Place Baits and Traps:**

Arcoa (EZ Reacher)

Baits:

Peaceful Valley • Trapper Jack's (macadamia nut lure) • Bell (Detex, non-toxic monitoring bait)

Bait stations:

Bell (Protecta, RTU) • JT Eaton (Rat Depot) • Liphia Tech (Bait Safe)

Stop feed, single dose (0.075% cholecalciferol Vitamin D3):

Bell (Terad3) • Peaceful Valley

Anticoagulants:

Bell (Final, warfarin) • Bell (Liqua-Tox II, diphacinone) • Bell (Ditrac, diphacinone) • Liphia Tech (Rozol, chlorphacinone) • Scimetrics (Kaput, warfarin)

Zinc phosphide:

Bell (ZP Rodent Bait AG)

Bromethalin: Bell Labs (Tom Cat)**SKUNKS****Physical Controls****Catch Poles:**

Tomahawk

Electric Fencing:

Gallagher Power Fence (Gallagher) • Gardener's Supply

Live Traps and Carrying Cages:

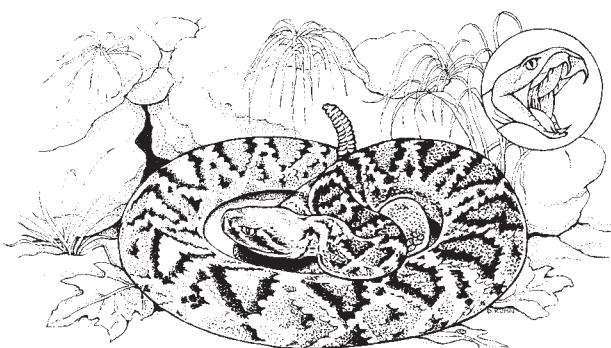
Safeguard (Safeguard) • Tomahawk • Woodstream, Great Lakes, Harmony, Peaceful Valley, Gardener's Supply (Havahart) • Margo (Tru Catch) • Nichols • Wildlife Management

Least-Toxic Chemical Controls**Repellents:**

Nixalite, Peaceful Valley (Ropel)

Skunk Deodorant:

Drs. Foster & Smith (Skunk Kleen) • Bramton, Drs. Foster & Smith • NISUS (BAC-AZAP)

**SQUIRREL****Squirrel-Proof Bird Feeders:**

Arundale (The Mandarin)

Live Traps:

Tomahawk • Woodstream • Harmony • Peaceful Valley

Repellent:

Harmony • Peaceful Valley • J.T. Eaton • Woodstream

WILDLIFE**Physical Controls****Control Equipment:****Cat tongs:**

Tomahawk, Harmony

Poles to catch animals:

Tomahawk • Wildlife Management

Protective Gloves:

Tomahawk

Snake tongs:

Tomahawk

Alarms & Detonators:

Reed-Joseph (Scare Away Pyrotechnics, Multi Bang Automatic Cannon, Rotomat Revolving Platform) • Critter Control • Margo

Infra-Red Triggered Water Cannon:

Gardener's Supply (Water Defence) • Charley's (Scarecrow)

Heat Activated Alarm: Drs. Foster and Smith**Wireless Fences (for guard dogs):** Drs. Foster and Smith**Copper Mesh Hole Filler:**

Allen Special Products (Stuf-Fit)

Electric Fencing:

Gallagher • Gardner's Supply • Peaceful Valley • Harmony • Margo (for bear, wolverine)

Live traps:

Margo (for large animals) • Reed-Joseph (Trap Away) • Safeguard (Safeguard) • Tomahawk, Great Lakes (Tomahawk) • Wildlife Control • Woodstream, Great Lakes, Harmony, Peaceful Valley, Gardener's Supply (Havahart, Victor)

Wildlife Removal/Relocation Services:

Margo (for large animals) • Critter Control (for small animals only)

Least-Toxic Chemical Controls**Repellents:**

Nixalite, Peaceful Valley (Ropel) • Becker Underwood (Rejexit to deter Canada geese) • MoleRelief, Gardens Alive, Soil Technologies (MoleRelief, Repellent for moles) • Liquid Fence (Snakes) • Nisus (Snake Out)

MISCELLANEOUS**Educational Materials****Integrated Pest Management Publications:**

Bio-Integral Resource Center

WEED MANAGEMENT



Educational Materials

Pest Management Publications & AV Products:

Integrated Pest Management publications, videos:
Bio-Integral Resource Center

Identification & Monitoring

Information/Identification Services

Information, identification of agricultural, urban insects:
Cooperative Extension Service (local offices)
Information service on biological control of weeds:
International Institute of Biological Control

Physical Controls

Barriers and Exclusion Devices:

Asphalt crack filler:
Garon Products (Crack-Fill)

Electric Shredder to Make Mulch:
Gardener's Supply (Gloria)

Mulch:
Peaceful Valley (IRT, Planter's Paper) • Birkett Mills (Mul-Tex) •
Penny Newman (Rice Hull Mulch)

Sunlight Barrier (aquatic weeds):
Applied Biochemists (Aquashade)

Weed control fabric/plastic:

Easy Gardener, Peaceful Valley (WeedBlock Landscape Fabric) •
Fiberweb, Planet Natural (Typar Landscape Fabric) • Gardener's Supply (Weed Mat) • Gardens Alive! • Peaceful Valley (IRT Plastic) •
Fiberweb (Tree Circles)

Flamers:

Ben Meadows • Forestry Suppliers (Panama) • Flame Engineering, Planet Natural, Harmony (Red Dragon) • Peaceful Valley • Planet Natural • Gemplers • Flame Weeders • Rittenhouse • Sunburst

Heat Treatment (system using boiling water):

Sunburst

Heat Treatment (portable propane radiant heat): Forevergreen •
Rittenhouse

Skin Protectant:

Poison oak/ivy cleanser/prevention:
Masune (Ivy Block, Technu)
• Gempler's (Technu) • Sawyer (Itch Balm)

Weeding Animals:

Books, pamphlets, lists of breeders:
American Donkey & Mule • Natural Colored Wool Growers'

Weeding Tools:

Brush-clearing tools: Forestry Suppliers

Hand tools: Gardener's Supply • Smith & Hawken • Peaceful Valley • A.M. Leonard • Uprooter • ProQuo (Puller Bear)

Mechanical Weeder: Weed Badger (Tiller, Qwik-Disk, Cyclone Spade, Mower, Undercutter)

Mechanical harvester: Hockney Weed Cutter (underwater weeds)

Rotary cutters: Bush Hog (Bush Hog Rotary Cutter)

Tiller/mulcher/mower: Weed Badger (Weed Badger)

Weedeater: BeeTee Equipment Sales (Husqvarna)

Weed Hound: Hound Dog Products (for dandelion)

Biological Controls

Bacterial Biostimulation for Pond Maintenance:

Ben Meadows, Gemplers (Pond Saver) • Enviro-Rep (Super Bug)

Sterile grass carp fish (for aquatic weeds):

Keo Fish Farms (diploid and triploid) • Richmond Fisheries

California Native Plants:

California Native Plant Society

Herbivores:

Aphthona spp. (beetle for leafy spurge): BCW

Aphthona nigricutis (beetle for leafy spurge): BCW

Aphthona lacertosa (beetle for leafy spurge): BCW

Aplocera plagiata (inchworm for St. John's wort): BCW

Ceutorhynchus litura (thistle weevil for Canada thistle): BCW

Chrysolina quadrigemina (beetle for St. johnswort): BCW

Cypocleonus achates (knapweed root weevil): BCW • ARBICO

Eustenopus villosus (weevil for yellow starthistle): BCW • California Bioworks

Gallerucella pusilla (purple loosestrife defoliating weevil): BCW

Gymnetron antirrhini (toadflax seedcapsule weevil): BCW

Larinus obtusus (knapweed weevil): BCW

Larinus minutus (knapweed weevil): BCW

Longitarsus jacobaeae (flea beetle for tansy ragwort): BCW

Mecinus janthiniformis (for toadflax): BCW

Microlarinus lareynii (weevil for puncturevine): Peaceful Valley

Oberea erythrocephala (beetle for leafy spurge): BCW

Spurgia esulae (gall midge for leafy spurge): BCW

Urophora cardui (gall fly for Canada thistle): BCW

Distributes stem & seed weevils against puncture vine:

CALTEC Agri Marketing Services • Peaceful Valley

Weeder Geese (brown Chinese):

Holderread's Waterfowl Farm & Preservation Center • Morris Farms & Hatcheries

Weeding Chickens:

Murray McMurray Hatchery • Stromberg's Chicks & Game Birds Unlimited

Microbial Herbicides:

Alternaria cassiae (for sicklepod, available sporadically): Dow Agro (Casst)

Colletotrichum gloeosporioides (for northern jointvetch, available sporadically): No current supplier

Phytophthora palmivora (available sporadically for stranglervine): Valent USA (DeVine)

Phoma macrostoma (turf weeds): Scotts

Sclerotinia minor (turf weeds): Sylvan

Streptomyces (rice weeds): Marrone

Least-Toxic Chemical Controls

Application equipment:

Forestry Suppliers (Hypo-Hatchet Tree Injectors) • AG Spray Equipment

20%-25% Acetic Acid: Bradfield • Ecoval • Pharm Solutions

Herbicidal Soap (postemergent):

Monterey, Harmony (Herbicidal Soap) • Gardens Alive (WeedAside) • Woodstream (Concern) • Certis (Final San-O) • BioSafe (AXXE)

Herbicidal Essential Oil (postemergent):

Dr. Earth (Final Stop) • North Country (Burnout) • Monterey (Burnout) • St. Gabriel (Burnout 2) • Harmony • JH Biotech, Peaceful Valley (Weed Zap) • Brandt (Matratec) • Cutting Edge, Harmony (Avenger, limonene) • Soil Technologies (Phydura) • Liquid Fence • EcoSmart (Clove oil)

Citric Acid: Summerset (All Down)

Fatty Acid Herbicide: Planet Natural (Scythe) • Westbridge (Suppress)

Iron chelate: Gardens Alive (Iron-X) • Scotts (Fiesta)

Least-Toxic Herbicide (corn gluten meal pre-emergent):

Grain Processing • Soil Technologies • Gardens Alive (WOW) • Fertrell, Gardener's Supply, Peaceful Valley, North Country (Weedstop) • Floyd Rogers • Manning Agricultural • Rhodes • Safe Earth • Walts • Blue Seal • Soil Technologies • Harmony

Corn gluten hydrolysate: Grain Processing:

• PredaLure

Controlled release. Attracts predators/parasites to crop for control of aphids, mites, leafhopper, many others.

• Honey Bee Lure

Controlled release dispenser attracts bees for increased pollination. No spray. No mess.

• Mycostop Biofungicide

• Pentra-Bark Surfactant

• Agri-Fos Fungicide

• Insect Traps

Stink Bugs, Oriental Beetles, Onion Maggot, Thrips, more.

• Cucumber Beetle Trap

• Mycorrhiza

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- Crop Production Services**, 7815 N Palm Ave., Ste 410, Fresno, CA 93711; 800/829-7671; 559/436-2940, Fax 559/436-2949; www.cpsagu.com
- Cutting Edge Formulations (Avenger Organics)**, 3057 Summer Oak Place, Buford, GA 30518; 866/906-9333; 678/546-5009, Fax 678/482-0510; www.avengerorganics.com
- D**
- Dadant & Sons**, 51 S. 2nd St., Hamilton, IL 62341-1399; 888/922-1293, 217/847-3324, Fax 217/847-3660; www.dadant.com
- Dea-Chi Ind. Co.**, 3rd Floor, Sung-Kwang B/D, 456-13, Sung-Nae-Dong, Kang-Dong-Ku, SeoulKOREA; +82 24866316, Fax +82 24866318
- De Groene Vlieg**, Duivenwaardsedijk 1, 3244 LG Nieuwe Tonge, THE NETHERLANDS; 0187-651862, Fax 0187-652445; www.degroenevlieg.nl
- Degussa Corp. (Evonik Degussa)**, 299 Jefferson Rd. Parsippany, NY 07054; 800/233-8052, 973/929-8000; https://www.aerosil.com
- Delmhorst Instrument Co.**, 51 Indian Ln. E., Towaco, NJ 07082-1025; 877/335-6467, 973/334-2557, Fax 973/334-2657; www.delmhorst.com
- Dey Laboratories**, 2751 Napa Valley Dr., Napa, CA 94558; 800/755-5560, 707/224-3285; www.dey.com
- Diacore**, PO Box 1110, Katy, TX 77492; 800/915-5996
- Dow AgroSciences**, 9330 Zionsville Road, Indianapolis, IN 46268-1054; 800/255-3726; 800/745-7476, 317/337-3000, Fax 800/905-7326; www.dowagro.com
- Dr. Earth**, PO Box 460, Winters, CA 95694; 707/448-4676; www.drearth.com
- Drs. Foster and Smith, Inc.**, 2253 Air Park Rd., PO Box 100, Rhinelander, WI 54501; 800/381-7179; www.drsfostersmith.com
- Duclos Agro-BioTech S.A.**, B.P. 3, 13240 Septemes les, Vallons, FRANCE; 91-963000, Fax 91-962527
- Dunegan Engineering Consultants**, PO Box 61808, Midland, TX 79711; 432/561-5901, Fax 432/563-0178; www.deci.com
- Dunhill Chemical (see MGK)**, www.mgk.com
- Dupont Professional Products**, CRP Bldg. 705, Contra Rd., Wilmington, DE 19805; 888/638-7668, www.products.dupont.com
- D-VAC Company (see Rincon Vitova)**, PO Box 2506, Ventura, CA 93002; 805/643-5407, Fax 805/643-6267; www.rinconvitova.com
- E**
- Eagle Picher Minerals, Inc.**, 9785 Gateway Dr., Reno, NV 89511; 800/366-7607, 775/824-7600, Fax 775/824-7601; www.epminerals.com
- Earthfort**, 635 SW Western Blvd., Corvallis, OR 97333, 541/257-2612; www.earthfort.com
- Earthgro/Scotts**, PO Box 143, Rte 207, Lebanon, CT 06249; 800/874-7336, 860/642-7591; www.scotts.com
- Easy Gardener**, PO Box 21025, Waco, TX 76702-1025; 800/327-9462, 254/753-5353, Fax 254/753-5372; www.easycardener.com
- EcoHealth, Inc.**, 56 Hawes St., Brookline, MA 02446; 800/234-8425, 617/742-2400, Fax 617/849-5494; www.ticktubes.com
- Ecological Laboratories**, 13 Hendrickson Avenue, Lynbrook, NY 11563; 800/645-2976, 516/823-3441, Fax 516/379-3632; www.microbelift.com
- Ecology Works (see The Ecology Works)**
- EcoSmart Technologies (Kittrich)**, 5070 Phillip Lee Drive, Atlanta, GA 30336; 877/723-3545, 404/691-9500; 714/736-1000; Fax 714/736-2000; www.ecosmart.com
- EcoSolutions**, 2948 Landmark Way, Palm Harbor, FL 34684; 727/455-1674, Fax 727/787-3669; www.ecosolutionsbeneficials.com
- Ecovol**, 293 Church Street, Oakville, ON, Canada L6J 1N9; 866/298-2229, Fax 866/239-8342; www.ecoval.ca
- Electrostatic Spraying Systems, Inc.**, 62 Morrison St., Watkinsville, GA 30677; 800/213-0518, 706/769-0025, Fax 706/769-8072; www.maxcharge.com
- Enforcer Products (Zep Inc.)**, 1310 Seaboard Ind. Blvd., Atlanta, GA 30318; 888/805-4357, 770/386-0801, Fax 770/386-1659; www.enforcer.com
- Ensure-A-Seal**, 7011 Fair Oaks Drive, Export, PA 15632; 800/864-4174, Fax 724/327-8046; www.ensure-a-seal.com
- Ensystex**, 2709 Breezewood Avenue; PO Box 2587, Fayetteville, NC 28302; 888/398-3772, Fax 888/368-4749; www.ensystex.com
- Envirodyne**, PO Box 451, Manistee, MI 49660; 800/968-9453, Fax 231/723-4761; www.greenscreen1.com
- Enviro-Reps Intl.**, 1656 Walter St. Unit E, Ventura, CA 93003; 877/999-9374, 805/644-3527, Fax 805/644-3766; www.enviro-reps.com
- EnviroSafe**, PO Box 81101, When Ua Pai 0618, Auckland, New Zealand; 64 9416 1160; Fax 64 9416 1183; www.megacatch.com
- ETEX Ltd.**, PO Box M, Mojave, CA 93502; 800/543-5651, 661/824-2275, Fax 661/824-2218; www.etex-Ltd.com
- Evergreen Growers Supply**, 17592 S. Palmer Road, Oregon City, OR 97045; 503/908-1946, Fax 503/631-7954; www.evergreen-growers.com
- F**
- FAR (see Foothill Agricultural Research)**
- Farsemente**, Paco branco-Conceicao de Faro,

Box B. Biobest Distributors

- Agralan**, The Old Brickyard, Ashton Keynes Swindon, Wiltshire, SN6 6QR UK; +44 1285 860015, Fax +44 1285 860056, www.agralan.co.uk
- Agrocola Biologica**, Via Guglielmo Nicastro 22 97100 Ragusa Sicilia, ITALY; Fax +39 093 26 42 768, email marcificicchia@alice.it
- AGROBee**, Via Mazzini 22 I-09012 Capoterra Sardinia, ITALY; Fax +39 070 72 03 98, www.giancarminecasu.it
- Agro Connexion**, Connexion Ltda. Cuarto Centenario 201 Las Condes Santiago, CHILE; +56 2 202 59 44, Fax +56 2 202 59 43, www.connexion.cl
- Agrotech**, Sendnergasse 127 1110 Wien, AUSTRIA; 0043 1 767 58 70, Fax 0043 1 767 58 71
- Al-Awfiya** P.O. Box 420148 Amman 11142, JORDAN; +962 6 41 26 041, Fax +962 6 41 26 041, email alawfiyaagri@yahoo.com
- Andermatt**, Stahermatten 6 6146 Grossdettwil, SWITZERLAND; +41 62 917 50 00 Fax +41 62 917 50 06, www.biocontrol.ch
- Arend-Sosef BV**, Stationsweg 23 2675 ZG Honselersdijk, NETHERLANDS; +31 174 63 02 14 Fax +31 174 62 26 56, www.arendsosef.nl
- Arpad**, Apponyi tér 12, Pf. 22 6600 Szentes, HUNGARY; +36 63 56 14 76, Fax +36 63 56 14 60, www.arpad-biokontroll.hu
- Biobasiq Sverige AB**, Braxengränd 3 312 33 Laholm, SWEDEN; +46 (430) 71165 Fax: +46 (430) 71165, www.biobasiq.se
- Biobest Belgium N.V. (Professioneel)** Ilse Velden 18, 2260 Westerlo, BELGIUM; +32 14 25 79 80, Fax +32 14 25 79 82, email info@biobest.be
- Biobest Canada Ltd.**, 2020 Fox Run Road, RR 4 Leamington Ontario N8H 3V7 CANADA; +1 519 322 21 78, Fax +1 519 322 12 71, email info@biobest.ca
- Biobest France**, 294 rue Roussanne 84100 FRANCE; +33 (0)432.81.03.96, Fax +33 (0)432.81.03.98, www.biobest.fr
- Biobest Spain**, Bulevar Ciudad de V'car, 821 04738 V'car (Almer'a), SPAIN; +34 950 557 333, Fax +34 950 557 334, www.biobest.es
- Biofa AG**, Bio-Farming-Systems Rudolf-Diesel-Str. 2 72525 Münzingen, GERMANY; +49 (7381) 935420, Fax +49 (7381) 935454, www.biofa-profi.com
- Biopartner**, Ul. Kminkowa 31 62-064 Plewiska, POLAND; +48 61 899 83 78, Fax +48 61 899 83 77, www.biopartner.com.pl
- Borregaard BioPlant ApS**, Helsingforsgade 27B 8200 Aarhus N DENMARK; +45 86 78 69 88, Fax +45 86 78 69 20, www.bioplant.dk
- Clima Kontroll Kb**, Asvägen 95 64220 Yttermark FINLAND; +358 6 225 64 01, +358 6 225 64 91, Fax +358 6 225 64 02, email stefan.pellfolk.clima@pp.qnet.fi
- Tokai Trading Co. Ltd.**, 2997 Takatsuno-cho Yokkaichi-city, Mie-pref. JAPAN; +81 59 32 63 931, Fax +81 59 32 66 758, www.tokaibussan.com
- Distribuciones Imex**, Calle Josefa Ort'z de Dom'nguez N 24, 45235 Zapopan, Jalisco, MEXICO; +52 33 32 83 46 39, Fax +52 33 36 84 84 29, email hernandez@imex.mx, www.distribucionesimex.com
- H & P Welte**, Maurershorn 18 B 78479 Insel Reichenau, DENMARK; +49 75 34 71 90, Fax: +49 75 34 14 58, www.welte-nuetzlinge.de
- Horticentre**, 10 Firth Street Drury South Auckland, NEW ZEALAND, +64 (9) 29 48 453, Fax +64 (9) 29 47 278, www.horticentre.co.nz
- Hydrogroup Hellas Ltd.**, 9 Aristofanous str. Ag. Dimitrios 17236 Athens, GREECE; +30 210 97 18 978, Fax +30 210 97 69 327, email info@hydrogroup.org
- International Technology**, Wayzata, MN 55391; +1 877 505 9703, +1 303 661 9546 Fax +1 303 552 5747, www.beesandbugs.com
- Katz Biotech AG** Industriestrasse 38, D-73642 Welzheim, GERMANY; +49 71 82 93 53 73, Fax +49 71 82 93 53 71, www.katzbiotech.de
- Norgro A/S**, Postboks 4144 2307 Hamar, NORWAY; +47 62 54 18 80 Fax +47 62 54 15 55, www.norgro.no
- P. Bioccontrol**, Celakovského 389/II 38901 Vodnany CHECKCLOSOVAKIA; +420 383 38 27 57 Fax +420 383 38 27 57, email pliva.bioccontrol@tiscali.cz

- Contribuinte nº 501 832 459, P-8000 Faro, PORTUGAL; +351 89816953, Fax +351 89832007; www.farsemente.com
- Fertrell Inc.**, PO Box 265, Bainbridge, PA 17502; 717/367-1566, Fax 717/367-9319; www.fertrell.com
- Fiberweb (Polymer Group)**, 70 Old Hickory Blvd., PO Box 511, Old Hickory, TN 37138-3651; 800/321-6271, 615/847-7000, Fax 615/847-7068; www.technicalnonwovens.com
- First Choice Manufacturing Ltd.**, 19402 56th Ave., Surrey, BC, CANADA V3S 6K4; 800/663-3162, 604/534-8626, Fax 604/534-8626; www.mansongvilleplastics.com
- Flame Engineering Inc.**, PO Box 577, LaCrosse, KS 67548-0577; 888/388-6724, 785/222-2873, Fax 785/222-3619; www.flameengineering.com
- Flame Weeders**, 1711 Mud Lick Road, Glenville, WV 26351; 304/462-7606, Fax 304/462-8805; www.flame-weeders.com
- FleaBusters/Rx for Fleas**, 6555 Northwest 9th Ave., Ste. 412, Fort Lauderdale, FL 33309; 800/666-3532, 954/351-9244, Fax 954/351-9266; www.fleabuster.com
- Flora Nutzlinge**, Wulkowes Weg (Gartnerei), 15518 Hanglesberg, GERMANY; 033632/59363, Fax 033632/59364; www.katzbiotech.de
- Florida Canine Academy**, 3571 Fairview Street., Safety Harbor, FL 34695, 800/665-3364; www.termitatedogs.com; www.bedbugdog.com
- Florikan**, 1579 Barber Road, Sarasota, FL 34240; 800/322-8666, 941/379-4048, Fax 941/377-3633; www.florikan.com
- Flowtron Outdoor Products**, 15 Highland Avenue, Malden, MA 02148; 781/321-2300, Fax 781/324-8403; www.flowtron.com
- Floyd Rogers**, 22W 213 Glen Valley Dr., Glen Ellyn, IL 60137; 630/858-3538
- FMC Corporation (wholesale)**, 1735 Market St., Philadelphia, PA 19103; 215/299-6000, Fax 215/299-5998; www.fmc.com
- Foothill Agricultural Research (FAR)**, 550 Foothill Parkway, Corona, CA 92882; 888/760-0120, 951/371-0120, Fax 951/279-5150; www.far-inc.com
- Forestry Suppliers Inc.**, 205 W. Rankin St., Jackson, MS 39201; 800/647-5368, 601/354-3565, Fax 800/543-4203; www.forestry-suppliers.com
- Forevergreen Landscaping**, 19974 12th Avenue, Langley, BC, CANADA V2Z 1W3; 604/534-9326, Fax 604/530-7129; www.ecoweeder.com
- G**
- Gallagher North America**, PO Box 681409, Riverside, MO 64168; 800/531-5908, Fax 800/444-5422; www.gallagherusa.com
- Gardener's Supply Co.**, 128 Intervale Road, Burlington, VT 05401; 888/833-1412, 800/876-5520, Fax 800/551-6712; www.gardeners.com
- Garden Essentials**, 11620 Sterling Avenue, Suite A, Riverside, CA 92503; 800/301-9009, 951/351-1880, FAX 951/351-1872; www.thegardenessentials.com
- Gardens Alive**, 5100 Schenley Place, Lawrenceburg, IN 47025; 513/354-1482, Fax 812/537-8660; www.gardensalive.com
- Gardner Manufacturing**, 1201 West Lake St., Horicon, WI 53032; 888/558-1990, 920/485-4303, Fax 920/485-4370; www.gardnerep.com
- Garlic Research Labs Inc.**, 624 Ruberta Road, Glendale, CA 91201; 800/424-7990, 818/247-9600, Fax 818/247-9828; www.garlicbarrier.com
- Garon Products Inc.**, PO Box 1924, Wall, NJ 07719-1924; 800/631-5380, 732/223-2500, Fax 732/223-2002; www.garonproducts.com
- Garta**, Torveporten 10, DK-2500 Valby, DEN-MARK; +45 70 33 03 00, Fax +45 36 46 06 37; www.garta.dk
- Gartnerei Hatto Welte**, Maurershorn 10, 7752 Insel Reichenau, Bodensee, GERMANY; 07534-7190, Fax 07534-1458; www.welte-nutzlinge.de
- Gempler's Inc.**, PO Box 5175, Janesville, WI 53547; 800/382-8473, 608/662-3301, Fax 608/662-3360; Fax 800/551-1128; www.gempplers.com
- Gilbert Industries, Inc.**, 5611 Krueger Dr., Jonesboro, AR 72401; 800/643-0400, 870/932-6070, Fax 870/932-5609; www.gilbertinc.com
- Gloves in a Bottle**, PO Box 615, Montrose, CA 91021; 800/600-1881, 818/248-9980, Fax 818/248-8991; www.glovesinabottle.com
- Gowan Company**, 370 South Main, Yuma, AZ 85364; 800/883-1844, 928/783-8844, Fax 928/343-9255; www.gowanco.com
- Grain Processing Corporation**, 1600 Oregon St., Muscatine, IA 52761; 563/264-4265, Fax 563/264-4289; www.grainprocessing.com
- Grainger**, 800/472-4643; www.grainger.com
- Great Lakes IPM**, 10220 Church Rd. NE, Vestaburg, MI 48891; 800/235-0285, 989/268-5693, Fax 989/268-5311; www.greatlakesipm.com
- Green Light Company (see Scotts)**
- Greenmethods**, 9664 Tanqueray Ct., Redding, CA 96003; 800/477-3715, 530/226-6300, Fax 530/226-6310; www.greenmethods.com
- Green Pro Services**, 380 S. Franklin St., Hempstead, NY 11550; 800/645-6464, 516/538-6444, Fax 516/538-2042; www.greenproservices.com
- Green Spot Ltd (see Greenmethods)**
- Green-Tek, Inc.**, 3708 Enterprise Dr., Janesville, WI 53546; 800/747-6440, 608/754-7336, Fax 608/754-7334; www.green-tek.com
- Growing Solutions**, 1702 West Second Avenue, Ste. B, Eugene, OR 97402; 888/600-9558, 541/343-8727, Fax 541/338-7809; www.growingsolutions.com
- Growth Products**, 80 Lafayette Ave, White Plains, NY 10603; 800/648-7626, 914/428-1316, Fax 914/428-2780; www.growthproducts.com
- H**
- Happy Jack Co.**, PO Box 475, Snow Hill, NC 28580; 800/326-jack, 252/747-2911, Fax 252/747-4111; www.happyjackinc.com
- Harantonis**, 58500 Skydra, Pellis, GREECE; +30 38183110, Fax +30 38183111; www.charantonis.gr
- Harmony Farm Supply**, 3244 Gravenstein Hwy, Sebastopol, CA 95472; 707/823-9125, Fax 707/823-1734; www.harmonfarm.com
- HeadsUp Plant Protectants**, 483 3rd Street, Kamsack,, SK, CANADA S0A 1SO; 866/368-9306, 306/542-2439; wwwsars-headsup.com
- Health Enterprises Inc.**, 90 George Levin Dr., N. Attleboro, MA 02760; 800/633-4243, Fax 508/695-3061; www.healthenterprises.com
- Hedley Technologies Inc.**, 520-170 Attwell Drive, Toronto, ON, CANADA M9W 5Z5; 888/476-4473, 905/206-0013, Fax 905/206-1413; www.hedleytech.com
- Heirloom Roses**, 24062 Riverside Dr. NE, St. Paul, OR 97137; 800/820-0465, 503/538-1576, Fax 503/538-5902; www.heirloomroses.com
- Heitman Labs**, 2512 Summit, Suite 307, Plano, TX 75074; 800/451-6539, 972/509-2400, Fax 972/509-2401; www.antcharmer.com
- Heron Environmental Products**, PO Box 435, Aberdeen Rd., Emigsville, PA 17318; 800/864-4838, 717/764-5211, Fax 717/767-1016; www.herconenviron.com
- Heritage Rosarium**, 211 Haviland Mill Rd., Brookville, MD 20833; 301/774-2806
- Heritage Rose Gardens**, 16831 Mitchell Creek Dr., Fort Bragg, CA 95437; 707/964-3478
- Hockney Underwater Weed Cutter Co.**, PO Box 414, Delavan, WI 53115; 262/215-6037; Fax 262/740-7565; www.weedcutter.com
- Holderread's Waterfowl Farm & Preservation Center**, PO Box 492, Corvallis, OR 97339; 541/929-5338; www.holderreadfarm.com
- Homax Products**, PO Box 5643, Bellingham, WA 98227; 800/729-9029, 360/733-9029, Fax 360/647-1071; www.homaxproducts.com
- HOMS**, PO Box 1887, Pittsboro, NC 27312; 888/270-5721; 800/805-2483; www.homs.com
- Hortico Inc.**, 422 Concession 5 East., Waterdown, ON, CANADA L0R 2H1; 905/689-6984, Fax 905/689-6566; www.hortico.com
- Hortimic OY (Ltd.)**, Apilakatu 8, Turku 20740, FINLAND; +358/21 254 2211, Fax +358/21 254 2582
- Hot Foot America**, PO Box 1339, Sausalito, CA 94966; 800/533-8421, 415/789-5135, Fax 415/789-0564; www.hotfoot.com
- Hound Dog Products (Ames True Temper)**, 465 Railroad Avenue, Camp Hill, PA 17011; 800/393-1846, Fax 800/567-1904; www.hound-dog.com; www.amestruetemper.com
- Hydro-Gardens, Inc.**, 8765 Vollmer Road, Colorado Springs, CO 80936; 888/693-0578, 719/495-2266, Fax 719/495-2266; www.hydro-gardens.com
- Hydros Inc.**, 114 Waterhouse Rd., Suite C, Bourne, MA 02532; 888/285-9654, 508/759-5994, Fax 508/759-1884; http://hydros.cc
- Hygienitech Inc.**, 3849 Acline Rd., 108, Bldg 3, Punta Gorda, FL 33959; 888/999-9030, 561/381-4202, Fax 941/347-7193; www.hygienitech.com
- I**
- Idexx Inc.**, 1 Idexx Drive, Westbrook, ME 04092; 800/548-6733, 207/556-0300, Fax 207/556-4346; www.idexx.com
- Industrial Netting**, 7681 Setzler Pky,

- Minneapolis, MN 55445; 800/328-8456, 763/496-6355, Fax 763/493-6356; www.industrialnetting.com
- Innolytics**, 24 Via Leucena, Ste 100, San Clemente, CA 92673; 888/908-0853, 858/759-8012, Fax 858/923-2060; www.ovoccontrol.com
- Innovative Pest Products**, PO Box 880216, Boca Raton, FL 33488; 877/483-4997; 561/483-4997, Fax 561/488-0443; www.antcafe.com
- Insects Limited**, 16950 Westfield Park Drive, Westfield, IN 46074-9374; 800/992-1991; 317/896-9300, Fax 317/867-5757; www.insectslimited.com
- Insight Pharmaceuticals**, 900 Northbrook Dr., Suite 200, Trevose, PA 19053, 888/542-3546; www.prontoplus.com
- International Technology Services**, 1161 Wayzata Blvd. E. #209, Wayzata, MN 55391; 877/505-9703; 303/661-9546, Fax 303/552-5747; www.intertechserv.com
- Invitrogen (Life Technologies)**, 3175 Staley Rd., Grand Island, NY 14072; 800/955-6288, Fax 800/331-2286; www.lifetechnologies.com
- IPM Laboratories Inc.**, PO Box 300, Locke, NY 13092-0300; 315/497-2063, Fax 315/497-3129; www.ipmlabs.com
- Isagro USA**, 430 Davis Dr., Ste 240, Morrisville, NC 27560; 919/321-5200, Fax 919/321-5220; www.isagro-usa.com
- Isca Technologies Inc.**, 1230 Spring St., Riverside, CA 92507; 951/686-5008, Fax 815/346-1722; www.iscatech.com
- J**
- Jack and the Beanstalk**, Kou 2779-71 Moriya, Moriya-Machi Kitsoma-Gun, Ibaragi 302-01, JAPAN; 0297-45-2838, Fax 0297-45-2838
- Jackson and Perkins**, 2 Floral Ave., Hodges, SC 29653; 800/292-4769; www.jacksonand-perkins.com
- Jet Harvest**, PO Box 915139, Longwood, FL 32791; 877/866-5773, 407/523-7842; www.jetharvest.com
- JH Biotech Inc.**, 4951 Olivas Park Drive, Ventura, CA 93003; 800/428-3493; 805/650-8933; Fax 805/650-8942; www.jhbiotherapy.com
- J.L. Hudson**, PO Box 337, La Honda, CA 94020-0337; www.jlhudsonseeds.net
- J.M. Malone & Son Enterprises**, PO Box 158, Lonoke, AR 72086; 501/676-0207, Fax 501/676-2910; www.jmmaloneandson.com
- Johnny's Selected Seeds**, PO Box 299, Waterville, ME 04903; 877/564-6697, 207/861-3901, Fax 800/738-6314; 207/437-2165; www.johnnyseeds.com
- J. Reilly**, 5000 Trenton St., Metairie, LA 70006; 504/887-3666
- JT Eaton & Company, Inc.**, 1393 E. Highland Rd., Twinsburg, OH 44087; 800/321-3421, 330/425-7801, Fax 330/425-8353; www.jteaton.com
- K**
- Katz Biotech Services**, Industriestrasse 38, Weltzheim 73642, Germany; 07182/935373, Fax 07182/935371; www.katziobiotech.de
- Kemira Oy/Kemira Biotech**, Porkkalankatu 3, PO Box 330, 00101 Helsinki, FINLAND; 011-358-10-8611511, Fax 011-358-10-862-1384; www.kemira.com
- Kennco Manufacturing**, 1105 3rd St. NE, PO Box 1149, Ruskin, FL 33570; 800/645-2591; 813/645-7801; www.kenncomfg.com
- Keo Fish Farms, Inc.**, PO Box 166, Keo, AR 72083; 501/842-2872, Fax 501/842-2156
- KHH Biosci Inc.**, 634 Lake Hogan Lane, Chapel Hill, NC 27515; 919/929-2935
- KM Ant Pro**, PO Box 967, Nokomis, FL 34275; 941/445-4252; www.kmantpro.com
- Koppert B.V.**, Veilingweg 17 PO Box 155, 2650 AD Berkel en Rodenrijs, THE NETHERLANDS; 010-514 04 44, Fax 010-511 52 03; www.koppert.com
- Koppert Canada Ltd.**, 50 Ironside Crescent, Unit 2, Scarborough, Ont., CANADA M1X 1G4; 416/291-0040, Fax 416/291-0902; www.koppertonline.com
- Koppert United Kingdom**, Homefield Road, Haverhill, Suffolk CB9 8QP, United Kingdom; 44 1440704488, Fax 44 1440704487; www.koppert.com
- Koppert USA**, 1502 Old US Hwy 23, Howell, MI 48843; 800/928-8827, 734/641-3763, Fax 734/641-3793; www.koppertonline.com
- Kuida Ag Supply Co.**, PO Box 2598, Salinas, CA 93902; 831/758-9914, Fax 831/758-9933; www.kuidaag.com
- Kunafin Trichogramma Insectaries**, PO Box 190, Quemado, TX 78877; 800/832-1113, 830/757-1181, Fax 830/757-1468; www.kunafin.com
- KWS**, Postfach 146, 37555 Einbeck, GERMANY; 05561-311531, Fax 05561-311544; www.kws.com
- L**
- Lab Safety Supply (see Grainger)**, PO Box 1368, Janesville, WI 53547-1368; 800/356-0783, 800/356-2501, Fax 800/543-9910; www.grainger.com
- Ladd Research Industries Inc.**, 83 Holly Court, Williston, VT 05495; 800/451-3406, 802/658-4961, Fax 802/660-8859; www.ladresearch.com
- Ladybug Company (see The Ladybug Company)**
- Laverlam International (see BioWorks)**, 117 South Parkmont, PO Box 4109, Butte, MT 59702; 406/782-2386, Fax 406/782-9912; www.laverlamint.com
- Lesco (John Deere Landscapes)**, 1301 East 9th St., Suite 1300, Cleveland, OH 44114; 800/321-5325; www.lescodirect.com
- Life Technologies**, 3175 Staley Rd., Grand Island, NY 14072; 800/955-6288, 760/603, 7200, Fax 800/331-2286; www.lifetechnologies.com
- Liphatech**, 3600 W. Elm St., Milwaukee, WI 53209; 888/331-7900, 414/351-1476, Fax 414/247-8166; www.liphatech.com
- Liquid Fence**, PO Box 1510, Blakeslee, PA 18610, 800/332-5553, Fax 570/646-5740; www.liquidfence.com
- Lockwood Seed**, 504 S. Tehama Avenue, Willows, CA 95988; 530/934-2157, Fax 530/934-9106
- Lok-n-Logs**, PO Box 677, Route 12 South,

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- Baywa AG**, Am Heizwerk 8, 82054 Sauerlach, GERMANY; +49 8104649046, Fax +49 8104649040, www.baywa.de
- Borregaard BioPlant**, Helsingforsgade 27b, 8200 Århus N, DENMARK; +45 86 78 69 88, Fax +45 86 78 69 22, www.bioplant.dk
- Charantonis**, Skydra 58500 Pellas, GREECE; +30 2381083110, Fax +30 2381081994, www.charantonis.gr
- H. & P. Welte GdbR**, Maurershorn 18 B, 78479 Insel Reichenau, GERMANY; +49 75347190, Fax +49 75341458, info@welte-nuetzlinge.de
- H & T BioProtect**, Kiss Jnos 54, 2500 Esztergom, HUNGARY; +36 33413240, Fax +36 33 413 240
- Koppert Biological Systems** (USA), 1502 Old US-23, Howell, MI 48843; +1 810-632-8750, Fax +1 810-632-8770; www.koppert.com
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- Koppert Spain**, C/Cobre 22, 24 Parcela P.14 Nave 3, Pol. Industrial Ciudad del Transporte del Poniente, 04745 La Mojona Almer'a, SPAIN; +34 902 48 99 00, Fax +34 902 43 13 95, www.koppert.com
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- L.O.G. AS**, Brøbekveien 104b, 0582 Oslo, NORWAY; +47 815 20 100, Fax +47 815 20 101, www.log.no
- Lindesro AB**, Reslöv Lindesro, 240 30 Marieholm, SWEDE-DEN; +46 42 161870, www.lindesro.se
- Martin Grima Ltd.**, 'The Knot' Ghajnej Astas, SPB 07, MALTA; +356 574474, Fax +356 21583087, grimar@maltanet.net
- Mertens bv**, Handelstraat 6, 5961 PV Horst, NETHERLANDS; +31 77 3999111, Fax +31 77 3999199, www.mertens-agro.nl
- Sautter & Stepper GmbH**, Rosenstraße 19, 72119 Ammerbuch, GERMANY; +49 7032-957830, www.nuetzlinge.de
- Schetelig AB Oy**, Tüllitie 14, 01720 Vantaan, FINLAND; +358 9852061, Fax +358 985206254, www.scheteling.com
- Wilhelm**, Neue Heimat 25, 74343 Sachsenheim 4, GERMANY; +49 70462386, Fax +49 704612198
- Zonda Resources**, P.O. Box 756, 1800 Pukekohe, South Auckland, NEW ZEALAND; +64 9 2363700, Fax +64 9 2363705, www.koppert.com

- Sherburne, NY 13460; 800/343-8928; www.loknlogs.com
- Looker, Inc.**, PO Box 29, Milford, IL 60953; 815/889-5555, Fax 815/889-5550; www.lookerinc.com
- Louisiana Pacific (suppressive mix)**, 888/820-0325; Fax 877/523-7192; www.lpcorp.com
- Loveland Industries (see Crop Production Services)**; 800/356-8920, www.cpsagu.com
- M**
- Macbee Trap Company**, 110 Loma Alta Avenue, Los Gatos, CA 95030; 408/354-4158; www.gophertrapping.com
- Makhteshim-AGAN (see Adama Agricultural)**, 3120 Highwoods Blvd., Suite 100, Raleigh, NC 27604; 866/406-6262; www.adama.com
- Manning Agricultural Center**, 712 Front St., Manning, IA 51455; 800/248-4409, Fax 712/653-3411
- Margo Horticultural Supplies, Ltd.**, PO Box 5400, High River, Alberta, CANADA T1V 1M5; 888/652-1199; 403/652-1932, Fax 403/652-3511; www.margosupplies.com
- Marrone Bio Innovations**, 1540 Drew Avenue, Davis, CA 95618; 877/664-4476, 530/750-2800; www.marronebioinnovations.com
- Martin Grima**, Ghajin Astas, St. Paul's Bay, MALTA SPB 07; +356 21 574474, Fax +356 21 583087; www.martingrimaltd.com
- Martinson-Nicholls Inc.**, 4910 E 345th St., Willoughby, OH 44094; 800/876-1312, 440/951-1312, Fax 440/951-1315; www.floormat.com
- Masune**, 500 Fillmore Avenue, Tonawanda, NY 14150; 800/831-0894, 716/695-3244, Fax 800/222-1934; www.masune.com
- McCrometer**, 3255 West Stetson Avenue, Hemet, CA 92545; 951/652-6811, Fax 951/652-3058; www.mccrometer.com
- Merial Ltd.**, 2100 Ronson Rd., Iselin, NJ 08830; 800/660-1842, 888/637-3887; www.merial.com
- MGK Company**, 8810 10th Avenue North, Minneapolis, MN 55427; 800/645-6466, 763/544-0341, Fax 763/544-6437; www.pyganic.com; www.mgk.com
- Microbe Brewer**, 182 Capital Lane, Roseburg, OR 97470
- Microcide Ltd.**, Shepherds Grove, Stanton, Bury St. Edmunds, Suffolk, UK IP31 2AR; 01359 251077, Fax 01359 251545; www.microcide.co.uk
- Mikro-tek Labs**, PO Box 2120, Timmons, Ontario, CANADA P4N 7X8; 705/268-3536, Fax 705/268-7411; www.mikro-tek.com
- Miller Bee Supply**, 496 Yellow Banks Rd., North Wilkesboro, NC 28659; 888/848-5184; 336/670-2249; Fax 336/670-2293; www.millerbeesupply.com
- Miller Chemical & Fertilizer Corp.**, PO Box 333, Hanover, PA 17331; 800/233-2040, 717/632-8921; 717/632-4581, Fax 717/632-9638; www.millerchemical.com
- MIP Polywest**, PO Box 3156, San Luis Obispo, CA 93403; 805/549-9540, Fax 805/549-0384
- Monterey Ag Resources (see Brandt Consolidated)**, 3654 S Willow Avenue, PO Box 35000, Fresno, CA 93745; 559/499-2100, Fax 559/499-1015; www.montereyagresources.com
- Morris Farms & Hatcheries, Inc.**, 18370 SW 232nd St., Goulds, FL 33170; 305/248-5589, Fax 305/247-0982; www.morriahatchery.com
- M & R Durango Inc.**, PO Box 886, Bayfield, CO 81122; 800/526-4075, 970/259-3521, Fax 970/259-3857; www.goodbug.com
- Murray McMurray Hatchery**, PO Box 458, 191 Close Drive, Webster City, IA 50595-0458; 800/456-3280, 515/832-3280, Fax 515/832-2213; www.mcmurrayhatchery.com
- Mycorrhizal Applications Inc.**, PO Box 1029, Grants Pass, OR 97528; 866/476-7800, 541/476-3985, Fax 541/476-1581; www.mycorrhizae.com
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- Nabat Agricultural**, PO Box 851805, Amman 11185, JORDAN; +962 6 551 43 95, Fax +962 6 551 4389; www.nabat.com
- National Pediculosis Association**, 1005 Boylston St., Ste 343, Newton, MA 02461; 800/323-1305, 617/905-0176, Fax 800/235-1305; www.headlice.org
- National Pest Management Association (NPMA)**, 10460 North St., Fairfax, VA 22031; 800/678-6722, 703/352-6762, Fax 703/352-3031; www.pestworld.org
- Natural Animal Health Products**, 7000 US 1 North, Ste 301, St. Augustine, FL 32095; 800/274-7387, 904/824-5884, Fax 904/824-5100; www.naturalanimal.com
- Natural Colored Wool Growers' Assoc.**, PO Box 406, New Palestine, IN 46163; 317/861-4795; www.ncwga.org
- Natural Enemies**, 19122 Abernathy Lane, Gladstone, OR 97027; 503/342-6698; www.naturalenemiesbiocontrol.com
- Natural Enemy Rearing Center**, Guangdong Academy of Agricultural Sciences, Guangzhou, Wushan, P.R. China 510640; 86 020 87597447, Fax 86 020 85268070
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- Natural Gardening Solutions (formerly Quick Trading)**, 9 Lake Avenue, Piedmont, CA 94611; 510/533-0605, Fax 510/535-0437
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- Nature's Way**, 3051 West Maple Loop Drive, #125, Lehi, UT 84043; 800/962-8873, 801/489-1700; www.naturesway.com
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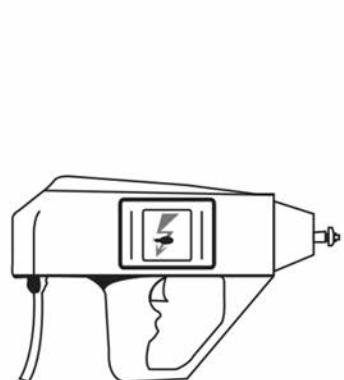
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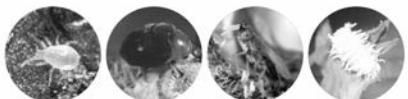
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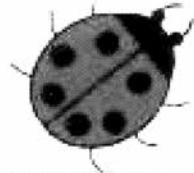
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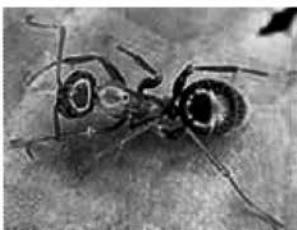
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Other beneficial items: Encarsia formosa, Phytoseiulus persimilis, Mesoseiulus longipes, Neoseiulus californicus, Aphidoletes aphidimyza, Aphidius, Amblyseius cucumeris, Chrysopa carnea (lacewings), Hippodamia convergens (ladybugs), Nosema locustae (Nolo Bait), Orius, Mealybug predators, etc. Sticky ribbons, Sticky cards, Insect Screens and much more!



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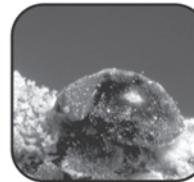
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