

U.S. ENVIRONMENTAL PROTECTION AGENCY

Office of Pesticide Programs

Biopesticides and Pollution Prevention Division (7511P) 1200 Pennsylvania Ave., N.W.

Washington, D.C. 20460

NOTICE OF PESTICIDE:

X Registration
Reregistration
(under FIFRA, as amended)

EPA	Reg.	Num	ber:
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91234-305

Date of Issuance:

07/20/2022

T	erm	οf	Issuance:
	CIIII	UI.	issuance.

Unconditional

Name of Pesticide Product:

A1117.01

Name and Address of Registrant (include ZIP Code):

Atticus, LLC 5000 CentreGreen Way, Suite 100 Cary, NC 27513

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Biopesticides and Pollution Prevention Division prior to use of the label in commerce. In any correspondence on this product, always refer to the above EPA Registration Number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA or the Act).

Registration is in no way to be construed as an endorsement or recommendation of this product by the U.S. Environmental Protection Agency (EPA). In order to protect health and the environment, the Administrator, on his or her motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under the Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is unconditionally registered in accordance with FIFRA section 3(c)(5) provided that you:

1. Submit and/or cite all data required for registration or registration review of your product when the EPA requires all registrants of similar products to submit such data.

Signature of Approving Official:

Date:

Gina Burnett, Senior Regulatory Advisor

Biochemical Pesticides Branch

Biopesticides and Pollution Prevention Division (7511P)

Office of Pesticide Programs

07/20/2022

Page 2 of 2 EPA Reg. No. 91234-305 OPP Case No. 00338645

EPA Form 8570-6

- 2. Make the following labeling change before you release this product for shipment:
 - Revise the EPA Registration Number to read, "EPA Reg. No. 91234-305"
- 3. Submit one (1) copy of the final printed labeling for the record before you release this product for shipment.

Should you wish to add/retain a reference to your company's website on your label, then please be aware that the website becomes labeling under FIFRA and is subject to review by the EPA. If the website is false or misleading, the product will be considered to be misbranded and sale or distribution of the product is unlawful under FIFRA section 12(a)(1)(E). 40 CFR § 156.10(a)(5) lists examples of statements the EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the EPA find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA-approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance Assurance.

Your release for shipment of this product constitutes acceptance of these terms. If these terms are not complied with, this registration will be subject to cancellation in accordance with FIFRA section 6. A stamped copy of the labeling is enclosed for your records. Please also note that the record for this product currently contains the following acceptable Confidential Statement of Formula (CSF):

• Basic CSF dated 01/27/2022

Any CSFs other than those listed above are superseded.

If you have any questions, please contact Susannah Powell of my team via email at powell.susannah@epa.gov.

Sincerely,

Gina Burnett, Senior Regulatory Advisor Biochemical Pesticides Branch

Biopesticides and Pollution Prevention Division (7511P)

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Office of Pesticide Programs

ACCEPTED

07/20/2022
Under the Federal Insecticide, Fungicide

{Note to reviewer: [Text] in brackets denotes optional or explanatory language} {Note to reviewer: {Text} in braces denotes where in the final label text will appear} [Sublabel A: Agricultural and Commercial Uses]

EPA Reg. No. 91234-305

and Rodenticide Act as amended, for the

pesticide registered under

{BOOKLET FRONT PANEL LANGUAGE}



A1117.01 [TM]

[Alternate Brand Name: Atrevia 3.0% SL]

[FOR USE ON GREENHOUSE AND OUTDOOR FOOD CROPS, HEMP, ORNAMENTAL FLOWERS, GOLF COURSES, TURF,
PARKS & ORNAMENTALS]
[INSECTICIDE / MITICIDE / NEMATICIDE]
[FOR ORGANIC GARDENING]

ACTIVE INGREDIENT:	(% by weight)
Azadirachtin	3.0%
OTHER INGREDIENTS:	<u>97.0%</u>
TOTAL	100.0%
Contains 0.24 lb. (111 grams) of azadirachtin per gallon.	

KEEP OUT OF REACH OF CHILDREN CAUTION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

Read entire label. Use strictly in accordance with precautionary statements and directions for use, and with applicable state and federal regulations.

[See inside label booklet for First Aid, [additional] Precautionary Statements, and Directions for Use.]

[See below additional Precautionary Statements]

EPA Reg. No.: 91234-XX
EPA Est. No.:

Net Contents:

Manufactured for:
Atticus, LLC
5000 CentreGreen Way, Suite 100
Cary, NC 27513

{LANGUAGE INSIDE BOOKLET}

_	FIRST AID
If swallowed:	Call a poison control center or doctor immediately for treatment advice.
	Have person sip a glass of water if able to swallow.
	Do not induce vomiting unless told to do so by the poison control center or doctor.
	Do not give anything by mouth to an unconscious person.
If on skin or	Take off contaminated clothing.
clothing:	Rinse skin immediately with plenty of water for 15-20 minutes.
J	Call a poison control center or doctor for treatment advice.
	HOT LINE NUMBER
Have the produ	uct container or label with you when calling a poison control center or doctor, or going
for treatment.	You may also contact SafetyCall at 1-844-685-9173 for emergency medical treatment
information.	

For Chemical Emergency: Spill, Leak, Fire, Exposure, or Accident, Call CHEMTREC Day or Night

Within USA and Canada: 1-800-424-9300 or +1 703-527-3887 (collect calls accepted)

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Harmful if swallowed or absorbed through skin. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before use.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and handlers must wear:

- Long-sleeved shirt and long pants
- Waterproof gloves
- Shoes plus socks

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions exist for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and aquatic invertebrates. For terrestrial uses: Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwater or rinsate. Do not apply when weather conditions favor drift from treated areas. Runoff from treated area may be hazardous to aquatic organisms in neighboring areas.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

Do not apply this product through any irrigation system unless the chemigation instructions on this label are followed. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the State or Tribal agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard,

40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment and restricted entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard (WPS).

Do not enter or allow entry into treated areas during the restricted entry interval (REI) of 4 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is:

- Long-sleeved shirt and long pants
- Waterproof gloves
- Socks and shoes

For field sprays:

Keep unprotected persons out of treated areas until sprays have dried.

NON-AGRICULTURAL USE REQUIREMENTS

These requirements apply to uses of this product that are NOT within the WPS for agricultural pesticides (40 CFR part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses. For other uses including golf courses and other non-agricultural uses, do not enter treated areas without protective clothing until sprays have dried.

PRODUCT DESCRIPTION

A1117.01 is an emulsifiable concentrate containing 3.0% azadirachtin by weight. It has been evaluated on a wide variety of ornamental, forestry, and food crops. **A1117.01** is an insect growth regulator and does not control adult insects.

MODE OF ACTION

A1117.01 controls insects in the larval, pupal, and nymphal stages by interfering with the synthesis of ecdysone. Insects typically die between larval to larval, larval to pupal, nymph to nymph molts, or during adult eclosion.

COMPATIBILITY

A1117.01 is compatible with the most commonly used insecticides, fungicides and fertilizers but has not been evaluated with all potential combinations. Do not combine **A1117.01** in the spray tank with insecticides, fungicides and fertilizers if there is no previous experience or use of the combination to show it is physically compatible,

effective and non-injurious under use conditions. Check the physical compatibility of **A1117.01** before tank mixing with other product(s) or liquid fertilizers by using the correct proportion of the products in small test containers. Take three one-quart jars. Add 1 pint of water into each jar. To the first jar, add **A1117.01** equivalent to highest label rate and mix. To the second jar, add tank mix product(s) equivalent to highest label rate and mix. To the third jar, add **A1117.01** plus tank mix product(s) equivalent to highest label rate and mix. Let the jars stand for 5 minutes and note any differences between the jars. In the jar that has **A1117.01** and tank mix product(s), check for any precipitation, separation, layering, extreme color change, bubbling, heating or other signs of incompatibility. Do not use the mixture if there are signs of incompatibility. If no incompatibility appears in the first 5 mins, let the jars sit for another 25 minutes. If the combination stays mixed or can be remixed, it is physically compatible, and can be sprayed with good agitation. If the tank mix combination is physically compatible, test the combination on a small portion of the crop to be treated to ensure that a phytotoxic response will not occur as a result of application. Avoid mixtures of several materials and very concentrated spray mixtures.

Do not use **A1117.01** with Bordeaux mixture, triphenyltin hydroxide, lime sulfur, Rayplex iron or other highly alkaline materials. Use mildly alkaline mixtures immediately after mixing to prevent loss of insecticidal activity.

Do not add additional surfactants to A1117.01 solutions or tank mixes containing A1117.01.

When using **A1117.01** in combination with other products, consider using **A1117.01** at the low end of the rate range specified in the Use Rate tables. Follow the directions for use, precautions and limitations for use on all of the product labels used in the combination. Some tank mix combinations are as follows:

A1117.01 plus non – phytotoxic crop oil*
A1117.01 plus endosulfan*
A1117.01 plus chlorpyrifos*
A1117.01 plus acephate*
A1117.01 plus Bacillus thuringiensis* (BT)
A1117.01 plus bifenthrin*
A1117.01 plus esfenvalerate*
A1117.01 plus abamectin*
A1117.01 plus diflubenzuron*
A1117.01 plus pyrethrum + piperonyl butoxide (for fogging use) *

USE SITES:

GREENHOUSE, MUSHROOM HOUSE, HYDROPONIC, AND FIELD GROWN FOOD CROPS: Refer to label for complete list.

GREENHOUSE AND FIELD GROWN ORNAMENTAL PLANTS, TREES AND SHRUBS:

Refer to label for complete list.

NON-FOOD USES: such as athletic fields, barrier strips, campsites, cemeteries, farmyards, fence rows, fuel storage areas, grasslands, pastures, rights-of-way, sheds, soil banks, uncultivated or fallow farmland, vegetative barriers and fences, and areas surrounding agricultural farms or other buildings.

COMPOST AND MANURE TREATMENT: Manure or refuse piles, mulches, cull piles, pretreatment for potting soils or compost for greenhouses, soil application with no mention of crops to be grown (potting soil, topsoil).

COMMERCIAL AND INDUSTRIAL AREAS: Food and feed processing plants (fresh fruit and vegetable packing and processing), food marketing, food storage, food distribution, feedlot operations, dairy operations and poultry farms to treat manure on and off-site.

^{*}Always follow the manufacturer's **Directions for Use** and **Precautionary Statements**.

LAWNS, TURF AND TURFGRASS (including golf courses and athletic fields):

Bentgrass, Bermuda grass, Bluegrass, Centipede grass, Fescue, Rye grass, St. Augustine grass, Wheatgrass, Zoysia grass.

POULTRY LITTER AND LIVESTOCK BEDDING:

For control of litter beetles (such as Darkling, Hide and Carrion Beetles), fowl mites, red poultry mites, and nematodes in poultry houses and livestock facilities.

APPLICATION INSTRUCTIONS READ ALL DIRECTIONS AND PRECAUTIONS BEFORE USE

A1117.01 is exempt from tolerances and may be applied as directed to any food or non-food crop up to and including the day of harvest at a rate not exceeding 22.5 fl. oz. (20 grams active ingredient) per acre per application.

To apply **A1117.01**, select a suitable power or pump pressure sprayer or a handheld trigger type sprayer that will deliver a fine spray mist to cover all leaf and fruit surfaces. To get complete spray coverage on waxy or pubescent plant surfaces, the addition of small amount of a suitable sticker agent added to the spray mix at the specified rates may give better foliage coverage, and insect control.

MIXING:

Shake well before mixing. Always use this product promptly after mixing with water. **A117.01** will break down in the spray solution if not used within 8 hours. Never allow tank mix to stand overnight. **A1117.01** will break down in spray tank mixtures that have pH values exceeding 7.0. The optimum pH range is between 5.5 and 6.5. For optimum performance, a buffering agent may be used. When mixing with other approved agrichemicals, always ensure proper agitation in the spray tank to ensure uniform application.

Using the use tables below, determine the amount of **A1117.01** required for the number of acres to be treated. To a clean spray tank add at least one half the water to be sprayed. Begin agitation and add the determined amount of **A1117.01**. Add the remaining water and continue agitation.

A1117.01 disperses freely when added to water. Always use clean equipment. For uniform distribution on plant canopy and proper dilution, always ensure proper agitation in mixing tanks or vessels. When mixing with other agrichemicals, add solid constituents (such as wettable powders, water dispersible granules or micronutrients) last in the form of a slurry.

APPLICATION METHODS AND EQUIPMENT:

A1117.01 can be applied as a foliar spray or a drench to soil or soil-less media (e.g., greenhouses and mushroom houses) to control insects and nematodes. When needed, soil drenches can also be used to control soil-borne pests, including soil-borne larvae of foliar insect pests. When applying as a drench, avoid excessive leaching. **A1117.01** may be applied through sub-surface soil treatment equipment (e.g., turf grass). **A1117.01** can also be injected into mature trees (landscaping, forestry, residential, etc.) using appropriate tree injection equipment. To repel adult flies, apply through fogging equipment. Always follow equipment manufacturers use directions.

A1117.01 may be applied using any powered or manual pesticide application equipment, which includes but is not restricted to: high-volume, low-volume, ultra-low volume, electrostatic, fogging, and chemigation. Follow the original manufacturer's directions when using these types of equipment.

FOR OUTDOOR AND FIELD APPLICATIONS USING CONVENTIONAL GROUND AND AERIAL SPRAY EQUIPMENT:

Apply **A1117.01** in a sufficient volume of water to ensure adequate coverage of plant surfaces. Typically, 30 - 200 gallons per acre for ground applications, depending on crop type, canopy and/or crop growth stage. Refer to tables below to determine appropriate use rates for sites and pests. Use lower end of rate range when infestations are low

to moderate. Use higher rates for heavy infestations. For extremely heavy infestation or when plant canopy is dense, **A1117.01** may be applied at up to 22.5 fl. oz. per acre.

For aerial applications or low volume sprays applied in 30 gallons of water or less per acre, do not exceed an A1117.01 solution concentration of 0.625% v/v (1:160).

FOR GREENHOUSE AND INDOOR APPLICATIONS USING CONVENTIONAL SPRAY EQUIPMENT:

Apply product in a sufficient volume of water to ensure adequate coverage of plant surfaces. Typically, 16-45 gallons per 10,000 sq. ft. depending on crop type, canopy and/or crop growth stage. Refer to tables below to determine appropriate use rates of **A117.01** for sites and pests. Use lower end of rate range when infestations are low to moderate and higher rates for heavy infestations. For extremely heavy infestation, or when the plant canopy is dense, **A117.01** may be applied at up to 5.1 fl. oz. per 10,000 sq. ft. For optimum performance, prepare spray solution with a product concentration of 0.125% v/v -0.25% v/v (1:800-1:400). Do not exceed a 0.25% v/v (1:400 dilution rate) on sensitive plants.

Groups of potted plants may be sprayed at a rate of one gallon of finished spray solution per 500 sq. ft.

[Hose End Sprayer: Follow use directions on manufacturers hose end sprayer. Fill reservoir with A1117.01. Set sprayer to deliver a rate of 0.08 to 0.10 fl. oz. per gallon or a 1:1280 – 1:1600 dilution. Spray this solution on the desired treatment surface.]

[32 oz. Spray Bottle: For smaller applications, **A1117.01** may be diluted into a 32-ounce handheld spray bottle. Follow all label directions for use.

- 1. Remove cap on side of bottle and fill with hot tap water to the fill line. (Note fill line on bottle).
- 2. Peel up the resealable label containing ampoules on front of container. Remove one ampoule. Squeeze all contents of ampoule into container. Close cap and shake vigorously. Discard empty ampoule.
- 3. Spray **A1117.01** solution onto plants. Thoroughly wet all surfaces of the plant.

Note: Use entire container contents at the time of application. Do not store diluted product.]

For optimum results, make 2 to 3 applications at 7 to 10 day intervals, unless otherwise specified. Treat early for best control. Make foliar applications to both sides of leaves. In addition, a surfactant used as per the manufacturer's directions may improve product performance. The addition of a non-phytotoxic crop oil at rates not exceeding 1.0% (volume / volume) generally enhances insect control.

NOTE: This product has been evaluated for phytotoxicity on a wide range of plants. However, since all combinations or sequences of pesticide sprays including fertilizers, surfactants and adjuvants have not been tested, spray a small area first to make certain no phytotoxicity occurs. Additionally, when applying **A1117.01** on sensitive crops, such as leafy vegetables, first test rates as a ground spray on a small portion of the crops to be treated to ensure a phytotoxic response will not occur before spraying the entire crop. Avoid any spray drift on non-target crops or sites by following appropriate spray drift control measures.

PLANTS ON WHICH A1117.01 CAN BE USED

A1117.01 is intended for use on outdoor plants and food crops, mushroom houses, plants grown indoors or in greenhouses, shade cloth, interiorscapes and nurseries.

GREENHOUSE FOOD CROPS: Brassica (Cole) Crops, Cucurbits, Eggplants, Herbs and Spices, Hops, Legumes, Peppers, Tobacco, Tomatoes, and other miscellaneous crops grown in greenhouses.

ROOT AND TUBER VEGETABLES: Arracacha, Artichokes, Beets, Carrots, Canna, Cassava, Chicory, Chufa, Dasheen, Ginger, Horseradish, Leren, Jicama, Potatoes, Radishes, Rutabagas, Salsify, Skirret, Sweet Potatoes, Tanier, Turmeric, Turnips, Yam Bean, Yams.

MUSHROOMS: Agaricus, Enoki, Maitake, Oyster, Shitake, and other specialty mushrooms.

LEAFY VEGETABLES (INCLUDING BRASSICA LEAFY VEGETABLES): Amaranth, Arugula, Broccoli, Broccoli Raab, Brussels Sprouts, Cabbage, Cauliflower, Cardoon, Cavalo Broccoli, Celery, Celtuce, Chervil, Chinese Cabbage (Bok Choy, Napa), Collards, Corn Salad, Cress, Endives, Fennel, Frisee, Kale, Kohlrabi, Lettuce, Mizuna, Mustard Greens, Parsley, Purslane, Rape Greens, Radicchio, Rhubarb, Spinach, Swiss Chard, Turnip Greens.

LEGUME VEGETABLES: Beans (Field, Kidney Etc.), Chickpeas, Cowpeas, Guar, Jackbeans, Lablab Beans, Lentils, Peas, Pigeon Peas, Soybeans, Sword Beans.

FRUITING VEGETABLES: Eggplants, Ground Cherries, Pepinos, Peppers, Pimentos, Tomatillos, Tomatoes.

CUCURBIT VEGETABLES: Bitter Melons, Chayotes, Chinese Wax Gourds, Citron Melons, Cucumbers, Gherkins, Gourds, Muskmelons (Cantaloupes, Casabas, Crenshaw), Pumpkins, Squash, and Watermelons.

CITRUS FRUITS: Calamondins, Citrus Citrons, Citrus Hybrids, Grapefruits, Kumquats, Lemons, Limes, Mandarins, Oranges, Pummellos, Satsuma Mandarins, White Sapote.

POME FRUITS: Apples, Crabapples, Loquats, Mayhaws, Oriental Pears, Pears, Quinces.

STONE FRUITS: Apricots, Cherries, Nectarines, Peaches, Plums, Prunes.

BERRIES: Blackberries and Caneberries, Blueberries, Currants, Elderberries, Gooseberries, Huckleberries, Loganberries, Raspberries, Strawberries, Youngberries.

CEREAL GRAINS: Barley, Buckwheat, Corn, Millet, Oats, Popcorn, Rice, Rye, Sorghum, Teosintes, Triticale Hybrids, Wheat, Wild Rice.

FORAGE CROPS: Alfalfa, Clover, Trefoil, Vetch.

HERBS AND SPICES: Allspice, Angelica, Anise, Annatto, Balm, Basil, Black And White Peppers, Borage, Burnet, Chamomile, Caper Buds, Cardamom, Caraway, Cassia, Catnip, Celery Seeds, Chervil, Chives, Cinnamon, Clary, Cloves, Coriander (Cilantro), Costmary, Culantro, Cumin, Curry Leaf, Dills, Fennels, Fenugreek, Grains Of Paradise, Horehound, Hyssop, Juniper Berry, Lavender, Lemongrass, Lovage, Mace, Marigolds, Marjoram, Mustard Seeds, Nasturtium, Nutmeg, Parsley, Pennyroyal, Poppy Seeds, Rosemary, Rue, Saffron, Sage, Savory, Sweet Bay (Bay Leaf), Tansy, Tarragon, Thyme, Vanilla, Wintergreen, Woodruff, Wormwood and other miscellaneous herbs.

BULB VEGETABLES: Garlic, Leeks, Onions, Shallots.

NUTS: Almonds, Beechnuts, Brazil Nuts, Butternuts, Cashews, Chestnuts, Chinquapin, Filberts, Hickory Nuts, Lychee Nuts, Macadamias, Pecans, Pistachios, Walnuts.

OILSEED CROPS: Canola, Castor, Cotton Seed, Crambe, Guar, Jojoba, Peanut, Rape, Safflower, Sesame, Soybean, Sunflower.

TROPICAL FRUITS: Atemoya, Banana, Breadfruit, Canistel, Cherimoya, Durian, Guava, Lychee, Longan, Malanga, Mango, Papaya, Passionfruit, Spanish Lime, Starfruit, Sugar Apple.

MISCELLANEOUS FOOD AND NON-FOOD CROPS: Asparagus, Avocado, Birdseed, Cacao, Coffee, Cotton, Cranberry, Edible Flowers, Feijoa, Figs, Ginseng, Globe Artichokes, Grapes, Guayule, Hemp, Hops, Kiwi, Okra, Olives, Palms, Papaya, Pawpaw, Persimmon, Pineapple, Pomegranate, Rambutan, Sugarcane, Tamarillo, Tea, Tobacco, Water Chestnut, Watercress, and all other food crops.

BEDDING PLANTS, FLOWERS, ORNAMENTAL PLANTS, POTTED PLANTS AND FOLIAGE: Actinopteris, African Violets, Ageratum, Aglaonema, Allamanda, Algerian Ivy, Alocasia, Anthurium, Aphelandra, Artemisia, Aster, Aucuba Azalea, Baby's Breath, Begonia, Bougainvillea, Boston Fern, Boxwood, Brachycome, Cacti, Calabrese, Caladium, Calla, Calathea, Calendula, Carnation, Chrysanthemum, Cineraria, Coleus, Columbine, Cotoneaster, Cyclamen, Daffodil, Dahlia, Daisy, Daylily, Delphinium, Dianthus, Dieffenbachia, Dusty Miller, Easter Lily, English Ivy, Euphorbia, Fern, Ficus, Foxglove, Freesia, Fuchsia, Gaillardia, Gardenia, Geranium, Gerbera, Gladioli, Gloxinia Gypsophilla, Hedera, Hibiscus, Hyacinth, Hydrangea, Impatiens, Iris, Ivy, Lily, Maidenhair Fern, Mandevilla, Marigold, Narcissus, Nasturtium, Orchid, Pansy, Pelargonium, Peony, Peperomia, Petunia, Philodendron, Phlox, Photinia, Pittosporum, Pinks, Poinsettia, Pothos, Portulaca, Pyracantha, Rosemary, Rose, Rubberplant, Salvia, Schefflera, Sedum, Sempervivum, Snapdragon, Spathiphyllum, Stock, Syngonium, Tulip, Verbena, Vinca, Wandering Jew, Yew, Yucca, Zinnia.

ORNAMENTAL TREES AND SHRUBS: Andromeda, Arborvitae, Ash, Austrian Pine, Azalea, Beech, Birch, Birds Nest Spruce, Blue Spruce, Bougainvillea, Boxwood, Butternut, Camellia, Cedar, Chamaecyparis, Cherry, Crabapple, Cyprus, Dogwood, Douglas Fir, Elm, Euonymus, Firethorn, Forsythia, Hackberry, Hawthorn, Hemlock, Hickory, Holly, Honey Locust, Horse Chestnut, Ilex, Juniper, Larch Laurel, Lilac, Linden, London Plane, Magnolia, Maple, Mimosa, Mountain Ash, Myrtle, Oak, Pachysandra, Peach Pine, Photinia, Plane Tree, Pines, Poplar, Privet, Quince, Rhododendron, Roses, Spruce, Sycamore, White Cedar, White Pine.

TURF AND TURFGRASS: Bentgrass, Bermuda Grass, Bluegrass, Centipede Grass, Fescue, Ryegrass, St. Augustine, Wheatgrass, Zoysia Grass.

{NOTE TO REVIEWER: Registrant may add or remove the following state restriction statem	ent as required
throughout. (e.g., NOT FOR USE IN CALIFORNIA)}	

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USE RATES FOR LISTED PESTS BY USE SITE

A1117.01 is intended for use on outdoor plants and food crops, mushroom houses, plants grown indoors or in greenhouses, shade cloth, interiorscapes and nurseries. It can be used to control any of the insects and nematodes listed below.

Use the tables below to determine the appropriate use rate for your site / pest combination. Rates provided are in ounces of **A1117.01** per area or row-length.

NOTE: When infestation is heavy, or when plant canopy is dense, **A1117.01** may be used up to but not exceeding 22.5 fl. oz. per acre. When combining with other insecticides, use at the low end of specified rates of **A1117.01**.

USE RATES FOR OUTDOOR PLANTS INCLUDING: FOOD CROPS [,] [TREES, TURFGRASS, NURSERY, AND ALL OUTDOOR ORNAMENTAL PLANTS]			
PEST	RATE Fluid Ounces of A1117.01/ Acre	REMARKS	
WHITEFLIES: Greenhouse whiteflies, Silverleaf whiteflies, Woolly whiteflies	8 - 21	Use in combination with 0.25 - 1.0% non-phytotoxic crop oil in sufficient water to cover undersides of leaves.	
LEAFMINERS: Azalea, leafminers, Birch Leafminers, Citrus leafminers, Serpentine leafminers, Vegetable leafminers	10 - 16	Use in combination with 0.25 - 1.0% non-phytotoxic crop oil in sufficient water to cover undersides of leaves.	
SCALES: Brown soft scales, California red scales, Coffee scales, Olive scales, San Jose scales	10 - 16	Use in combination with 0.25 - 1.0% non-phytotoxic crop oil in sufficient water to cover twigs and leaves.	
MEALY BUGS: Citrus mealybugs	10 - 16	Use in combination with 0.25 - 1.0% non-phytotoxic crop oil in sufficient water to cover twigs and leaves.	
GRASSHOPPERS and LOCUSTS	10 - 16	Spray when pests first appear. For food crops: Repeat application after 7 - 10 days. Use in combination with 0.25 - 1.0% non-phytotoxic crop oil in sufficient water to cover undersides of leaves. For non-food crops: Repeat application every 5 to 7 days.	
MITES: Banks mite, Clover mite, Citrus Rust mite, Citrus Red mite, European Red Mite, Hemlock Rust mite, Honey Locust mite, Pacific mite, Spruce mite, Two- spotted Spider mite	10 - 16	Use in combination with 0.25 - 1.0% non-phytotoxic crop oil in sufficient water to cover twigs and leaves.	
THRIPS: Citrus thrips, Onion thrips, Thrips palmi	10 - 16	Spray when pests first appear. Repeat every 5 to 7 days.	
APHIDS: Cotton aphids, Green peach aphids, Pea aphids, Potato aphids	10 - 16	Spray when pests first appear. For food crops: Repeat application after 7 - 10 days. Use in combination with 0.25 - 1.0% non-	

		T
		phytotoxic crop oil in sufficient
		water to cover undersides of
		leaves.
		For non-food crops: Repeat
		application every 5 to 7 days.
PSYLLIDS: Pear psylla	8 - 16	Spray when pests first appear.
		For food crops: Repeat application
		after 7-10 days. Use in combination
		with 0.25 - 1.0% non-phytotoxic
		crop oil in sufficient water to cover
		undersides of leaves.
		For non-food crops: Repeat
		application every 5 to 7 days.
LEAFHOPPERS: Grape	10 - 16	Spray when pests first appear.
leafhopper, Potato Leafhopper,		For food crops: Repeat application
Variegated Leafhopper		after 7-10 days. Use in combination
		with 0.25 - 1.0% non-phytotoxic
		crop oil in sufficient water to cover
		undersides of leaves.
		For non-food crops: Repeat
		application every 5 to 7 days.
BUGS: Boxelder bugs, Chinch bugs,	10 - 16	Spray nymphs early.
Lygus bugs Spittle bugs, Stink bugs.		
CHAFERS:	10 - 16	Spray when pests first appear.
European Chafer, Northern Masked		Repeat application every 5 to 7
Chafer, Rose Chafer		days.
FLIES: Blueberry maggots, Cherry	10 - 16	For food crops: Spray when pests
maggots, Crane flies, Fruit flies,		first appear.
Midges, Onion maggots, Walnut		For non-food crops: Drench soil to
husk flies, Fungus Gnat, Hessian		kill larvae.
Fly, Marsh Crane Fly, Melon Fly,		
Midges, Shore Fly		
SAWFLIES: European pine	10 - 16	Treat larvae early.
sawflies, Yellow headed pine		·
sawflies		
CATERPILLARS and MOTHS:	8 - 16	Spray when pests first appear.
Armyworms, Beet Armyworm,		For food crops: Repeat application
Fall Armyworm, Lawn Armyworm,		after 7 - 10 days. Use in combination
Southern Armyworm,		with 0.25 - 1.0% non-phytotoxic crop
Yellowstriped Armyworm,		oil in sufficient
Artichoke plume moths,		water to cover undersides of leaves.
Bagworms, Black Cutworm,		For non-food crops: Repeat
Bollworms, Budworms, Cabbage		application every 5 to 7 days.
butterflies, Cabbage Loopers,		, , , , , , , , , , , , , , , , , , , ,
Cankerworms, Caseworms, Citrus		
Cutworm, Corn earworms,		
Cutworms, Diamond-backed		
moths, European Pine Shoot Moth,		
Fall Cankerworm, Fruitworms,		
Grapeleaf skeletonizers, Gypsy		
moths, Hickory shuckworms,		
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Hornworms, Imported cabbage		
worms, Leaf perforators,		
Leafrollers, Melonworms, Navel		
Orange worms, Oblique banded		
leafrollers, Omnivorous leafrollers.		
Oriental fruit moths, Pickle worms,		
Pine tip moths, Pinworms, red-		
banded leaf rollers, Sod		
webworms, Soybean loopers,		
Spring Cankerworm, Tent		
caterpillars, Tobacco budworms,		
Tobacco Hornworm, Tomato		
Fruitworm Tomato Pinworm,		
Tussock moths.		
BEETLES and GRUBS: Bark	8 - 16	Spray when pests first appear.
Beetles, Blueberry flea beetles, Boll		For food crops: Repeat application
weevils, Colorado potato beetles,		after 7 - 10 days. Use in combination
Flea beetles, Japanese beetles, Leaf		with 0.25 - 1.0% non- phytotoxic
beetles, Mexican bean beetles,		crop oil in sufficient water to cover
Pepper weevils, Phylloxera, Rose		undersides of leaves.
Chafers, Twig girdlers, Elm Leaf		For non-food crops: Repeat
Beetle, Cucumber Beetle, June		application every 5 to 7 days.
Beetle.		
WEEVILS: Black vine weevils,	10 - 16	Make foliar applications to deter
Strawberry vine weevils		adult feeding. Make at least 3 to 4
		applications 10 days apart.
BORERS: Peach twig borers,	10 - 16	Spray soon after egg hatch.
Peachtree borers, Dogwood borers,		For food crops: Use in combination
Cranberry borers.		with 0.25% - 1.0% non-phytotoxic
		crop oil in sufficient water to cover
		undersides of leaves.
MOLE CRICKETS	10 - 16	Spray nymphs soon after egg hatch.
NEMATODES: Burrowing nematodes,	15	Apply in sufficient amount of water
Dagger nematodes, Golden		to penetrate in the soil to a depth of
nematodes, Root knot nematodes		12 inches. Repeat applications
		every 3 or 4 weeks or as needed.

USE RATES FOR MUSHROOMS		
PEST	RATE Fluid Ounces of A1117.01/	REMARKS
	1,000 sq. ft.	
Mushroom flies, Nematodes, Phorid flies	0.5	Apply as drench to the casing layer, media or compost. Make at least 4 to 5 applications 7 to 10 days apart. To repel adults, apply with fogging equipment at first sign of activity. For mushroom house use: mix into the casing layer, or into media during the spawn run. Can be applied between breaks until the final flush.

USE RATES FOR MANURE PILES		
PEST	RATE Fluid Ounces of A1117.01/ 1,000 sq. ft.	REMARKS
Mushroom flies, Nematodes, Phorid flies	0.5	For Manure Piles and Compost: Surface treat and incorporate using appropriate equipment when the manure piles are moist. Avoid treating when manure is too wet. Directly spray on to areas where flies are actively breeding.

USE RATES FOR TURFGRASS		
PEST	RATE Fluid Ounces of A1117.01/Acre	REMARKS
Sod Webworms, Armyworms, Grubs, Cutworms, Aphids, Cinchbugs, Billbugs, Leafhoppers, Ants, and Chiggers	8 - 21	Irrigate well before applying. Use a suitable pressure sprayer and mix ½ - ¾ tablespoon in 3 gal. of water and apply to 2,500 sq. ft of turf. Apply when insect larvae first appear. Repeat application in 10 to 14 days if necessary. The use of an approved "spreader sticker" may help the spray to penetrate turf down to the larvae/worm feeding area.
Nematodes	15	Apply in sufficient amount of water to penetrate in the soil to a depth of 12 inches. Repeat applications every 3 or 4 weeks or as needed.

A1117.01 can also be applied through sub-surface soil treatment equipment (e.g., turf grass).

TREE TRUNK INJECTION:

A1117.01 can be injected into mature trees (landscaping, forestry, residential, etc.) using appropriate tree injection equipment. Inject at a rate of 0.30-0.75 oz. per tree trunk diameter, and repeat application as needed.

USE RATES FOR TREE TRUNK INJECTION OR TREE TREATMENT			
PEST	RATE Fluid Ounces of A1117.01/ Inch Tree Trunk Diameter	REMARKS	
Emerald Ash Borer, Gypsy Moth, Spruce Budworm, Jack Pine Budworm, Tent Caterpillars, Leafminers, Sawflies, Whiteflies, Aphids, Scales, Psyllids, Mealybugs, Hemlock Wooly Adelgid	0.30 - 0.75	Measure tree diameter in inches at breast height (DBH) which is approximately 4.0-5.0 feet from the ground. If measuring the circumference of the tree, divide circumference by 3 to get DBH. Inject with suitable equipment that ensures uniform and slow delivery of the product. Evenly space drill holes (3/16" diameter) approximately 3-5 inches apart and 2-5 feet above the ground. Extend the holes into the bark and approximately ½ to 1 inch into sapwood of the tree. If the product is too viscous to inject directly, dilute with small amount of water before injection. To determine dosage per injection site, divide total dose by number of injection sites.	

FOR USE INDOORS OR IN GREENHOUSES

Use the table below to determine the appropriate use rate for each pest.

NOTE: When infestation is heavy, or when plant canopy is dense, **A1117.01** may be used up to but not exceeding 22.5 fl. oz. per acre or 5.1 fl. oz. per 10,000 sq. ft. When combining with other insecticides, use at the low end of specified rates of **A1117.01**.

USE RATES FOR ANY PLANT GROWN INDOORS OR IN GREENHOUSES, SHADECLOTH, INTERIORSCAPE AND NURSERIES			
PEST	RATE Fluid Ounces of A1117.01/ 10,000 sq. ft.	REMARKS	
WHITEFLIES: Greenhouse whiteflies, Silverleaf whiteflies, Sweet potato Whitefly, Woolly whiteflies	2.0 – 3.5	Ensure good coverage to top and bottom of leaves against larvae and pupae. Can be applied after bract formation on poinsettias (test for phytotoxicity prior to large scale use).	
LEAFMINERS: Serpentine leafminers	2.0 – 3.5	Spray early. Make 2 to 3 applications in rotation with adulticides such as pyrethroids.	

COST COALES	20.25	11 . 1
SOFT SCALES	2.0 – 3.5	Use in combination with 0.5 – 1.0% non-phytotoxic crop oil in sufficient
		water to cover twigs and leaves.
MEALY BUGS	2.0 – 4.0	Always use in combination with 0.5 – 1.0% non-phytotoxic crop oil.
THRIPS: Western flower thrips	2.0 – 4.0	Spray when pests first appear. Repeat every 5 to 7 days.
MITES: Banks mite, Clover mite, Citrus Rust mite, Citrus Red mite, European Red Mite, Hemlock Rust mite, Honey Locust mite, Pacific mite, Spruce mite, Two-spotted Spider mite	2.0 – 4.0	Use in combination with 0.25 – 1.0% non-phytotoxic crop oil in sufficient water to cover twigs and leaves.
APHIDS: Green peach aphids, Pea aphids, Cotton aphids, Rose aphids, Apple Aphid, Melon Aphid, Potato Aphid	2.0 – 4.0	Spray when pests first appear. Addition of 0.5 – 1.0% non- phytotoxic crop oil will enhance efficacy.
LACE BUGS: Azalea lace bugs	2.0 – 4.0	Spray when pests first appear.
FLIES: Crane flies, Fungus gnats, Shore flies, Blueberry maggots, Caribbean Fruit Fly, Cherry maggots, Fruit flies, Hessian Fly, Marsh Crane Fly, Melon Fly, Midges, Onion maggots, Walnut husk fly	2.0 – 4.0	Add at least 1 pint of mixture per gallon pot as soil drench. Repeat application every 7 days for 3 weeks. For poinsettias, lilies and bedding plants, also make 1 application 10 to 15 days prior to shipping plants to prevent adult emergence.
CATERPILLARS: Armyworms, Bagworms, Cutworms, Leafhoppers, Leafrollers, Loopers, Spruce budworms, Webworms	2.5 – 4.0	Spray when pests first appear.
BORERS: Peachtree borers	2.0 – 4.0	Spray when pests first appear. Repeat as needed.
BEETLES: Bark beetles, Flea beetles, Japanese beetles, Cucumber beetle	2.0 – 4.0	Spray when pests first appear. Repeat as needed.
WEEVILS: Black vine weevils, strawberry vine weevils	2.0 – 4.0	Make foliar applications to deter adult feeding. Drench soil at a rate of 1 pint per gallon pot during spring and fall periods to control larvae. Make at least 3 to 4 applications 10 days apart.
NEMATODES: Burrowing nematodes, Dagger nematodes, Golden nematodes, Root knot nematodes	2.0 – 4.0	Drench at least 1 pint of mixture per gallon pot once a week for 4 weeks. Avoid leaching – drench until moist to the touch. For heavy infestations, use twice the rate and drench more frequently.

Soil Drench: This product is effective as a soil drench for controlling larvae and other immature stages of soil borne insect pests such as but not limited to larvae of leaf miners, root aphids, shore flies, cutworms, beetle grubs, fungus gnats/mushroom flies, and nematodes.

Dilute **A1117.01** with water at a rate of 0.15% - 0.30%. Rate table below provides the amount of **A1117.01** for different drench volumes of water.

Mix the solution thoroughly and apply to moderately moist soils at a rate of 1 pint of finished solution for each gallon of soil in the pot or 45-55 gallons of mixed solution per 1,000 sq. ft. of soil. Use volumes that thoroughly wet the soil, but do not cause significant surface runoff or excessive drip from pots. Make 3-5 applications at 7 to 10 day interval until pest pressure subsides.

Use higher rates (0.2% - 0.3%) and apply at shorter intervals (7 days) for difficult to control insect pests and nematodes and/or when pest infestation is high.

A1117.01 Rates for Soil Drench Applications

Gallons of Water	Amou	nt of A1117.01 (fl.	oz.)
Gallons of Water	0.15%	0.2%	0.30%
1.0	0.192	0.256	0.384
5.0	0.96	1.28	1.92
10.0	1.92	2.56	3.84
100.0	19.2	25.6	38.4

NOTE: For soil-less media do not exceed concentrations greater than 0.05% A1117.01.

[Hydroponic Applications: Use A1117.01 for control of immature stages (larvae/nymphs) of foliar and soil-borne insect pests in hydroponic systems.

Dilute **A1117.01** with water at a rate of 0.10% - 0.25% v/v. Rate table below provides **A1117.01** amounts for different volumes of water.

Mix or agitate treated water thoroughly for uniform distribution across the entire hydroponic system. After adding **A1117.01**, solution may need to be buffered to a pH ideal for crop growth and applications be made during early morning hours to maximize root uptake. Repeat applications at 7–10-day intervals as necessary until sufficient control of pest pressure subsides.

Use higher rates (0.2% - 0.25%) and apply at shorter intervals (7 days) for difficult to control insect pests and/or when pest infestation is high.]

[Chart Optional]
A1117.01 Rates for Hydroponic Applications

Gallons of	Amount of A1117.01 (fl. oz.)		
Water	0.1%	0.2%	0.25%
1.0	0.128	0.256	0.32
5.0	0.64	1.28	1.60
10.0	1.28	2.56	3.20
100.0	12.8	25.6	32.0

POULTRY LITTER AND LIVESTOCK BEDDING:

Apply to poultry and livestock bedding, litter, floors, walls, cages, nest boxes, nest pads and other housing equipment where insect pests collect, travel, rest, hide, harbor or breed. Apply when animals are not in the immediate area being treated. Animals may reenter treated area once spray solution has thoroughly dried. Do not contaminate food, feed, potable water or watering equipment.

USE RATES FOR POULTRY LITTER AND LIVESTOCK BEDDING			
PEST	RATE Fluid Ounces of A1117.01/ 10,000 sq. ft.	REMARKS	
Litter Beetles (Darkling, Hide and Carrion), Northern Fowl Mites, Red Poultry Mites, Nematodes	2.0 – 4.0	Apply in a sufficient volume of water to thoroughly ensure coverage. Concentrate sprays under feed and watering lines or in other areas where insect pests collect.	

CHEMIGATION

General Information

This product may be applied only through drip (trickle) or sprinkler (center pivot, lateral move, end tow, side roll, traveler, big gun, solid set, or hand move), flood (basin) irrigation systems. Do not apply this product through any other type of irrigation system.

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water. If you have questions about calibration, contact State Extension Service Specialists, equipment manufacturers or other experts. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place. A person knowledgeable of the chemigation system and responsible for its operation or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

Dilute **A1117.01** with water before introduction into the system; use the diluted mixture within 8 hours. Do not apply in irrigation water if the pH exceeds 7.0. The optimum pH for application is a range of 5.5 to 6.5. If needed, the pH of the irrigation water can be adjusted by use of a suitable buffering agent. Agitation is necessary. Apply at the rate specified in the Directions for Use using sufficient water to achieve an even distribution within an 8-hour period. Do not apply **A1117.01** at a rate that exceeds 20 grams active ingredient per acre (22.5 fl oz of **A1117.01**). If applying **A1117.01** in combination with other products refer to the compatibility statement in the **DIRECTIONS FOR USE** section.

General Requirements -

- 1. Apply this product only through a drip system or sprinkler including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, hand move, flood (basin), furrow, border or drip (trickle) irrigation systems. Do not apply this product through any other type of irrigation system.
- 2. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.
- 3. If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.
- 4. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.
- 5. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

- 6. Posting of areas to be chemigated is required when 1) any part of a treated area is within 300 feet of sensitive areas such as residential areas, labor camps, businesses, day care centers, hospitals, in-patient clinics, nursing homes or any public areas such as schools, parks, playgrounds, or other public facilities not including public roads, or 2) when the chemigated area is open to the public such as golf courses or retail greenhouses.
- 7. Posting must conform to the following requirements. Treated areas shall be posted with signs at all usual points of entry and along likely routes of approach from the listed sensitive areas. When there are no usual points of entry, signs must be posted in the corners of the treated areas and in any other location affording maximum visibility to sensitive areas. The printed side of the sign should face away from the treated area towards the sensitive area. The signs shall be printed in English. Signs must be posted prior to application and must remain posted until foliage has dried and soil surface water has disappeared. Signs may remain in place indefinitely as long as they are composed of materials to prevent deterioration and maintain legibility for the duration of the posting period.
- 8. All words shall consist of letters at least 2.5 inches tall, and all letters and the symbol shall be a color which sharply contrasts with their immediate background. At the top of the sign shall be the words KEEP OUT, followed by an octagonal stop sign symbol at least 8 inches in diameter containing the word STOP. Below the symbol shall be the words PESTICIDES IN IRRIGATION WATER.

Specific Requirements for Chemigation Systems Connected to Public Water Systems -

- 1. Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
- 2. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
- 3. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- 4. The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- 5. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
- 6. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- 7. Do not apply when wind speed favors drift beyond the area intended for treatment.

Specific Requirements for Sprinkler Chemigation -

- 1. The system must contain a functional check valve, vacuum relief valve and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
- 2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- 3. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

- 4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- 5. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- 6. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being filled with a system interlock.
- 7. Do not apply when wind speed favors drift beyond the area intended for treatment.

Specific Requirements for Flood (Basin), Furrow and Border Chemigation -

- 1. Systems using a gravity flow pesticide dispensing system must meter the pesticide into the water at the head of the field and downstream of a hydraulic discontinuity such as a drop structure or weir box to decrease potential for water source contamination from backflow if water flow stops.
- 2. The systems utilizing a pressurized water and pesticide injection system must meet the following requirements:
 - a. The system must contain a functional check valve, vacuum relief valve and low- pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
 - b. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
 - c. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
 - d. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
 - e. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
 - f. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being filled with a system interlock.

Specific Requirements for Drip (Trickle) Chemigation -

- 1. The system must contain a functional check valve, vacuum relief valve and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
- 2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- 3. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- 4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- 5. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- 6. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being filled with a system interlock.

Application Instructions -

- 1. Remove scale, pesticide residues, and other foreign matter from the chemical supply tank and entire injector system. Flush with clean water. Failure to provide a clean tank, void of scale or residues may cause product to lose effectiveness or strength.
- 2. Determine the treatment rates as indicated in the directions for use and make proper dilutions.
- 3. Prepare a solution in the chemical tank by filling the tank with the required water and then adding product as required. The product will immediately go into suspension without any required agitation.
- 4. Do not apply **A1117.01** in conjunction with any other pesticides or fertilizers; this has the potential to cause reduced performance of the product. Avoid application in this manner.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

PESTICIDE STORAGE: Store in original containers in a cool, well-vented area, away from direct sunlight. Do not allow product to become overheated in storage. This may cause increased degradation of the product, which will decrease product effectiveness. In case of spill, flood area with large quantities of water.

PESTICIDE DISPOSAL: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Open dumping is prohibited. If wastes cannot be disposed of according to label directions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

CONTAINER HANDLING:

[Nonrefillable Containers ≤ 5 gal:] Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration.

[Nonrefillable Containers > 5 gal:] Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration.

[Refillable Containers:] Refillable container. Refill this container with pesticide only. Do not use this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration.

LIMITATION OF WARRANTY AND LIABILITY

IMPORTANT: READ BEFORE USE. Read the entire Directions for Use, Conditions of Warranties and Limitations of Liability before using this product. If these terms and conditions are not acceptable, return the unopened product container at once. By using this product, user or buyer accepts the following Disclaimer of Warranties and Limitations of Liability. CONDITIONS: The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Ineffectiveness, injury, and other unintended consequences may result because of such factors as manner of use or application (including misuse), the presence of other materials, weather conditions, and other unknown factors, all of which are beyond the control of ATTICUS, LLC. To the extent consistent with applicable law, all such risks shall be assumed by the user or buyer.

DISCLAIMER OF WARRANTIES: To the extent consistent with applicable law, ATTICUS, LLC makes no other warranties, express or implied, of merchantability or of fitness for a particular purpose or otherwise, that extend beyond statements on this label. **LIMITATIONS OF LIABILITY:** To the extent consistent with applicable law, neither ATTICUS, LLC the manufacturer, nor the Seller shall be liable for any indirect, special, incidental or consequential damages resulting from the use, handling, application, storage, or disposal of this product. To the extent consistent with applicable law, the exclusive remedy of the user or buyer for any and all losses, injuries or damages resulting from the use, handling, application, or storage of this product, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall not exceed the purchase price paid.

[A1117.01 is a trademark of Atticus, LLC]

{Note to reviewer: [Text] in brackets denotes optional or explanatory language} {Note to reviewer: {Text} in braces denotes where in the final label text will appear}

[Sublabel B: For Home Gardens]

{BOOKLET FRONT PANEL LANGUAGE}



A1117.01 [TM]

[Alternate Brand Name: Atrevia 3.0% SL]

[INSECTICIDE / MITICIDE / NEMATICIDE] [FOR ORGANIC GARDENING]

ACTIVE INGREDIENT:	(% by weight)
Azadirachtin	3.0%
OTHER INGREDIENTS:	97.0%
TOTAL	
Contains 0.24 lb. (111 grams) of azadirachtin per gallon.	

KEEP OUT OF REACH OF CHILDREN

CAUTION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

Read entire label. Use strictly in accordance with precautionary statements and directions for use, and with applicable state and federal regulations.

[See inside label booklet for First Aid, [additional] Precautionary Statements, and Directions for Use.]

[See below additional Precautionary Statements]

EPA Reg. No.: 91234-XX

EPA Est. No.:

Net Contents:

Manufactured for:
Atticus, LLC
5000 CentreGreen Way, Suite 100
Cary, NC 27513

{LANGUAGE INSIDE BOOKLET}

	FIRST AID
If swallowed:	Call a poison control center or doctor immediately for treatment advice.
	Have person sip a glass of water if able to swallow.
	• Do not induce vomiting unless told to do so by the poison control center or doctor.
	Do not give anything by mouth to an unconscious person.
If on skin or	Take off contaminated clothing.
clothing:	Rinse skin immediately with plenty of water for 15-20 minutes.
J	Call a poison control center or doctor for treatment advice.
	HOT LINE NUMBER
Have the produ	uct container or label with you when calling a poison control center or doctor, or going
for treatment.	You may also contact SafetyCall at 1-844-685-9173 for emergency medical treatment
information.	

For Chemical Emergency:
Spill, Leak, Fire, Exposure, or Accident,
Call CHEMTREC Day or Night
Within USA and Canada: 1-800-424-9300 or +1 703-527-3887 (collect calls accepted)

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Harmful if swallowed or absorbed through skin. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before use.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and aquatic invertebrates. For terrestrial uses: Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwater or rinsate. Do not apply when weather conditions favor drift from treated areas. Runoff from treated area may be hazardous to aquatic organisms in neighboring areas.

APPLICATION INSTRUCTIONS

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

READ ALL DIRECTIONS AND PRECAUTIONS BEFORE USE

A1117.01 controls insects in the larval, pupal, and nymphal stages by interfering with the metabolism of ecdysone. Insects typically die between larval to larval, larval to pupal, nymph to nymph molts, or during adult eclosion.

A1117.01 may be applied as directed to any food or non-food crop up to and including the day of harvest.

Application Instructions:

- 1. Remove cap on side of bottle and fill with hot tap water to the fill line. (Note fill line on bottle).
- 2. Peel up the resealable label containing ampoules on front of container. Remove one ampoule. Squeeze all contents of ampoule into container. Close cap and shake vigorously. Discard empty ampoule.
- 3. Spray A1117.01 solution onto plants. Thoroughly wet all surfaces of the plant.

Note: Use entire container contents at the time of application. Do not store diluted product.

For optimum results, make 2 to 3 applications at 7-to-10-day intervals, unless otherwise specified. Make foliar applications to top and under sides of leaves. Apply as a fine spray to both sides of leaf surfaces to run-off. Do not over apply.

Make applications when insects first appear and are in their early larval stages. Repeat applications every 7 days, or as needed. When insect populations are high, apply on a 3–4-day interval until insect numbers are reduced.

NOTE: This product has been evaluated for phytotoxicity on a wide range of plants. However, since all combinations or sequences of pesticide sprays including fertilizers, surfactants and adjuvants have not been tested, spray a small area first to make certain no phytotoxicity occurs.

ORNAMENTAL PLANTS

A1117.01 controls the following pests on Ornamental Trees, Shrubs, Plants, Bedding Plants, Flowers, and Potted Plants:

PESTS

Aphids	Beetles
Lace Bugs	Borers
Flies	Nematodes
Caterpillars	Weevils
	Lace Bugs Flies

Mites

FRUIT AND VEGETABLE CROPS

A1117.01 controls the following pests on Fruit and Vegetable crops:

PESTS

Whiteflies	Sawflies	Chafers
Leafminers	Caterpillars	Flies
Scales	Moths	Leafhoppers
Mealy Bugs	Beetles	Bugs
Grasshoppers	Grubs	Psyllids
Locusts	Weevils	Aphids
Nematodes	Mites	Borers
Thrips	Mole Crickets	

CROPS

Broccoli	Lettuce	Spinach
Potatoes	Sweet Potatoes	Radishes
Turnips	Beans	Eggplants
Tomatoes	Peppers	Cucurbits
Squash	Melons	Berries
Stone Fruits	Apples	Pears

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

PESTICIDE STORAGE: Store in original containers in a cool, well-vented area, away from direct sunlight. Do not allow product to become overheated in storage. This may cause increased degradation of the product, which will decrease product effectiveness. In case of spill, flood area with large quantities of water.

PESTICIDE DISPOSAL: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Open dumping is prohibited. If wastes cannot be disposed of according to label directions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

CONTAINER HANDLING:

[Nonrefillable Containers ≤ 5 gal:] Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration.

[Nonrefillable Containers > 5 gal:] Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration.

[Refillable Containers:] Refillable container. Refill this container with pesticide only. Do not use this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration.

Garlic Onions Asparagus
Corn Herbs Strawberries

LIMITATION OF WARRANTY AND LIABILITY

IMPORTANT: READ BEFORE USE. Read the entire Directions for Use, Conditions of Warranties and Limitations of Liability before using this product. If these terms and conditions are not acceptable, return the unopened product container at once. By using this product, user or buyer accepts the following Disclaimer of Warranties and Limitations of Liability. CONDITIONS: The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Ineffectiveness, injury, and other unintended consequences may result because of such factors as manner of use or application (including misuse), the presence of other materials, weather conditions, and other unknown factors, all of which are beyond the control of ATTICUS, LLC. To the extent consistent with applicable law, all such risks shall be assumed by the user or buyer.

DISCLAIMER OF WARRANTIES: To the extent consistent with applicable law, ATTICUS, LLC makes no other warranties, express or implied, of merchantability or of fitness for a particular purpose or otherwise, that extend beyond statements on this label. **LIMITATIONS OF LIABILITY:** To the extent consistent with applicable law, neither ATTICUS, LLC the manufacturer, nor the Seller shall be liable for any indirect, special, incidental or consequential damages resulting from the use, handling, application, storage, or disposal of this product. To the extent consistent with applicable law, the exclusive remedy of the user or buyer for any and all losses, injuries or damages resulting from the use, handling, application, or storage of this product, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall not exceed the purchase price paid.

[A1117.01 is a trademark of Atticus, LLC]

{LANGUAGE ON LABEL AFFIXED TO CONTAINER}



A1117.01[™]

[Alternate Brand Name: Atrevia 3.0% SL]

[INSECTICIDE / MITICIDE / NEMATICIDE]
[FOR USE ON GREENHOUSE AND OUTDOOR FOOD CROPS, HEMP,
ORNAMENTAL FLOWERS, GOLF COURSES, TURF, PARKS & ORNAMENTALS]
[FOR ORGANIC GARDENING]

ACTIVE INGREDIENT:	(% by weight)
Azadirachtin	3.0%
OTHER INGREDIENTS:	<u>97.0%</u>
TOTAL	100.0%
Contains 0.24 lb. (111 grams) of azadirachtin per gallon.	

KEEP OUT OF REACH OF CHILDREN CAUTION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

FIRST AID	
If swallowed:	Call a poison control center or doctor immediately for treatment advice.
	 Have person sip a glass of water if able to swallow.
	 Do not induce vomiting unless told to do so by the poison control center or doctor.
	 Do not give anything by mouth to an unconscious person.
If on skin or	Take off contaminated clothing.
clothing:	Rinse skin immediately with plenty of water for 15-20 minutes.
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HOT LINE NUMBER

Have the product container or label with you when calling a poison contro center or doctor, or going for treatment. You may also contact SafetyCall at 1-844-685-9173 for emergency medical treatment information.

For Chemical Emergency:

Spill, Leak, Fire, Exposure, or Accident, Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 or +1 703-527-3887 (collect calls accepted)

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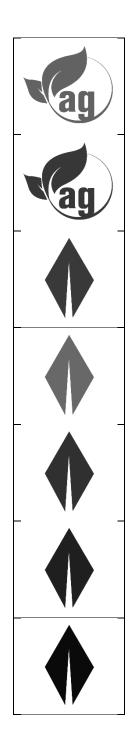
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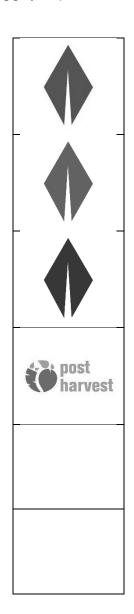
See inside label booklet for additional Precautionary Statements and Directions for Use.

Manufactured for: Atticus, LLC 5000 CentreGreen Way, Suite 100 Cary, NC 27513 EPA Reg. No.: 91234-XX
EPA Est. No.: _____
NET CONTENTS: ____

{Optional Marketing graphics}







[Optional Label Claims (may appear throughout the label):]

- Insecticide
- Nematicide
- Larvaecide
- Antifeedant
- Ovicide
- Miticide
- Reproduction Inhibitor
- Insect Growth Regulator
- Multiple Modes of Action
- Controls insects as listed on the label
- Botanical based active ingredient
- Plant-based Insecticide
- Azadirachtin Made from seeds of the Neem Tree
- From the Neem Tree "Azadirachta Indica"
- Reduces crop damage
- Spray right up to the time of harvest
- Compliments IPM programs
- Alternative to conventional insecticides
- Only a 4-hour Re-Entry Interval
- For Indoor and Outdoor Use
- For use on turf grass, outdoor shrubs, trees and ornamentals
- For ornamental greenhouse, shade house, interiorscape and nursery use
- For mushroom house use
- For use on food crops
- To control the following insects: aphids, armyworms, beetles, budworms, cutworms, fungus gnats, leafhoppers, leafminers, leafrollers, lepidopterous larvae, loopers, mushroom flies, sawflies, thrips, webworms, and whiteflies; and plant parasitic nematodes such as dagger, golden, and root knot nematodes
- For residential and commercial lawn, flowers and vegetable gardens, farms, forests, sod farms, nurseries, greenhouse food and ornamental plants, mushroom houses, nursery plants, interiorscapes, landscapes, turfgrasses and golf courses
- Use as a spray, drench, fog, or chemigation
- Plant-Based Active Ingredient
- Concentrate
- Zero-day pre-harvest interval
- Effective against soil-borne and foliar pests as listed on the label
- For use in packinghouses
- Easy to Use
- Mix and Spray
- Home and Garden Insecticide
- For residential greenhouses, gardens, flowers, shrubs, plants, trees, houseplants and vegetables
- For indoor and outdoor use
- Control on many insects as listed on this label
- Controls insects without harming plants
- Just Add Water

- Dissolves completely
- Use on vegetable crops, flowers, and grasses
- Works on tomatoes, peppers, lettuce, squash, pumpkins, and cucumbers
- Works on strawberries, apples, blueberries, citrus fruit, pears
- Works on African violets, begonias, geraniums, peony, phlox, tulip, azaleas, lilacs, rhododendrons, roses, hydrangeas, boxwoods, and more.
- Works on birch trees, oak, spruce/pine, crabapples, dogwood, cherry, magnolia, cypress, and more
- Use on vegetable crops, flowers, & outdoor shrubs
- For controlling the following insects: aphids, armyworms, beetles, borers, caterpillars, chafers, cutworms, grasshoppers, grubs, lace bugs, leafminers, loopers, mealy bugs, mites, mole crickets, nematodes, scales, thrips, weevils, whiteflies
- Use on flowers, outdoor shrubs, trees, vegetable crops, and turf grasses.
- Beetles, stinkbugs, budworms, and more.
- Systemic Insecticide
- For use in hydroponic systems
- For use with tree injection equipment
- For home and garden use.
- For indoors and outdoor vegetables, ornamentals, flowers, trees, shrubs, container grown plants, and interiorscapes.
- Controls aphids, armyworms, beetles, budworms, cutworms, fungus gnats, houseflies, leafhoppers, leafminers, loopers, leafrollers, and other caterpillars, mealybugs, mushroom flies (or sciarid flies), sawflies, scales, thrips, webworms, weevils, whiteflies; and plant parasitic nematodes such as burrowing, dagger, golden and root knot nematodes.
- For use on food crops, ornamentals, shrubs, trees, turfgrass (including golf courses and athletic fields), and nonfood uses.
- For greenhouses, shadehouses, interiorscapes, mushroom houses, and nursery uses.
- For commercial and industrial areas.
- For use on [flowering] [and] [green] plants.
- The Power of Neem
- Derived from Neem
- Insect Repellent
- Broad Spectrum [Insecticide][control] [action]
- [For] Use as part of an Integrated Pest Management [program] [strategy]
- Alternative within conventional programs
- For sustainable programs
- Peel Here for Directions & Precautions
- Single Product, Multiple Action
- For Organic Gardening
- 4in1 Insecticide, Miticide, Nematicide, Insect Growth Regulator
- 3in1 Insecticide, Miticide, Nematicide
- Repellent