

**BIONEX™**

Insecticide and Miticide

**ACTIVE INGREDIENTS:**

Pyrethrins..... 0.5%  
 Canola Oil..... 89.0%

**OTHER INGREDIENTS:**.....10.5%**TOTAL:**.....100.0%

This product contains 6.875 lbs. of canola oil and 0.038 lbs. of pyrethrins per gallon.

**KEEP OUT OF REACH OF CHILDREN  
CAUTION****FIRST AID**

If on skin or clothing	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15–20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
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Have the product container or label with you when calling a poison control center or doctor or going for treatment.

**STORAGE AND DISPOSAL**

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

**PESTICIDE STORAGE:** Keep this product in its tightly closed original container when not in use. Store in a cool, dry, well-ventilated (preferably locked) area that is inaccessible to children and animals. **PESTICIDE DISPOSAL:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. **CONTAINER HANDLING:** 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 and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with diluent 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. Offer for recycling if available, for reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

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**BioWorks®**  
 DIVISION OF BIOFIRST GROUP

## PRECAUTIONARY STATEMENTS

### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**CAUTION:** Avoid contact with skin or clothing. Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.

#### PERSONAL PROTECTIVE EQUIPMENT (PPE) REQUIREMENTS

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Mixers, loaders, applicators, and other handlers must wear the following: long-sleeved shirt and long pants; shoes plus socks; and waterproof gloves.

User Safety Requirements: Follow manufacturer's instructions for maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent material that have been drenched or heavily contaminated with the product's concentrate. Do not reuse them.

#### USER SAFETY RECOMMENDATIONS

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

#### ENVIRONMENTAL HAZARDS

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This product is toxic to aquatic organisms including fish and invertebrates. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. This product may contaminate water through runoff. This product has a potential for runoff for several weeks after application. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product. This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are actively foraging the treatment area. 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 cleaning equipment or disposing of equipment washwaters.

#### DIRECTIONS FOR USE

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

#### USE RESTRICTIONS

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- Do not wet plants to point of runoff or drip.
- Do not apply more than 10 times per season.
- Do not reapply within 3 days except under extreme pest pressure.
- Do not apply more than 1 time per day.
- Do not harvest until spray has dried.
- 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 the application.
- Do not apply within 21 days of a sulfur application.
- Do not use when temperatures are above 90°F.
- Do not make applications during rain.
- Do not water the treated area to the point of runoff.
- Do not apply this product through any type of irrigation system.
- Do not apply directly into sewers or drains, or to any area like a gutter where drainage to storm sewers, water bodies, or aquatic habitat can occur.
- Do not allow the product to enter any drain during or after application.
- Do not apply directly to the water in hydroponic growing systems. Discarded water from hydroponic growing systems may be used in greenhouses and for irrigating site vegetation. Water from these systems is prohibited from being discarded directly into a water source.

## SPRAY DRIFT MANAGEMENT FOR AGRICULTURE CROPS

Avoiding spray drift at the application site is the responsibility of the applicator and the grower. The interactions of many equipment (boom sprayer, pressurized handheld/backpack sprayer, airblast sprayer, insectigation) and weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions. Do not apply at wind speeds greater than 10 mph at the application site. Do not make any type of application into temperature inversions. Apply as a medium or coarser spray (ASABE standard 572). Do not release spray at a height greater than 4 feet above the ground or crop canopy.

### PHYTOTOXICITY

Oil removes the glaucous (blue) bloom from such evergreens as Colorado blue spruce and Koster spruce. Use a 1% solution on oil sensitive plants such as: *Chamaecyparis*, *Cryptomeria*, Japanese Holly, Red Cedar and Smoke Tree. Use care on blooms and buds. If concerned about sensitivity of plants, test spray a portion of the plant and wait several days to determine if burn occurs before spraying larger areas.

**Read entire label.** Use only as directed. Mix well before each use. Thoroughly wet all parts of the plants. Repeat treatment in 7 - 14 days if necessary. May be used on edible crops up to and including day of harvest.

### 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 (PPE), restricted-entry interval, and notification to workers. The requirements of this box apply to uses of this product that are covered by the Worker Protection Standard (WPS).

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours.

PPE required for early reentry into 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: coveralls; shoes plus socks; and chemical resistant gloves made of any waterproof material.

### NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are **not** within the scope of the Worker Protection Standard 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.

Do not enter or allow others until sprays have dried.

### TANK MIXING

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

BioNex Insecticide and Miticide can be applied up to day of harvest. When tank mixed with products, do not apply that product closer to the harvest than is permitted or stated on the other product's label.

Pour BioNex Insecticide and Miticide into spray tank at least half filled with water using adequate agitation. When mixed with other products proven or known to be compatible, wettable powders should be added first, followed by flowable concentrates, then BioNex and other emulsifiable concentrates.

BioNex Insecticide and Miticide can be mixed with spinosad (Entrust™, Conserve™ or SpinTor), *Bacillus thuringiensis* (Deliver®, Agree® WG, Javelin® WG, XenTari® DF, Foray® XG, Foray® 76B, Foray® 48B or Biobit® XL), *Bacillus subtilis* (Serenade® ASO or Serenade® Max), *Bacillus pumilis* (Sonata®) for use on the crops listed on this label, in accordance with the most restrictive of label limitations and precautions. No label dosage rates may be exceeded. This product cannot be mixed with any product containing a label prohibition against such mixing.

For foliage application the spray tank must be free of any sulfur residue before using this material. Do not combine sulfur sprays with this material on foliage during spring and summer months. Do not apply within 21 days of a sulfur application. If in doubt, spray a portion of one tree previously treated with sulfur and wait several days to determine if burn occurs.

When used in combination with or immediately before or after spraying, this product may increase the phytotoxicity of fungicides such as Captan, or copper compounds. If in doubt, treat a small area with a combination spray and wait several days to determine if burn occurs.

## **MIXING**

For 2% solution, mix 2 parts concentrate with 98 parts water. For 1% solution, mix 1 part concentrate with 99 parts water. For soft-bodied pests such as aphids and mites, use 1% solution. Agitate well before each use and agitate diluted spray frequently during use.

1. Add sufficient water to the mixing tank to allow proper agitation by pump or paddles.
2. Continue stirring while adding first the BioNex Insecticide and Miticide then the remaining water.
3. Continue to stir throughout use.
4. If using equipment without pump or paddle, shake often during use.
5. Flush fluid in sprayer hose lines back into the tank if the solution has remained unstirred for more than 20 minutes.

BioNex Insecticide and Miticide will kill Adelgids, Ants (including Foraging Ants, Sweet-Feeding Ants, Pavement Ants, Moisture Ants, Little Black Ants, Argentine Ants, Crazy Ants, Acrobat Ants, Bigheaded Ants, Cornfield Ants, Ghost Ants, Odorous House Ants, Thief Ants, Texas Leafcutting Ants, Field Ants, and other Common Ants) (except Fire Ants, Harvester Ants, Carpenter Ants, and Pharaoh Ants), Aphids (including Cotton Aphids, Green Peach Aphids, Melon Aphid, Wooly Aphid), Armyworms (including Beet Army Worms, Western Yellow Striped Armyworms, Fall Armyworms, Southern Armyworm), Bagworms, Beetles (Colorado potato beetle, flea beetle, Japanese beetle, asparagus beetle, Blister Beetles, 12-spotted Cucumber Beetles, Cucumber Beetle, Western Striped Cucumber Beetle, Darkling Beetles (lesser mealworm), Saw-toothed Grain Beetles, Elm Leaf Beetles, Bean Beetles, Mexican Bean Beetles), Borers (including European Corn Borer, Branch and Twig Borers, Squash Vine Borer, Dogwood Borer, Peach Twig Borer Shot hole borers and Pacific flathead borers), Box Elder Bugs, Cabbageworms (including Cross-striped Cabbageworm and Imported Cabbageworm), Cankerworms, Caterpillars (Gypsy Moth Caterpillars, Tent Caterpillar, Eastern Tent Caterpillar, Forest Tent Caterpillar and Tomato Fruitworm Caterpillar), Corn Earworms, Crane Flies, Crickets, Diamondback Moth Larvae, Earwigs, Fireworms, Fungus Gnats, Fruit Flies (Including Cherry Fruit Fly), Glassy Winged Sharpshooter, Grape Leaf Skeletonizer, Grasshoppers, Green Fruit Worm, Harlequin Bugs, Hornworms (including Tomato Hornworm), Katydid, Lace Bugs, Leafhoppers (including Grape Leafhopper, and Potato Leafhoppers), Leafminers (Including Chrysanthemum Leaf Miners, Citrus Leaf Miners, Tentiform Leaf Miners), Leafrollers (including Fruitree Leafrollers), Leaf-tiers, Loopers (including Cabbage Looper)], Lygus, Maggots (including Apple Maggot, Cabbage Maggots, and Onion Maggot), Mealybugs (including Citrus Mealybugs, Grape Mealybugs Longtail Mealybugs, Maderia Mealybugs, Obscure Mealybugs, Pink Hibiscus Mealybugs and Vine Mealybugs), Non-biting Midges, Millipedes, Mites including Clover Mites, European Red Mite and Spider Mites, Moths (including Artichoke Plume Moth, Codling Moth, Diamondback Moth, European Pine Tip Moth, Gypsy Moths, Indian Meal Moth, Oriental Fruit Moth, Mediterranean Flour Moth), Mushroom Flies, Navel Orangeworm, Plant Bugs (including Leaf footed Plant Bug, Tarnished Plant Bug, Mullein Plantbugs), Psyllids (including Pear Psyllids and Asian Citrus Psyllids), Sawfly Larvae (pear and rose slugs), Scale insects (including Soft Scale, Armoured Scale, Asian Cycad Scale, California Red Scale, Caribbean Black Scale, Citricola Scale, Cottony Maple Scale, Eucymnus Scale, Fletcher Scale, Florida Wax Scale, Green Shield Scale, Indian Wax Scale, Oyster Shell Scale, Pine Needle Scale, Red Scale, San Jose Scale, Tea Scale), Silverfish, Skippers, Sowbugs, Spittlebugs, Squash Bugs, Stink Bugs (including Brown Marmorated Stink Bug), Thrips (including Greenhouse Thrips, Citrus Thrips, Palm Thrips, Western Flower Thrips), Vinegar Flies, Webworms, Weevils (including Black vine weevil, Boll Weevil, Carrot Weevil, Clover Weevil, Rice Weevil, Pecan Weevil, Pepper Weevil, Plum Curculio Weevil, Strawberry Weevil), Whitefly (including Banded Whitefly, Giant Whitefly, Greenhouse Whitefly, Silverleaf Whitefly, Sweet Potato Whitefly), Phylloxera and Powdery mildew.

## **USE SITES AND APPLICATION INSTRUCTIONS**

### **GREENHOUSE, SHADEHOUSE, NURSERY, HOOPHOUSE AND CONTAINER-GROWN NURSERY CROPS.**

Repeat in 7 to 14 days, as needed. Apply 2% diluted product, except for on soft-bodied pests such as aphids and mites. For these pests use a 1% dilution rate. Mix well before each use. Apply at a rate of 1.5 gallons per 1000 square feet of 2% dilution, or 1.5 to 3 gallons per 1000 square feet of 1% dilution. Do not apply more than 3.8 fl. oz. of concentrate per 1000 square feet per application.

<b>Crop</b>	<b>Application Rate of Diluted Concentrate</b>
Flowering, foliage and bedding plants	1%: 1.5 to 3 gallons per 1000 square feet 2%: 1.5 gallons per 1000 square feet
Ornamental and shade trees, flower and foliage plants: bedding plants, annual ornamentals, perennial ornamentals, birch, flowering cherry, dogwood, evergreens, hawthorn, holly, magnolia, maple, oak, flowering peach, privet, pyracantha, sycamores	Dormant, pre-bloom and summer use 1%: 65-130 gallons/acre 2%: 65 gallons/acre
Root and Tuber Vegetables: arracha, arrowroot, Chinese artichoke, Jerusalem artichoke, garden beets, sugar beets, Edible burdock, edible canna, carrots, cassava (bitter or sweet), celeriac (celery root), chayote (root), chervil (turnip rooted), chicory, chufa, dasheen (Taro), ginger, ginseng, horseradish, leren, parsley (turnip rooted), parsnip, potato, radish, Japanese radish (daikon), rutabaga, salsify, black salsify, sweet potato, tanager, turmeric, turnip, yam (true), yam bean.	When insects appear, repeat weekly as needed. 1%: 1.5 to 3 gallons per 1000 square feet 2%: 1.5 gallons per 1000 square feet
Leaves of Root and Tuber Vegetables: garden beet, sugar beet, edible burdock, carrot, cassava (bitter or sweet), celeriac (celery root), chervil (turnip rooted), chicory, dasheen (Taro), parsley (turnip rooted), parsnip, radish, Japanese radish (daikon), rutabaga, salsify, black salsify, sweet potato, turnip, yam (true).	When insects appear, repeat weekly as needed. 1%: 1.5 to 3 gallons per 1000 square feet 2%: 1.5 gallons per 1000 square feet
Bulb Vegetables: garlic, great-headed garlic, leek, onion (bulb and green) Welch, Shallot	When insects appear, repeat weekly as needed. 1%: 1.5 to 3 gallons per 1000 square feet 2%: 1.5 gallons per 1000 square feet
Leafy Vegetables: amaranth (leafy amaranth, Chinese spinach, tampala), arugula, cardoon, celery, celtuce, chervil, corn salad, chrysanthemum (edible-leaved), chrysanthemum (garland), cress (garden, water), upland cress (yellow rocket, winter cress), dandelion, dock (sorrel), endive (escarole), fennel (florence), lettuce (head and leafy), orach, parsley, purslane (garden and winter), radicchio, rhubarb, spinach, fine spinach (Malabar, ceylon), spinach (new Zealand), swiss chard	When insects appear, repeat weekly as needed. 1%: 1.5 to 3 gallons per 1000 square feet 2%: 1.5 gallons per 1000 square feet
Fruiting vegetables: Including: eggplant, ground cherry, okra, pepinos, peppers (bell peppers, chili peppers, cooking peppers, pimentos, sweet peppers) tomatillos, tomatoes	When insects appear, repeat weekly as needed. 1%: 1.5 to 3 gallons per 1000 square feet 2%: 1.5 gallons per 1000 square feet

<b>Crop</b>	<b>Application Rate of Diluted Concentrate</b>
<p>Cucurbit vegetables: balsam apple, balsam pear (bitter melon), chayote, Chinese wax gourd (Chinese preserving melon), Chinese cucumber, citron melon, cucumber, gherkin, edible gourds, melons (including hybrids, cantaloupe, casaba, golden pershaw melon, Crenshaw, honeydew melons, honey balls, mango melon, muskmelon, Persian melon, pineapple melon, santa claus melon, snake melon), pumpkin, squash (summer &amp; winter), watermelon (including hybrids)</p>	<p>When insects appear, repeat weekly as needed.            1%: 1.5 to 3 gallons per 1000 square feet            2%: 1.5 gallons per 1000 square feet</p>
<p>Brassica Leafy Vegetables: broccoli, Chinese broccoli (gai lan), broccoli raab (rapini), Brussels sprouts, cabbage, Chinese cabbage (Napa), Chinese mustard cabbage (gai choy), cauliflower, cavallo broccoli, collards, kale kohlrabi, mizuna, mustard greens, mustard spinach, rape greens.</p>	<p>When insects appear, repeat weekly as needed.            1%: 1.5 to 3 gallons per 1000 square feet            2%: 1.5 gallons per 1000 square feet</p>
<p>Legume vegetables: lima beans, runner beans, snap beans, wax beans, asparagus beans, Chinese yard long beans, broad beans (fava beans), lablab beans (hyacinth beans), Peas (garden peas, sugar snap peas, English peas, snow peas), soybeans</p>	<p>When insects appear, repeat weekly as needed.            1%: 1.5 to 3 gallons per 1000 square feet            2%: 1.5 gallons per 1000 square feet</p>
<p>Small fruits: grapes, strawberry, blueberry, raspberry (black and red), cranberry, blackberry, currant, dewberry, elderberry, gooseberry, huckleberry, loganberry, olallieberry, youngberry</p>	<p>Dormant and summer use            1%: 1.5 to 3 gallons per 1000 square feet            2%: 1.5 gallons per 1000 square feet</p>
<p>Herbs and spices: allspice, angelica, anise (aniseed), star anise, annatto (seed), balm (lemon balm), basil, borage, burnet, caper buds, caraway, black caraway, cardamom, cassia bark, cassia buds, catnip, celery seed, chamomile, chervil (dried), chicory, chives, coriander (cilantro or Chinese parsley leaf), coriander (cilantro seed), costmary, cilantro (leaf), cilantro (seed), cumin, curry (leaf), dill weed, dill seed, fennel (common), Florence fennel seed, fenugreek, grains of paradise, horehound, hyssop, juniper berry, lavender, lemongrass, lovage (leaf and seed), mace, marigold, marjoram, nasturtium, nutmeg, oregano, mint, paprika, parsley (dried), pennyroyal, black pepper, white pepper, poppy seed, rosemary, rue, saffron, sage, summer and winter savory, tarragon, thyme, vanilla, wintergreen, woodruff, wormwood.</p>	<p>When insects appear, repeat weekly as needed.            1%: 1.5 to 3 gallons per 1000 square feet            2%: 1.5 gallons per 1000 square feet</p>

## DORMANT USE

Kills egg stages of listed pests present in dormant season and scale insects, mites, and mealybugs on dormant shrubs, evergreens, woody plants, fruit and nut trees, and shade trees.

Apply 2% solution at a rate of 65 gal of diluted solution/acre. Do not apply more than 1.3 gallons of concentrate per acre per application.

For plants in hydroponic systems, do not apply directly to the water in the hydroponic growing systems. Apply as a foliar spray only. Discarded water from hydroponic growing systems may be used in greenhouses and for irrigating site vegetation. Water from these systems is prohibited from being discarded directly into a water source. Apply as soon as pests appear following the application directions above.

## STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE:** Keep this product in its tightly closed original container when not in use. Store in a cool, dry, well-ventilated (preferably locked) area that is inaccessible to children and animals. **PESTICIDE DISPOSAL:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. **CONTAINER HANDLING:** 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 and drain for 10 seconds after the flow begins to drip. Fill the container  $\frac{1}{4}$  full with diluent 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. Offer for recycling if available, for reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

## WARRANTY AND DISCLAIMER

Seller warrants that this product conforms to the description on this label and is reasonably fit for the purposes stated on this label when used and stored in accordance with the directions for use. This warranty does not extend to use of this product contrary to label directions or under conditions not reasonably foreseeable by the Seller, and Buyer and User assume the risk of any such use. To the extent consistent with applicable law, Seller disclaims all other warranties, express or implied, including any warranty of fitness or merchantability. To the extent consistent with applicable law, Seller shall not be liable for consequential, special or indirect damages resulting from use or handling of this product, and Seller's sole liability and Buyer's and User's exclusive remedy shall be limited to refund of the purchase price. This product is sold only for uses stated on its label.



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