

4-471

10/03/2008

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OFFICE OF  
PREVENTION, PESTICIDES  
AND TOXIC SUBSTANCES

October 3, 2008

Ms. Rebecca M. Horton  
Consultant/Agent for  
Bonide Products, Inc.  
6301 Sutliff Road  
Oriskany, NY 13424

Subject: Label Amendment/Resubmission in Response to August 27, 2008, Notice  
of Registration for Bonide Spinosad Concentrate (EPA Reg. No. 4-471)  
Application Dated September 10, 2008  
Decision Number 400302

Dear Ms. Horton:

The above referenced amendment, submitted in connection with a registration  
under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable.

In addition, this letter provides written confirmation that the Agency has waived  
the requirement for a signal word for this product, consistent with Chapter 7, section  
III.A.2, of the Label Review Manual.

Please submit 3 copies of final, printed labeling prior to releasing the product for  
shipment. If you have any questions concerning this action, please contact me at  
(703) 308-8059.

Sincerely,

A handwritten signature in black ink that reads "Kimberly Nesci".

Kimberly Nesci  
for Product Manager Team 13  
Insecticide Branch  
Registration Division (7505P)

Enclosure: Spinosad Concentrate label stamped "Accepted"

2/14

ACCEPTED  
OCT 03 2008  
Under the Federal Insecticide, Fungicide,  
and Rodenticide Act, as amended, for the  
pesticide registered under:

[VERSION A – MASTER LABEL]



EPA. Reg. No: 4-471

# Spinosad<sup>®</sup> Concentrate

[Additional Brand Name(s): Captain Jim's Deadbug Brew<sup>®</sup> Concentrate; Bonide<sup>®</sup> Captain Jack's Deadbug Brew<sup>®</sup> Concentrate]

Optional Marketing Statements:  
Insect Control Product

## FOR RESIDENTIAL USE IN HOME GARDENS, LAWNS AND ORNAMENTALS

For control of foliage feeding worms (caterpillars), thrips and other listed pests in:

- Fruiting vegetables, such as tomato, pepper, okra and eggplant
- Cucurbits, such as cantaloupe and honeydew
- Cole crops (Brassica), such as broccoli, cabbage and cauliflower
- Leafy vegetables, such as lettuce, spinach and celery
- Tuberous vegetables, such as potatoes, sweet potatoes, yams, Jerusalem artichoke Chinese artichoke and cassava
- Stone fruits, such as peaches, plums, cherries, nectarines, prunes and apricots
- Apple and other pome fruits, such as pears, crabapples, mayhaw and quince
- Bushberries and caneberries, such as blueberry, blackberry and raspberry
- Citrus trees, such as oranges, grapefruit, lemons, limes, and tangerines
- Succulent beans and peas, such as lima bean, snap bean and blackeyed pea
- Tree fruits, such as avocado, mango, star apple and papaya
- Tree nuts, such as pecans, almonds, cashew and walnuts
- Sweet corn and popcorn
- Asparagus
- Grape
- Leafy and dried herbs
- Strawberry
- Lawns
- Outdoor herbaceous and woody ornamentals
- Fire ant control in lawns, ornamentals, home gardens, and other outdoor areas

See Home Gardens and Lawns and Ornamentals sections for a complete listing of crops and use sites.

Liquid concentrate  
 Easy to use  
 User friendly  
 No guesswork  
**CONCENTRATE**  
 For vegetables, apples, and citrus trees  
 Controls worms (caterpillars)  
 Kills worms (caterpillars)  
 Controls citrus leafminers  
 Controls Colorado potato beetle  
 Kills Colorado potato beetle

Controls certain insects in vegetable gardens  
Controls certain insects in the garden  
Controls certain insects in vegetable gardens

For vegetables

No odor water-based formula

Water-based formula

Contains spinosad

Do-it-yourself home garden insect control

Leaves no oily residue

Kills certain home garden insect pests

Short post-harvest interval

Pick apples 7 days after spraying

Contains [trademark] Naturalyte® insect control

A [trademark] Naturalyte® insect control product

Use on fruits, vegetables, berries, citrus, grapes, nuts and ornamentals.

Kills bagworms, borers, beetles, caterpillars, codling moth, gypsy moth, loopers, leaf miners, spider mites, tent caterpillars, thrips and more!

Captain Jim's DEADBUG Brew® contains Spinosad "spin-OH-sid". Spinosad is derived from a naturally occurring soil dwelling bacterium that was collected from an abandoned rum distillery on a Caribbean island in 1982. This unique bacterium was defined as a new species when it was discovered and it has never been found in nature anywhere else in the world. Since being discovered, Spinosad has become a leading pesticide used by agriculture world wide in the production of organic produce. Today, thanks to Captain Jim, and his DEADBUG Brew® Spinosad is available to the homeowner.

To help avoid insect resistance to Spinosad, limit applications to any specific site to no more than 6 times per year.

Use with TURBO for enhanced effectiveness on borers and miners.

Be patient, it will take 1 - 2 days for insects to die off.



Active Ingredient:

spinosad (a mixture of spinosyn A and spinosyn D) .....	0.5%
Other Ingredients .....	99.5%
Total .....	100.0%

Contains 0.04 lb of active ingredient per gallon.

U.S. Patent No. 5,362,634 and 5,496,931

**Keep Out of Reach of Children**



**For Organic Production**

Refer to label booklet for Directions for Use.

Notice: Read the entire label. Use only according to label directions.

Shake Well Before Use -- Avoid Freezing

®Trademark of Dow AgroSciences LLC

Net Contents \_\_\_\_\_

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## Precautionary Statements

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### Environmental Hazards

This product is toxic to bees exposed to treatment for 3 hours following treatment. Do not apply this pesticide to blooming, pollen-shedding or nectar-producing parts of plants if bees may forage on the plants during this time period. This product is toxic to aquatic invertebrates. Do not apply directly to water. Do not contaminate water when disposing of equipment washwaters or rinsate. Do not put product or rinse water down drain.

### Physical or Chemical Hazards

**Combustible.** Do not use or store near heat or open flame

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## 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. Read all Directions for Use carefully before applying.

**For residential use in home gardens, lawns and ornamentals. Not for use on plants being grown for sale or other commercial use, or for commercial seed production, or for research purposes.**

### Storage and Disposal

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

**Pesticide Storage:** Store in original container only in secure or locked storage area.

**Pesticide Disposal:** *If partly filled* – Call your local solid waste agency for disposal instructions. Never place unused product down any indoor or outdoor drain.

**Container Disposal:** *If empty* - Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available or place in trash.

This insect control product is intended for control of worms (caterpillars) and other listed insects. This product does not significantly impact predatory beneficial insects, predatory mites, and spiders while controlling target pests. Susceptible insect pests may be observed on plants up to several hours after treatment, but will have ceased active feeding before being killed. Spinosad is classified as an organic substance by the USDA National Organic Standards Board.

[this section may be listed here, as well as on the front panel]

Captain Jim's DEADBUG Brew® contains Spinosad "spin-OH-sid". Spinosad is derived from a naturally occurring soil dwelling bacterium that was collected from an abandoned rum distillery on a Caribbean island in 1982. This unique bacterium was defined as a new species when it was discovered and it has never been found in nature anywhere else in the world. Since being discovered, Spinosad has become a leading pesticide used by agriculture world wide in the production of organic produce. Today, thanks to Captain Jim, and his DEADBUG Brew® Spinosad is available to the homeowner.

### How to Mix

Add the required amount of this product to the recommended amount of water, mix thoroughly, and apply uniformly to both upper and lower surfaces of plant foliage. It is recommended to mix only as much spray as needed for a single treatment. In vegetable gardens it is recommended to use not more than 3 gallons of spray for 1000 sq ft of area. Do not use kitchen utensils for measuring. Keep measuring utensils with product and away from children.

Unit of Measure <sup>1</sup>	Amount of this product to Use per Pint, Quart or Gallon of Spray		
	Per Pint (16 fl oz) of Spray	Per Quart (32 fl oz) of Spray	Per Gallon (128 fl oz) of Spray
Fluid Ounces (fl oz)	0.25 fl oz	0.5 fl oz	2 fl oz
Milliliters (mL)	7.5 mL	15 mL	60 mL
Tablespoons (Tbs)	1/2 Tbs	1 Tbs	4 Tbs
Teaspoons (tsp)	1 1/2 tsp	3 tsp	12 tsp

<sup>1</sup> Conversion factors: 1 fl oz = 30 mL = 2 tablespoons (Tbs) = 6 teaspoons (tsp) (1 teaspoon = 1/3 tablespoon)

## How to Apply

### Shake Well Before Use

This product may be applied with trigger sprayer, hand-held, backpack, or hose-end sprayers. Use a hose-end sprayer that can be adjusted to provide a dilution ratio of about 2 fl oz of this product (4 Tbs) per gallon of spray. **[Editor's Note:** The following statement should be included in the label if product is packaged to be applied with a hose-end sprayer.] See Hose-End Sprayer Directions below if this product is packaged in a hose-end sprayer.

### Hose-End Sprayer Directions

**[Editors note:** Formulator label may include directions and graphic for a hose-end sprayer application.]

## When to Apply

Apply when listed pests are present. Repeat applications may be made as indicated in the Home Gardens section. See your state extension service recommendations for treatment guidelines in your area.

## Uses

### Home Gardens

In the state of Georgia, do not apply this product to: Broccoli Raab, Chinese Cabbage (Bok Choy), Collards, Kale, Mizuna, Mustard Greens, Mustard Spinach, Rape Greens.

Crops	Pests Controlled	Maximum Number of Applications per Season	Minimum Days to Wait Before Reapplying	Minimum Days to Wait from Last Application to Harvest
apple and other pome fruits including, but not limited to: crabapples, mayhaw, pears, and quince	codling moth leafminers leafrollers oriental fruit moth tufted apple budmoth	6	10	7
asparagus (post-harvest to protect ferns)	asparagus beetles	4	7	60
bushberries and caneberries, including, but not limited to: blackberry, blueberry, currant, elderberry, gooseberry,	armyworms fireworms fruitfly (suppression) fruitworms	6	6	3

huckleberry, juneberry, lingonberry, loganberry, raspberry, and salal	leafrollers loopers thrips			
<b>citrus trees</b> , including, but not limited to: grapefruit, lemons, limes, oranges, and tangerines (to prevent fruit scaring from thrips, treat when fruit is marble size)	katydids leafminers thrips worms (caterpillars)	6	6	1
<b>cole crops (Brassica vegetables)</b> , including, but not limited to: broccoli raab, brussels sprouts, cauliflower, cavalo, Chinese broccoli, cabbage, Chinese cabbage (bok choy), Chinese cabbage (napa), Chinese mustard cabbage (gai choy), collards, kale, kohlrabi, mizuna, mustard greens, mustard spinach, and rape greens	cabbage looper diamondback moth imported cabbage worm leafminers worms	6	4	1
<b>cucurbits</b> , including, but not limited to: cucumber, edible gourds, muskmelons (cantaloupe, honeydew, etc.), pumpkin, summer and winter squash, and watermelon	leafminers thrips worms (caterpillars)	6	5	all except cucumber, 3 cucumber, 1
<b>fruiting vegetables</b> , including, but not limited to: eggplant, ground cherry, okra, pepino, pepper, tomatillo, and tomato	Colorado potato beetle leafminers thrips worms (caterpillars)	6	4	1
<b>grape</b>	leafrollers thrips worms (berry moth)	6	5	7
<b>leafy and dried herbs</b>	leafminers thrips worms (caterpillars)	5	7	1
<b>leafy vegetables</b> , including, but not limited to: arugula, celery, chervil, corn salad, cress, dandelion, dock, edible chrysanthemum, endive, fennel, garden purslane, head and leaf lettuce, parsley, radicchio, rhubarb, spinach, and Swiss chard	leafminers worms (caterpillars)	6	4	1
<b>stone fruits</b> , including, but not limited to: apricots, cherries, nectarines, peaches, plums, and prunes	borers fruit flies leafminers leafrollers thrips worms (caterpillars)	6	7	peach, apricot, all except cherry plum, prune, nectarine, 14 cherry, plum and prune, 7 nectarine, 1
<b>strawberry</b>	armyworms leafrollers thrips	6	5	1
<b>succulent beans and peas</b> ,	borers	6	5	3

including, but not limited to: blackeyed pea, garbanzo bean, garden pea, lima bean, snap bean, and snow pea	leafminers thrips worms (caterpillars)			
<b>sweet corn and popcorn</b> (for earworms, treat silk frequently as it grows)	corn borers worms (caterpillars), including earworm	6	3	1
<b>tree nuts</b> , including, but not limited to: almonds, cashew, chestnut, macadamia, pecans, pistachio, and walnuts	husk fly (suppression) leafrollers navel orangeworms peach twig borer shuckworms webworms	5	7	14
<b>tree fruits</b> , including, but not limited to: atemoya, avocado, cherimoya, custard apple, guava, longan, lychee, mango, papaya, passionfruit, rambutan, sapodilla, sapote, star apple, star fruit, and wax jambu	suppression of worms or caterpillars, thrips, and katydids	4	7	1
<b>tuberous and corm vegetables</b> , including, but not limited to: cassava, chayote root, Chinese artichoke, ginger, Jerusalem artichoke, potatoes, sweet potatoes, tumeric, and yams	Colorado potato beetle corn borers leafminers thrips worms (caterpillars)	6	7	7
<b>all crops listed in this table</b>	fire ants	See application directions in Lawns and Ornamentals		

**Lawns and Ornamentals**

Use Site	Pests Controlled	Comments
lawns	worms, including small ( $<3/4$ " ) armyworm, and sod webworm cat fleas (suppression only)	Mix the amount of this product recommended per gallon of spray and uniformly apply a minimum of 3 gallons of spray per 1000 sq ft of area. Delay watering or mowing for 12 to 24 hours after application. <b>Armyworms:</b> For best results, apply in early morning or late afternoon. <b>Cat fleas:</b> Apply early or late in the day since control requires contact with dilute spray before drying. Thorough coverage is necessary. Reapply in 7 to 14 days to control adults that have emerged from pupae present at time of initial treatment.
outdoor ornamentals (herbaceous and woody plants)	emerald ash borer <sup>1</sup> gall midges leaf feeding beetles leafminers sawfly larvae spider mites <sup>2</sup> thrips worms, including loopers, webworms, bagworms, gypsy moth, and tent	Mix the amount of this product recommended per pint, quart or gallon of spray and uniformly spray foliage to point of runoff. Uniform coverage of upper and lower leaf surfaces is essential for effective insect control.

	caterpillars	
lawns, ornamentals, home gardens (see listed crops in previous table) and other outdoor areas	fire ants	<b>Individual fire ant mounds:</b> Mix the amount of this product recommended per gallon of spray and use a sprinkler can or similar device to apply the diluted spray as a mound drench, using 1 to 2 gallons per mound. Do not use pressurized sprays. Apply about 10% of the spray volume around the perimeter of the mound and the remainder directly to the mound. Do not disturb fire ant mound prior to application. If possible, apply following recent rainfall. For best results apply when weather is cool, 65 to 85°F, or in early morning or late evening.

<sup>1</sup>Mix 5 fl oz of this product per gallon of spray and apply to foliage and bark of the tree when adult emerald ash borer are first observed emerging from the bark or when adult emerald ash borer are first noticed feeding on the leaves of the tree. Reapply every 7 to 10 days until no additional adult emerald ash borer activity is observed. Applications to trees already heavily infested may not prevent the eventual loss of the tree due to existing pest damage.

<sup>2</sup>Apply when spider mites are first observed prior to webbing and before mite populations have become severe. Reapply after 7 to 10 days (3 to 5 days in greenhouses and structures that can be altered to be closed or open) to contact newly hatched nymphs and repeat until infestation is managed. **Uniform coverage of both upper and lower leaf surfaces is critical.** Addition of a nonionic spray adjuvant at 0.1% v/v has been shown to enhance control of spider mites (follow surfactant manufacturer's label recommendations).

**Limited Warranty and Disclaimer**

Seller warrants that this product complies with the specifications expressed in this label. To the extent consistent with applicable law, Seller makes no other warranties, and disclaims all other warranties, express or implied, including but not limited to warranties of merchantability and fitness for the intended purpose. To the extent consistent with applicable law, Seller's liability or default, breach or failure under this label shall be limited to the amount of the purchase price. To the extent consistent with applicable law, Seller shall have no liability for consequential damages.

For information on pesticide products (including health concerns, medical emergencies, or pesticide incidents) call National Pesticide Information Center at 1-800-858-7378.

Bonide Products, Inc.  
6301 Sutliff Road  
Oriskany, NY 13424

[batch code inserted at production]

[VERSION B – FOR READY-TO-SPRAY PACKAGING]



## Spinosad<sup>®</sup> Ready-to-Spray

[Additional Brand Name: Captain Jim's Deadbug Brew<sup>®</sup> Ready-to-Spray; Bonide<sup>®</sup> Captain Jack's Deadbug Brew<sup>®</sup> Ready-To-Spray]

Optional Marketing Statements:

**Insect Control Product**

**FOR RESIDENTIAL USE IN HOME GARDENS, LAWNS AND ORNAMENTALS**

For control of foliage feeding worms (caterpillars), thrips and other listed pests in:

- Fruiting vegetables, such as tomato, pepper, okra and eggplant
- Cucurbits, such as cantaloupe and honeydew
- Cole crops (Brassica), such as broccoli, cabbage and cauliflower
- Leafy vegetables, such as lettuce, spinach and celery
- Tuberous vegetables, such as potatoes, sweet potatoes, yams, Jerusalem artichoke Chinese artichoke and cassava
- Stone fruits, such as peaches, plums, cherries, nectarines, prunes and apricots
- Apple and other pome fruits, such as pears, crabapples, mayhaw and quince
- Bushberries and caneberrries, such as blueberry, blackberry and raspberry
- Citrus trees, such as oranges, grapefruit, lemons, limes, and tangerines
- Succulent beans and peas, such as lima bean, snap bean and blackeyed pea
- Tree fruits, such as avocado, mango, star apple and papaya
- Tree nuts, such as pecans, almonds, cashew and walnuts
- Sweet corn and popcorn
- Asparagus
- Grape
- Leafy and dried herbs
- Strawberry
- Lawns
- Outdoor herbaceous and woody ornamentals
- Fire ant control in lawns, ornamentals, home gardens, and other outdoor areas

See Home Gardens and Lawns and Ornamentals sections for a complete listing of crops and use sites.

Liquid concentrate

Easy to use

User friendly

No guesswork

**CONCENTRATE**

For vegetables, apples, and citrus trees

Controls worms (caterpillars)

Kills worms (caterpillars)

Controls citrus leafminers  
Controls Colorado potato beetle  
Kills Colorado potato beetle  
Controls certain insects in vegetable gardens  
Controls certain insects in the garden

For vegetables  
No odor water-based formula

Water-based formula  
Contains spinosad  
Do-it-yourself home garden insect control

Leaves no oily residue  
Kills certain home garden insect pests  
Short post-harvest interval

Pick apples 7 days after spraying  
Contains [trademark] Naturalyte® insect control  
A [trademark] Naturalyte® insect control product

Use on fruits, vegetables, berries, citrus, grapes, nuts and ornamentals.

Kills bagworms, borers, beetles, caterpillars, codling moth, gypsy moth, loopers, leaf miners, spider mites, tent caterpillars, thrips and more!

Captain Jim's DEADBUG Brew® contains Spinosad "spin-OH-sid". Spinosad is derived from a naturally occurring soil dwelling bacterium that was collected from an abandoned rum distillery on a Caribbean island in 1982. This unique bacterium was defined as a new species when it was discovered and it has never been found in nature anywhere else in the world. Since being discovered, Spinosad has become a leading pesticide used by agriculture world wide in the production of organic produce. Today, thanks to Captain Jim, and his DEADBUG Brew® Spinosad is available to the homeowner.

To help avoid insect resistance to Spinosad, limit applications to any specific site to no more than 6 times per year.

Use with TURBO for enhanced effectiveness on borers and miners.

Be patient, it will take 1 - 2 days for insects to die off.



Active Ingredient:

spinosad (a mixture of spinosyn A and spinosyn D) .....	0.5%
Other Ingredients .....	99.5%
Total .....	100.0%

Contains 0.04 lb of active ingredient per gallon.

U.S. Patent No. 5,362,634 and 5,496,931

**Keep Out of Reach of Children**



**For Organic Production**

Refer to label booklet for Directions for Use.

Notice: Read the entire label. Use only according to label directions.

Shake Well Before Use -- Avoid Freezing

®Trademark of Dow AgroSciences LLC

Net Contents \_\_\_\_\_

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## Precautionary Statements

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### Environmental Hazards

This product is toxic to bees exposed to treatment for 3 hours following treatment. Do not apply this pesticide to blooming, pollen-shedding or nectar-producing parts of plants if bees may forage on the plants during this time period. This product is toxic to aquatic invertebrates. Do not apply directly to water. Do not contaminate water when disposing of equipment washwaters or rinsate. Do not put product or rinse water down drain.

### Physical or Chemical Hazards

**Combustible.** Do not use or store near heat or open flame

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## 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. Read all Directions for Use carefully before applying.

**For residential use in home gardens, lawns and ornamentals. Not for use on plants being grown for sale or other commercial use, or for commercial seed production, or for research purposes.**

### Storage and Disposal

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

**Pesticide Storage:** Store in original container only in secure or locked storage area.

**Pesticide Disposal:** *If partly filled* – Call your local solid waste agency for disposal instructions. Never place unused product down any indoor or outdoor drain.

**Container Disposal:** *If empty* - Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available or place in trash.

This insect control product is intended for control of worms (caterpillars) and other listed insects. This product does not significantly impact predatory beneficial insects, predatory mites, and spiders while controlling target pests. Susceptible insect pests may be observed on plants up to several hours after treatment, but will have ceased active feeding before being killed. Spinosad is classified as an organic substance by the USDA National Organic Standards Board.

[this section may be listed here, as well as on the front panel]

Captain Jim's DEADBUG Brew® contains Spinosad "spin-OH-sid". Spinosad is derived from a naturally occurring soil dwelling bacterium that was collected from an abandoned rum distillery on a Caribbean island in 1982. This unique bacterium was defined as a new species when it was discovered and it has never been found in nature anywhere else in the world. Since being discovered, Spinosad has become a leading pesticide used by agriculture world wide in the production of organic produce. Today, thanks to Captain Jim, and his DEADBUG Brew® Spinosad is available to the homeowner.

## How to Apply

### Shake Well Before Use

**Application:** Spray as directed – complete coverage is important. Treat when insects begin to appear and repeat treatments to maintain control as directed. Carefully follow all label directions and any limitations of use, such as the amount of spray to apply or PHI (pre-harvest interval) for particular vegetable crops.

### Ready-to-Spray Nozzle Instructions:

1. Make sure knob control lever is in "OFF" position, then connect sprayer to garden hose.

2. When spraying low growing groundcovers, lawns and small shrubs, twist the sprayer hood to the "FAN" position. When spraying taller Trees, Shrubs and Ornamentals, twist the sprayer hood to the "STREAM" position for extended reach and uniform coverage.
3. Turn water on at the faucet. To begin spraying, turn [rotate] knob control lever to the "ON" position. The product mixes automatically with the water as you spray.
4. To stop spraying, turn knob control lever to the "OFF" position. Turn off water at the faucet. To relieve pressure, turn knob control lever to the "ON" position and point the sprayer away from any desirable plants before disconnecting the spray nozzle from the garden hose.

**When to Apply**

Apply when listed pests are present. Repeat applications may be made as indicated in the Home Gardens section. See your state extension service recommendations for treatment guidelines in your area.

**Uses**

**Home Gardens**

In the state of Georgia, do not apply this product to: Broccoli Raab, Chinese Cabbage (Bok Choy), Collards, Kale, Mizuna, Mustard Greens, Mustard Spinach, Rape Greens.

Crops	Pests Controlled	Maximum Number of Applications per Season	Minimum Days to Wait Before Reapplying	Minimum Days to Wait from Last Application to Harvest
apple and other pome fruits including, but not limited to: crabapples, mayhaw, pears, and quince	codling moth leafminers leafrollers oriental fruit moth tufted apple budmoth	6	10	7
asparagus (post-harvest to protect ferns)	asparagus beetles	4	7	60
bushberries and caneberries, including, but not limited to: blackberry, blueberry, currant, elderberry, gooseberry, huckleberry, juneberry, lingonberry,loganberry, raspberry, and salal	armyworms fireworms fruitfly (suppression) fruitworms leafrollers loopers thrips	6	6	3
citrus trees, including, but not limited to: grapefruit, lemons, limes, oranges, and tangerines (to prevent fruit scaring from thrips, treat when fruit is marble size)	katydids leafminers thrips worms (caterpillars)	6	6	1
cole crops (Brassica vegetables), including, but not limited to: broccoli, broccoli raab, brussels sprouts, cauliflower, cavalo, Chinese broccoli, cabbage, Chinese cabbage (bok choy), Chinese cabbage (napa), Chinese mustard cabbage (gai choy), collards, kale, kohlrabi, mizuna, mustard greens, mustard spinach, and rape greens	cabbage looper diamondback moth imported cabbage worm leafminers worms	6	4	1

<b>cucurbits</b> , including, but not limited to: cucumber, edible gourds, muskmelons (cantaloupe, honeydew, etc.), pumpkin, summer and winter squash, and watermelon	leafminers thrips worms (caterpillars)	6	5	all except cucumber, 3 cucumber, 1
<b>fruiting vegetables</b> , including, but not limited to: eggplant, ground cherry, okra, pepino, pepper, tomatillo, and tomato	Colorado potato beetle leafminers thrips worms (caterpillars)	6	4	1
<b>grape</b>	leafrollers thrips worms (berry moth)	6	5	7
<b>leafy and dried herbs</b>	leafminers thrips worms (caterpillars)	5	7	1
<b>leafy vegetables</b> , including, but not limited to: arugula, celery, chervil, corn salad, cress, dandelion, dock, edible chrysanthemum, endive, fennel, garden purslane, head and leaf lettuce, parsley, radicchio, rhubarb, spinach, and Swiss chard	leafminers worms (caterpillars)	6	4	1
<b>stone fruits</b> , including, but not limited to: apricots, cherries, nectarines, peaches, plums, and prunes	borers fruit flies leafminers leafrollers thrips worms (caterpillars)	6	7	peach, apricot, all except cherry plum, prune, nectarine, 14 cherry, plum and prune, 7 nectarine, 1
<b>strawberry</b>	armyworms leafrollers thrips	6	5	1
<b>succulent beans and peas</b> , including, but not limited to: blackeyed pea, garbanzo bean, garden pea, lima bean, snap bean, and snow pea	borers leafminers thrips worms (caterpillars)	6	5	3
<b>sweet corn and popcorn</b> (for earworms, treat silk frequently as it grows)	corn borers worms (caterpillars), including earworm	6	3	1
<b>tree nuts</b> , including, but not limited to: almonds, cashew, chestnut, macadamia, pecans, pistachio, and walnuts	husk fly (suppression) leafrollers navel orangeworms peach twig borer shuckworms webworms	5	7	14
<b>tree fruits</b> : including, but not limited to: atemoya, avocado, cherimoya, custard apple, guava, longan, lychee, mango, papaya, passionfruit, rambutan, sapodilla, sapote, star apple, star fruit, and	suppression of worms or caterpillars, thrips, and katydids	4	7	1

wax jambu				
<b>tuberous and corm vegetables,</b> including, but not limited to: cassava, chayote root, Chinese artichoke, ginger, Jerusalem artichoke, potatoes, sweet potatoes, tumeric, and yams	Colorado potato beetle corn borers leafminers thrips worms (caterpillars)	6	7	7

**Lawns and Ornamentals**

Use Site	Pests Controlled	Comments
lawns	worms, including small (<3/4") armyworm, and sod webworm cat fleas (suppression only)	Uniformly apply a minimum of 3 gallons of spray per 1000 sq ft of area. Delay watering or mowing for 12 to 24 hours after application. <b>Armyworms:</b> For best results, apply in early morning or late afternoon. <b>Cat fleas:</b> Apply early or late in the day since control requires contact with dilute spray before drying. Thorough coverage is necessary. Reapply in 7 to 14 days to control adults that have emerged from pupae present at time of initial treatment.
outdoor ornamentals (herbaceous and woody plants)	emerald ash borer gall midges leaf feeding beetles leafminers sawfly larvae spider mites <sup>1</sup> thrips worms, including loopers, webworms, bagworms, gypsy moth, and tent caterpillars	Uniformly spray foliage to point of runoff. Uniform coverage of upper and lower leaf surfaces is essential for effective insect control.

<sup>1</sup>Apply when spider mites are first observed prior to webbing and before mite populations have become severe. Reapply after 7 to 10 days (3 to 5 days in greenhouses and structures that can be altered to be closed or open) to contact newly hatched nymphs and repeat until infestation is managed. **Uniform coverage of both upper and lower leaf surfaces is critical.**

**Limited Warranty and Disclaimer**

Seller warrants that this product complies with the specifications expressed in this label. To the extent consistent with applicable law, Seller makes no other warranties, and disclaims all other warranties, express or implied, including but not limited to warranties of merchantability and fitness for the intended purpose. To the extent consistent with applicable law, Seller's liability or default, breach or failure under this label shall be limited to the amount of the purchase price. To the extent consistent with applicable law, Seller shall have no liability for consequential damages.

For information on pesticide products (including health concerns, medical emergencies, or pesticide incidents) call National Pesticide Information Center at 1-800-858-7378.

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