

100-1276

06-06-2011

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



OFFICE OF  
CHEMICAL SAFETY AND  
POLLUTION PREVENTION

June 6, 2011

Timothy E. Wilson  
Syngenta Crop Protection, Inc.  
P.O. Box 18300  
Greensboro, NC 27419

Dear Dr. Wilson:

Subject: Supplemental label for new uses  
Endigo<sup>®</sup> ZC  
EPA Reg. No. 100-1276  
EPA Decision No. 449970  
Your submission dated February 22, 2011

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, is acceptable with the following comments:

- On the first page, under the product name, revise the heading "Supplemental Directions for Use" to read, "Supplemental Directions for Use on Barley, Brassica Cole Crops, Cotton, Cucurbit Vegetables, Fruiting Vegetables, Lettuce (Head and Leaf), Pome Fruits, Soybean, Stone Fruit, Tobacco, and Tree Nuts."
- Under the Pome Fruits section, please remove the reference to citrus and replace the statement "...apply Endigo ZC with a horticultural spray oil (not a dormant oil) approved for use on citrus," with "...apply Endigo ZC with an approved horticultural spray oil."

A stamped copy of the label is enclosed for your records. Please submit two copies of your final printed labeling before you release the product for shipment. Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). If you have any questions, please contact Julie Chao at (703) 308-8735 or [chao.julie@epa.gov](mailto:chao.julie@epa.gov).

Regards,

A handwritten signature in black ink, appearing to read "Venus Eagle".

*for* Venus Eagle, Product Manager (01)  
Insecticide-Rodenticide Branch  
Registration Division (7505P)

Enclosure

**RESTRICTED USE PESTICIDE**  
**DUE TO TOXICITY TO FISH AND AQUATIC ORGANISMS**  
**FOR RETAIL SALE TO AND USE ONLY BY CERTIFIED APPLICATORS, OR PERSONS UNDER THEIR DIRECT SUPERVISION,**  
**AND ONLY FOR THOSE USES COVERED BY THE CERTIFIED APPLICATOR'S CERTIFICATION.**

**SUPPLEMENTAL LABELING**

Syngenta Crop Protection, LLC  
P. O. Box 18300  
Greensboro, North Carolina 27419-8300

**Sale, use and distribution of this product in Nassau and Suffolk counties in the state of New York is prohibited.**

**SCP 1276A-S2 0111**  
EPA Reg. No. 100-1276

**ENDIGO® ZC**  
Insecticide

**Supplemental Directions for Use**

Active Ingredient:

Lambda-cyhalothrin<sup>1,2</sup> ..... 9.48%

Thiamethoxam<sup>3</sup> ..... 12.60%

Other Ingredients: ..... 77.92%

Total: ..... 100.00%

Endigo ZC contains 1.18 pounds thiamethoxam and 0.88 pounds lambda-cyhalothrin per gallon.

<sup>1</sup>Synthetic pyrethroid  
<sup>2</sup>CAS No. 91465-08-6  
<sup>3</sup>CAS No. 153719-23-4

**KEEP OUT OF REACH OF CHILDREN.**

**WARNING / AVISO**

This label expires January 4, 2014, and must not be used or distributed after that date.

All applicable directions, restrictions and precautions on the EPA-registered label must be followed. Before using Endigo ZC as permitted according to this supplemental labeling, read and follow all applicable directions, restrictions, and precautions on the label on or attached to the pesticide product container. This Supplemental Labeling contains revised use instructions and or restrictions that may be different from those that appear on the container label. This Supplemental Labeling must be in the possession of the user at the time of pesticide application. It is a violation of Federal law to use this product in a manner inconsistent with its labeling.



**ACCEPTED**  
**With COMMENTS**  
**In EPA Letter Dated:**  
**JUN 06 2011**  
**Under the Federal Insecticide, Fungicide**  
**and Rodenticide Act, As amended, for the**  
**pesticide Registered under EPA Reg. No:**

100-1276

## DIRECTIONS FOR USE RESTRICTED USE PESTICIDE

### RESTRICTIONS

- 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 agency responsible for pesticide regulation.
- Do not apply Endigo ZC or allow it to drift onto blooming plants or weeds while bees are foraging in/or adjacent to the treated area.
- Do not use Endigo ZC in nurseries, greenhouses, plant propagation houses, or on any plants grown for use as transplants.
- Do not apply Endigo ZC to crops grown from seed treated with thiamethoxam except for cotton and soybean.
- This product is classified as restricted use in New York State.
- Sale, use and distribution of this product in Nassau and Suffolk counties in the state of New York is prohibited.
- In New York State, do not exceed a total of 0.188 lb. a.i. of thiamethoxam containing products per acre per growing season.
- This labeling must be in the possession of the user at the time of application.

### Pollinator Precautions

- Endigo ZC is highly toxic to bees exposed to direct treatment on blooming crops or weeds.
  - For **apples**, do not apply Endigo ZC after pre-bloom (early pink growth stage) or before post bloom (petal fall growth stage).
  - For **citrus**, do not apply during pre-bloom or during bloom when bees are actively foraging.
  - For **pears**, do not apply Endigo ZC after pre-bloom (green cluster stage) or before post bloom (petal fall growth stage).
  - For **stone fruit**, do not apply Endigo ZC between the pre-bloom (swollen bud) and post bloom (petal fall) growth stages.
- Do not apply Endigo ZC or allow it to drift to blooming crops or weeds if bees are foraging in/or adjacent to the treatment area. This is especially critical if there are adjacent orchards that are blooming. (Refer to **Spray Drift Precautions** for additional information.)
- **After an Endigo ZC application, wait at least 5 days before placing beehives in the treated field.**
- If bees are foraging in the ground cover and it contains any blooming plants or weeds, always remove flowers before making an application. This may be accomplished by mowing, disking, mulching, flailing, or applying a labeled herbicide.
- Consult with your local cooperative extension service or state agency responsible for regulating pesticide use for additional pollinator safety practices.

Crop	Pest	Rate Per Acre Per Application
Barley	Army Cutworm Cutworm species	3.5 – 4.0 fl. oz./A
	Armyworm Bird Cherry-Oat Aphid <sup>1</sup> Cereal Leaf Beetle English Grain Aphid <sup>1</sup> Fall Armyworm Flea Beetle species Grass Sawfly Grasshopper species Hessian Fly <sup>4</sup> Orange Blossom Wheat Midge Russian Wheat Aphid <sup>1</sup> Stink Bug species Yellowstriped Armyworm	3.5 – 4.5 fl. oz./A
	Chinch Bug Corn Leaf Aphid Greenbug <sup>1,3</sup> Mite species <sup>2</sup>	4.5 fl. oz./A

**Use Restrictions:**

- **Application Timing:** Apply as required by scouting, usually at intervals of 7 or more days. Base timing and frequency of applications upon insect populations reaching locally determined economic thresholds.
  - For chinch bug control repeat applications may be needed, and Endigo ZC may only suppress heavy infestations and/or migrations.
  - Greenbug is known to have many biotypes. Endigo ZC may provide suppression only. In this situation, a second application using an alternative chemistry may be needed.
- **Maximum Endigo ZC Allowed per Growing Season:** Do not exceed a total of 9.0 fl. oz./Acre of Endigo ZC or 0.06 lb. a.i. of lambda-cyhalothrin containing products or 0.125 lb. a.i. of thiamethoxam containing products per acre per growing season.
- **Pre-Harvest Interval (PHI):** 30 days
- **Minimum interval between applications:** 7 days
- **Water Volume:** Use sufficient water volume to ensure thorough coverage of foliage. Do not use less than 10 GPA for ground applications or 2 GPA for aerial applications.
- **Grazing:** **Do not** allow livestock to graze in treated areas or harvest treated forage as feed for meat or dairy animals within 30 days after treatment. **Do not** feed treated straw to meat or dairy animals within 30 days after the last treatment.

<sup>1</sup>Best control is obtained before insects begin to roll leaves. Once the crop has started to boot, Endigo ZC may provide suppression only. Higher rates, within the listed rate range, and increased coverage will be necessary.

<sup>2</sup>Suppression only.

<sup>3</sup>See **Resistance Management** section.

<sup>4</sup>Make applications when adults emerge.

**Refer to Pollinator Precautions section.**  
**Refer to Resistance Management section.**

Crop	Pest	Rate Per Acre Per Application
<b>Brassica Cole Crops</b>		
<b>Head &amp; Stem Brassica</b> Broccoli Broccoli, Chinese Brussels sprouts Cabbage Cabbage, Chinese mustard Cabbage, Chinese (napa) Cauliflower Cavalo broccolo Kohlrabi	Alfalfa Looper Cabbage Looper Cabbage Webworm Cutworm species Imported Cabbageworm Southern Cabbageworm	4.0 fl. oz/A
	Aphid species Armyworm Corn Earworm Diamondback Moth <sup>3</sup> Fall Armyworm <sup>1</sup> Flea Beetle species Grasshopper species Japanese Beetle (Adult) Leafhopper species Meadow Spittlebug Plant Bug species including Lygus species <sup>3</sup> Spider Mite species <sup>2</sup> Stink Bug species Vegetable Weevil (Adult) Yellowstriped Armyworm	4.0 – 4.5 fl. oz/A
	Thrips species <sup>2</sup> Whitefly species <sup>2,3</sup>	4.5 fl. oz/A

**Use Restrictions:**

- **Application Timing:** Apply before pests reach damaging levels. Scout fields and treat again if populations rebuild to potentially damaging levels. Apply higher rates, within the listed rate range, for heavy infestations.
- **Maximum Endigo ZC Allowed per Growing Season:** Do not exceed a total of 19.0 fl. oz./Acre of Endigo ZC or 0.24 lb. a.i. of lambda-cyhalothrin containing products or 0.172 lb. a.i. of thiamethoxam containing products per acre per growing season.
- **Pre-Harvest Interval (PHI):** 1 Day
- **Minimum Interval Between Applications:** 7 days
- **Water Volume:** Use sufficient water volume to ensure thorough coverage of foliage. Do not use less than 10 GPA for ground applications or 2 GPA for aerial applications.

<sup>1</sup>For control of first and second instar only.

<sup>2</sup>Suppression only. For control of thrips or whiteflies tank mix with 2 – 2.5 oz/A of Actara Insecticide.

<sup>3</sup>See **Resistance Management** section.

**Refer to Pollinator Precautions section.**  
**Refer to Resistance Management section.**

Crop	Pest	Rate Per Acre Per Application
Cotton	Boll Weevil Cabbage Looper Clouded Plant Bug Cotton Bollworm Cotton Fleahopper Cotton Leafperforator Cotton Leafworm European Corn Borer Fall Armyworm Green Stink Bug Pink Bollworm Plant Bug species Saltmarsh Caterpillar Southern Green Stink Bug Stink Bug species Tarnished Plant Bug ( <i>Lygus lineolaris</i> )	4.5 – 5.5 fl. oz./A
	Aphid species Brown Stink Bug Red Banded Stink Bug Red Shouldered Stink Bug Western Tarnished Plant Bug ( <i>Lygus Hessperus</i> ) Whitefly species	5.0 – 6.0 fl. oz./A

**Use Restrictions:**

- **Application Timing:** Apply before pests reach damaging levels. Apply as required by scouting, usually at intervals of 5-10 days. Scout fields and treat again if populations rebuild to potentially damaging levels. Base timing and frequency of applications upon insect populations reaching locally determined economic thresholds. Apply the higher rate within the listed rate range for heavy infestations.
- **Aphids:** For best results, the low rate should not be used after first bloom or on rapidly increasing populations.
- **Bollworm:** Under light infestation levels, 4.5 fl. oz./A may be applied in conjunction with intense field monitoring. When applied according to label, Endigo ZC also provides ovicidal control of unhatched *Heliothine* species eggs.
- **Adjuvant:** Insect control can be improved with the use of a non-ionic surfactant or COC. Do not use binder or sticker type surfactants.
- **Pre-Harvest Interval (PHI):** 21 Days
- **Maximum Endigo ZC Allowed per Growing Season:** Do not exceed a total of 13.5 fl. oz. of Endigo ZC or 0.2 lb. a.i. of lambda-cyhalothrin containing products or 0.125 lb. a.i. of thiamethoxam containing products per acre per growing season.
- **Minimum Interval between Applications:** Allow at least 5 days between applications.
- **Water Volume:** Use sufficient water volume to ensure thorough coverage of foliage. Do not use less than 10 GPA for ground applications or 3 GPA for aerial applications.
- **Livestock Grazing:** Do not graze livestock in treated areas.
- **Neonicotinoids:** Do not apply this product within 45 days of planting if cotton seeds were treated with a neonicotinoid product.
- **Synthetic Pyrethroids:** Do not make more than a total of 10 synthetic pyrethroid applications (of one product or combination of products) to a cotton crop in one growing season.

**Refer to Pollinator Precautions section.**

**Refer to Resistance Management section.**

Crop	Pest	Rate Per Acre Per Application
<b>Cucurbit Vegetables</b>  Chayote Chinese waxgourd Citron melon Cucumber Edible gourd Gherkin <i>Momordica</i> species Muskmelon Pumpkin Squash: summer and winter Watermelon	Armyworm species <sup>1</sup> Blister Beetle species Brown Marmorated Stink Bug Cabbage Looper Corn Earworm Cricket species Cucumber Beetle species (adults) Cutworm species Flea Beetle species Grasshopper species June Beetle species Leaffooted Bug Leafhopper species Lygus Bug species <sup>1</sup> Melonworm Pickleworm Plant Bug species Rindworm species complex Saltmarsh Caterpillar Squash Beetle Squash Bug species Squash Vine Borer species Stink Bug species Thrips species <sup>1,2</sup> Tobacco Budworm <sup>1</sup> Webworm species	4.0 – 4.5 fl. oz./A
	Aphid species Leafminer species <sup>1,3</sup> Whitefly species <sup>3</sup> Spider Mite species <sup>3</sup>	4.5 fl. oz./A

**Use Restrictions:**

- **Maximum Endigo ZC Allowed per Growing Season:** Do not exceed a total of 19.0 fl. oz./Acre of Endigo ZC or 0.18 lb. a.i. of lambda-cyhalothrin containing products or 0.172 lb. a.i. of thiamethoxam-containing products per acre per growing season.
- **Application Timing:** Apply before pests reach damaging levels. Scout fields and treat again if populations rebuild to potentially damaging levels. Apply higher rates, within the listed rate range, for heavy infestations.
  - Use higher application volumes and/or rates when foliage is dense, pest populations are high, larvae are large, weather conditions are adverse and/or as plant size increases. Use higher rates, within the listed rate range, for longer residual.
  - Insects that bore or tunnel into leaves, vines, stems or fruit must be controlled before penetration. Only exposed insects (larvae and/or adults) can be controlled with foliar applications of Endigo ZC.
- **Pre-Harvest Interval (PHI):** 1 day
- **Minimum Interval Between Applications:** 5 days
- **Water Volume:** Use sufficient water volume to ensure thorough coverage of foliage. Do not use less than 10 GPA for ground applications or 2 GPA for aerial applications.

<sup>1</sup>See **Resistance Management** section.

<sup>2</sup>Does not include Western Flower Thrips.

<sup>3</sup>Suppression only.

Refer to **Pollinator Precautions** section.

Refer to **Resistance Management** section.

Crop	Pest	Rate Per Acre Per Application
<b>Fruiting Vegetables</b>  Eggplant Ground cherry Pepino Peppers (bell, chili, cooking, pimento, and sweet) Tomatillo Tomato	Aphid species Blister Beetle species Brown Marmorated Stink Bug Cabbage Looper Colorado Potato Beetle Cucumber Beetle species (Adult) Cutworm species European Corn Borer <sup>4</sup> Fall Armyworm <sup>1</sup> Flea Beetle species Grasshopper species Hornworm species Japanese Beetle (Adult) Leafhopper species Meadow Spittlebug Plant Bug species Southern Armyworm <sup>1</sup> Stalk Borer <sup>4</sup> Stink Bug species Tomato Fruitworm Vegetable Weevil (Adult) Yellowstriped Armyworm <sup>1</sup>	4.0 – 4.5 fl. oz./A
	Leafminer species <sup>2</sup> Pepper Weevil <sup>2</sup> Spider Mite species <sup>2</sup> Thrips species <sup>5</sup> Tobacco Budworm <sup>3</sup> Tomato Pinworm <sup>2,3</sup> Tomato Psyllid <sup>2,3</sup> Whitefly species <sup>2</sup>	4.5 fl. oz./A

**Use Restrictions:**

- **Maximum Endigo ZC Allowed per Growing Season:** Do not exceed a total of 19.0 fl. oz./Acre of Endigo ZC or 0.36 lb. a.i. of lambda-cyhalothrin containing products or 0.172 lb. a.i. of thiamethoxam-containing products per acre per growing season.
- **Application Timing:** Apply before pests reach damaging levels. Scout fields and treat again if populations rebuild to potentially damaging levels. Apply higher rates, within the listed rate range, for heavy infestations.
- **Pre-Harvest Interval (PHI):** 5 days
- **Minimum Interval Between Applications:** 5 days
- **Water Volume:** Use sufficient water volume to ensure thorough coverage of foliage. Do not use less than 10 GPA for ground applications or 2 GPA for aerial applications.

<sup>1</sup>For control of first and second instar only.

<sup>2</sup>Suppression only. For control, tankmix with 2.0 – 2.5 oz/A of Actara Insecticide.

<sup>3</sup>See **Resistance Management** section.

<sup>4</sup>For control before the larva bores into the plant stalk or fruit.

<sup>5</sup>Does not include Western Flower Thrips.

**Refer to Pollinator Precautions section.**

**Refer to Resistance Management section.**



Crop	Pest	Rate Per Acre Per Application
Lettuce (Head and Leaf)	Aphid species Armyworm Corn Earworm European Corn Borer Fall Armyworm <sup>1</sup> Flea Beetle species Grasshopper species Japanese Beetle (Adult) Leafhopper species Meadow Spittlebug Plant Bug species including Lygus species <sup>3</sup> Southern Armyworm Stink Bug species Vegetable Weevil (Adult)	4.0 – 4.5 fl. oz./A
	Diamondback Moth <sup>3</sup> Spider Mite species <sup>2</sup> Tobacco Budworm <sup>3</sup> Whitefly species <sup>2,3</sup>	4.5 fl. oz./A

**Use Restrictions:**

- **Maximum Endigo ZC Allowed per Growing Season:** Do not exceed a total of 19.0 fl. oz./Acre of Endigo ZC or 0.3 lb. a.i. of lambda-cyhalothrin containing products or 0.172 lb. a.i. of thiamethoxam-containing products per acre per growing season.
- **Application Timing:** Apply before pests reach damaging levels. Scout fields and treat again if populations rebuild to potentially damaging levels. Apply higher rates, within the listed rate range, for heavy infestations.
- **Pre-Harvest Interval (PHI):** 7 days
- **Minimum Interval Between Applications:** 7 days
- **Water Volume:** Use sufficient water volume to ensure thorough coverage of foliage. Do not use less than 10 GPA for ground applications or 2 GPA for aerial applications.

<sup>1</sup>For control of first and second instar only.

<sup>2</sup>Suppression only. For whitefly control, tankmix with 2.0 – 2.5 oz/A of Actara Insecticide.

<sup>3</sup>See **Resistance Management** section.

**Refer to Pollinator Precautions section.**  
**Refer to Resistance Management section.**

Crop	Pest	Rate Per Acre Per Application
<p><b>Pome Fruits</b></p> <p>Apple Crabapple Loquat Mayhaw Oriental Pear Pear Quince</p>	<p>Aphid species<sup>1</sup> Apple Maggot (Adult) Brown Marmorated Stink Bug Cherry Fruit Fly species (Adult) Codling Moth Green Fruitworm Japanese Beetle Leafhopper species Leafroller species Lesser Appleworm Mealybug species<sup>1</sup> Omnivorous Leafroller Orange Tortrix Oriental Fruit Moth Pear Psylla<sup>1</sup> Sawfly species Periodical Cicada Plant Bug species Plum Curculio<sup>1</sup> San Jose Scale (crawlers, fruit infestations only) Stink Bug species Tent Caterpillar species Tentiform Leaf Miner species Tree Borer species Tufted Apple Budworm Webworm species</p>	<p>5.0 – 6.0 fl. oz/A</p>

**Use Restrictions:**

- **Maximum Endigo ZC Allowed per Growing Season:** Do not exceed a total of 28.0 fl. oz./Acre of Endigo ZC or 0.258 lb. a.i. of thiamethoxam containing products or 0.2 lb, a.i. lambda-cyhalothrin containing products per acre per growing season. Do not apply more than 0.16 lb. a.i. lambda-cyhalothrin containing products per acre per growing season post bloom.
  - In New York State, do not exceed a total of 19.0 fl. oz./Acre of Endigo ZC or 0.172 lb. a.i./A thiamethoxam containing products per acre per growing season on Pome Fruit.
- **Application Timing:** Apply before pests reach damaging levels. Scout fields and treat again if populations rebuild to potentially damaging levels. Apply higher rates, within the listed rate range, for heavy infestations.
  - For scales, time the applications to coincide with the crawler stage.
  - For best results on scales, mealybugs and pear psylla, apply Endigo ZC with a horticultural spray oil (not a dormant oil) approved for use on citrus. Carefully follow the **Directions for Use and Precautions** on the horticultural spray oil label as well as the precautions in official spray guides or on product labels.
  - Apply when aphid colonies are first observed and before leaf curling occurs
- **Pre-Harvest Interval (PHI):** 35 days
- **Minimum Interval Between Applications:** 10 days
- **Water volume:** Apply with ground or air equipment using sufficient water volume to ensure thorough coverage of foliage. Do not use less than 10 gallons per acre by ground or 5 gallons per acre by air. For best results, use a minimum of 50 GPA applied with ground equipment to ensure thorough coverage of foliage.

<sup>1</sup>Suppression only. For control, tankmix with 2.0 oz/A of Actara Insecticide.

**Refer to Pollinator Precautions section.**

**Refer to Resistance Management section.**

Crop	Pest	Rate Per Acre Per Application
Soybean	Cabbage Looper Corn Earworm Corn Rootworm Beetles (Adults) Mexican Northern Southern Western Cutworm species Green Cloverworm Mexican Bean Beetle Painted Lady (Thistle) Caterpillar Potato Leafhopper Saltmarsh Caterpillar Soybean Aphid <sup>4</sup> Threecornered Alfalfa Hopper Thrips species <sup>5</sup> Velvetbean Caterpillar Woollybear Caterpillar	3.5 – 4.0 fl. oz/A
	Armyworm <sup>1</sup> Bean Leaf Beetle Blister Beetle species Brown Marmorated Stink Bug European Corn Borer Fall Armyworm <sup>1</sup> Grasshopper species Green Stink Bug Japanese Beetle (Adult) Plant Bug species Silverspotted Skipper Southern Green Stink Bug Stink Bug species Tobacco Budworm <sup>3</sup> Webworm species Yellowstriped Armyworm <sup>1</sup>	4.0 – 4.5 fl. oz/A
	Brown Stink Bug Lesser Cornstalk Borer <sup>2</sup> Red Banded Stink Bug Spider Mite species <sup>2</sup>	4.5 fl. oz./A

**Use Restrictions:**

- **Application Timing:** Apply before pests reach damaging levels. Scout fields and treat again if populations rebuild to potentially damaging levels. Apply the higher rate within the listed rate range for heavy infestations.
- **Pre-Harvest Interval (PHI):** 30 Days
- **Maximum Endigo allowed per growing season:** Do not exceed a total of 9.0 fl. oz. of Endigo ZC or 0.06 lb a.i. of lambda-cyhalothrin containing products or 0.125 lb. a.i. of thiamethoxam containing products per acre per growing season.

- **Minimum interval between applications:** Allow at least 7 days between applications.
- **Water Volume:** Use sufficient water volume to ensure thorough coverage of foliage. Do not use less than 10 GPA for ground applications or 3 GPA for aerial applications.
- **Stink Bugs:** Control may require the use of two applications made at a 7 to 10 day interval.
- For control of **adult corn rootworm beetles** (*Diabrotica* species) as part of an aerial applied corn rootworm control program use a minimum of 4.0 fl. oz. of Endigo ZC.
- Do not graze or harvest treated soybean forage, straw or hay for livestock feed.
- For resistance management, do not apply this product within 45 days of planting if soybean seeds were treated with a neonicotinoid product.

<sup>1</sup> Use the higher rates within the listed rate range for large larvae.

<sup>2</sup> Suppression only.

<sup>3</sup> See **Resistance Management** section.

<sup>4</sup> Use lower rates for early season applications and/or lighter populations.

<sup>5</sup> Does not include Western Flower Thrips.

**Refer to Pollinator Precautions section.**

**Refer to Resistance Management section.**

Crop	Pest	Rate Per Acre Per Application
<b>Stone Fruit</b> Apricot Chickasaw plum Damson plum Japanese plum Nectarine Peach Plum Plumcot Prune (fresh) Sweet and tart cherry	Aphid species American Plum Borer Brown Marmorated Stink Bug Codling Moth Green Fruitworm Japanese Beetle June Beetle Leafhopper species Leafroller species Oriental Fruit Moth Peach Twig Borer Peachtree Borer species Sawfly species Periodical Cicada Plant Bug species Rose Chafer Stink Bug species Tent Caterpillar species Thrips species	5.0 – 5.5 fl. oz./A
	Apple Maggot (adult) <sup>1</sup> Cherry Fruit Fly species (adult) <sup>1</sup> Plum Curculio <sup>1</sup>	5.5 – 6.0 fl. oz./A

**Use Restrictions:**

- **Maximum Endigo ZC Allowed per Growing Season:** Do not exceed a total of 19.0 fl. oz./Acre of Endigo ZC or 0.172 lb. a.i. of thiamethoxam containing products or 0.2 lb. a.i. lambda-cyhalothrin containing products per acre per growing season. Do not apply more than 0.16 lb. a.i. lambda-cyhalothrin containing products per acre per growing season post bloom.
- **Application Timing:** Apply before pests reach damaging levels. Scout fields and treat again if populations rebuild to potentially damaging levels. Apply higher rates, within the listed rate range, for heavy infestations.
- **Pre-Harvest Interval (PHI):** 14 days
- **Minimum Interval Between Applications:** 7 days
- **Water Volume:** Use sufficient water volume to ensure thorough coverage of foliage. Do not use less than 50 GPA for ground applications.
- **Do not** apply by air.

<sup>1</sup>Suppression only. For control, tankmix with 2.0 oz/A of Actara Insecticide.

**Refer to Pollinator Precautions section.**  
**Refer to Resistance Management section.**

Crop	Pest	Rate Per Acre Per Application
Tobacco	Aphid species Armyworm species <sup>1</sup> Blister Beetle species Cabbage Looper Corn Earworm Cucumber Beetle species (Adult) Cutworm species Grasshopper species Japanese Beetle (Adult) Katydid species Plant Bug species <sup>3</sup> Potato Tuberworm Salt Marsh Caterpillar Stink Bug species Thrips species <sup>2</sup> Tobacco Budworm <sup>3</sup> Tobacco Flea Beetle (Adult) Tobacco Hornworm Tomato Hornworm Tree Cricket species Vegetable Weevil (Adult) Webworm species	4.0– 4.5 fl. oz/A

**Use Restrictions:**

- **Maximum Endigo ZC Allowed per Growing Season:** Do not exceed a total of 4.5 fl. oz./Acre of Endigo ZC or 0.047 lb. a.i. of foliar applied thiamethoxam containing products or 0.09 lb, a.i. lambda-cyhalothrin containing products per acre per growing season per acre per growing season.
- **Application Timing:** Apply before pests reach damaging levels. Apply higher rates, within the listed rate range, for heavy infestations.
- **Pre-Harvest Interval:** 40 days
- **Water volume:** Apply with ground or air equipment using sufficient water to obtain full coverage of the foliage. When applying by air, apply in a minimum of 5 gals. of water per acre.

<sup>1</sup>For control of first and second instars only.

<sup>2</sup>Suppression only.

<sup>3</sup>See **Resistance Management** section.

**Refer to Pollinator Precautions section.**  
**Refer to Resistance Management section.**

Crop	Pest	Rate Per Acre Per Application
<b>Tree Nuts</b> Almond Beech Nut Brazil Nut Butternut Cashew Chestnut Chinquapin Filbert (Hazlenut) Hickory Nut Macadamia Nut (Bush Nut) Pistachio Walnut, Black Walnut, English (Persian)	Ant species Chinch Bug Codling Moth Filbertworm Leaffooted Bug Leafroller species Navel Orangeworm Peach Twig Borer Plant Bug species <sup>1</sup> Stink Bug species Walnut Aphid Walnut Husk Fly species (Adult)	5.0 – 6.0 fl. oz/A
<b>Pecan</b>	Hickory Shuckworm Pecan Aphid species Pecan Casebearer Pecan Phylloxera Pecan Spittlebug Pecan Weevil Stink Bug species	5.0 – 6.0 fl. oz/A
	Back Pecan Aphid	6.0 fl. oz./A

**Use Restrictions:**

- **Application Timing:** Apply before pests reach damaging levels. Scout trees and treat again if populations rebuild to potentially damaging levels. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds. Apply higher rates, within the listed rate range, for heavy infestations.
  - **Pecan phylloxera:** Apply treatment after egg hatch, before nymphs are in galls. This usually occurs after bud break when 1–2 inches of new growth is present.
- **Pre-Harvest Interval (PHI):** 14 Days
- **Maximum Endigo ZC Allowed per Growing Season:** Do not exceed a total of 13.5 fl. oz. of Endigo ZC or 0.16 lb. a.i. (or 0.012 lb. a.i. post bloom) of lambda-cyhalothrin containing products or 0.125 lb. a.i. of thiamethoxam containing products per acre per growing season.
- **Minimum Interval between Applications:** 7 days.
- **Water Volume:** Use sufficient water volume to ensure thorough coverage of foliage. Do not use less than 50 GPA for ground applications or 20 GPA for aerial applications. Use higher application volumes and/or rates when foliage is dense, pest populations are high, larvae are large, weather conditions are adverse and/or as plant size increases. Use higher rates, within the listed rate range, for longer residual.
- **Pollinator Precautions:** Endigo ZC is highly toxic to bees exposed to direct treatment on blooming crops. Do not apply during pre-bloom or during bloom when bees are actively foraging. Do not apply Endigo ZC or allow it to drift to blooming crops if bees are foraging in/or adjacent to the treatment area. This is especially critical if there are adjacent orchards that are blooming. **After an Endigo ZC application, wait at least 5 days before placing beehives in the treated field.** If bees are foraging in the ground cover and it contains any blooming plants or weeds, always remove flowers before making an application. This may be accomplished by mowing, disking, mulching, flailing, or applying a labeled

herbicide. Consult with your local cooperative extension service or state agency responsible for regulating pesticide use for additional pollinator safety practices.

<sup>1</sup>Use 6.0 fl. oz for *Lygus Hesperus*.

**Refer to Pollinator Precautions section.**

**Refer to Resistance Management section.**

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