OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION
WASHINGTON, D.C. 20460

May 15, 2025

Victoria Kleczewski Ph.D.
Regulatory Manager
Syngenta Crop Protection, LLC
P.O. Box 18300
Greensboro, North Carolina 27419

Subject: Label Amendment - Registration Review Mitigation for Lambda-cyhalothrin
Product Name: ENDIGO ZC
EPA Registration Number: 100-1276
Application Date: February 18, 2022
Decision Number: 582085
Case Number: 473808

Dear Victoria Kleczewski:

The Agency, in accordance with the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, has completed reviewing all the information submitted with your application to support the Registration Review of the above referenced product in connection with the Lambda-cyhalothrin Interim Decision, and has concluded that your submission is acceptable. The label referred to above, submitted in connection with registration under FIFRA, as amended, is acceptable.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide, Fungicide, and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements 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 Agency 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.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling and must be used at your next label printing. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 12 months from the date of this letter. After 12 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

If you have any questions about this letter, please contact Caleb Carr by phone at (202)-566-0636, or via email at carr.caleb@epa.gov.

Sincerely,

Linda Arrington, Branch Chief
Risk Management and Implementation Branch 4
Pesticide Re-Evaluation Division
Office of Pesticide Programs

ENCLOSURE: Stamped label

[Master Label]

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.

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

Endigo® ZC

THIAMETHOXAM	**GROUP**	**4A**	**INSECTICIDE**
LAMBDA-CYHALOTHRIN	**GROUP**	**3A**	**INSECTICIDE**

Insecticide

For control of listed pests infesting specified crops

Active Ingredient:	
Lambda-cyhalothrin[1,2]	9.48%
Thiamethoxam[3]	12.60%
Other Ingredients:	77.92%
Total:	100.00%

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

[1]Synthetic pyrethroid
[2]CAS No. 91465-08-6
[3]CAS No. 153719-23-4

ACCEPTED
May 15, 2025
Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 100-1276

KEEP OUT OF REACH OF CHILDREN.

WARNING / AVISO

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.)

See additional precautionary statements and directions for use in booklet.

EPA Reg. No. 100-1276
EPA Est.

SCP 1276 MAS

Net Contents

FIRST AID	
If swallowed	• Call a poison control center or doctor immediately for treatment advice. • Do not give **any** liquid to the person. • 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 clothing	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
If in eyes	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
If inhaled	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. • Call a poison control center or doctor for further treatment advice.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	
SYNGENTA HOTLINE NUMBER For 24-Hour Medical Emergency Assistance (Human or Animal) Or Chemical Emergency Assistance (Spill, Leak, Fire or Accident) Call **1-800-888-8372**	

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

WARNING/AVISO

May be fatal if swallowed. Causes skin irritation and moderate eye irritation. Harmful if absorbed through skin. Avoid contact with eyes. Do not get on skin 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 reuse.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Coveralls over short-sleeved shirt and short pants
- Chemical-resistant gloves made of barrier laminate or Viton™ ≥ 14 mils
- Chemical-resistant footwear plus socks
- Chemical-resistant apron when cleaning equipment, mixing, or loading
- For overhead exposure, wear chemical-resistant headgear.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. DO NOT reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

Engineering Controls

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240(d)(4-6)), the handler PPE requirements may be reduced or modified as specified in the WPS.

User Safety Recommendations

Users should:

- 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 extremely toxic to fish and aquatic organisms and toxic to wildlife. 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 apply when weather conditions favor drift from treated areas. Drift and runoff from treated areas may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment washwater or rinsate.

Non-Target Organism Advisory

This product is highly toxic to bees and other pollinating insects exposed to direct treatment or residues in/on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area. **Protect pollinating insects by following label directions intended to minimize drift and to reduce risk to these organisms.**

Surface Water Advisory

This product may impact surface water quality due to spray drift and runoff of rain water. This is especially true for poorly draining soils and soils with shallow groundwater. This product is classified as having a high potential for runoff for several months after application. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of thiamethoxam water from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall is forecast to occur within 48 hours. (See manual at the following Internet address: http://www.wsi.nrcs.usda.gov/products/W2Q/pest/core4.html.)

Groundwater Advisory

Thiamethoxam has properties and characteristics associated with chemicals detected in groundwater. This chemical may leach into the groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

PROTECTION OF POLLINATORS

APPLICATION RESTRICTIONS EXIST FOR THIS PRODUCT BECAUSE OF RISK TO BEES AND OTHER INSECT POLLINATORS. FOLLOW APPLICATION RESTRICTIONS FOUND IN THE DIRECTIONS FOR USE TO PROTECT POLLINATORS.

Look for the bee hazard icon  in the Directions for Use for each application site for specific use restrictions and instructions to protect bees and other insect pollinators.

This product can kill bees and other insect pollinators.

Bees and other insect pollinators will forage on plants when they flower, shed pollen, or produce nectar.

Bees and other insect pollinators can be exposed to this pesticide from:

- Direct contact during foliar applications, or contact with residues on plant surfaces after foliar applications
- Ingestion of residues in nectar and pollen when the pesticide is applied as a seed treatment, soil, tree injection, as well as foliar applications.

When Using This Product Take Steps To:

- Minimize exposure of this product to bees and other insect pollinators when they are foraging on pollinator attractive plants around the application site.
- Minimize drift of this product on to beehives or to off-site pollinator attractive habitat. Drift of this product onto beehives or off-site to pollinator attractive habitat can result in bee kills.

Information on protecting bees and other insect pollinators may be found at the Pesticide Environmental Stewardship website at:
http://pesticidestewardship.org/PollinatorProtection/Pages/default.aspx.

Pesticide incidents (for example, bee kills) should immediately be reported to the state/tribal lead agency. For contact information for your state, go to: www.aapco.org/officials.html. Pesticide incidents should also be reported to the National Pesticide Information Center at: www.npic.orst.edu or directly to EPA at: beekill@epa.gov

Physical and Chemical Hazards
Do not use, pour, spill, or store near heat or open flame.

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of SYNGENTA CROP PROTECTION, LLC or Seller. To the extent permitted by applicable law, Buyer and User agree to hold SYNGENTA and Seller harmless for any claims relating to such factors.

SYNGENTA warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, when used in accordance with directions under normal use conditions. To the extent permitted by applicable law: (1) this warranty does not extend to the use of the product contrary to label instructions, or under conditions not reasonably foreseeable to or beyond the control of Seller or SYNGENTA, and (2) Buyer and User assume the risk of any such use. TO THE EXTENT PERMITTED BY APPLICABLE LAW, SYNGENTA MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS WARRANTED BY THIS LABEL.

To the extent permitted by applicable law**,** in no event shall SYNGENTA be liable for any incidental, consequential or special damages resulting from the use or handling of this product. **TO THE EXTENT PERMITTED BY APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF SYNGENTA AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF SYNGENTA OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

SYNGENTA and Seller offer this product, and Buyer and User accept it, subject to the foregoing Conditions of Sale and Limitation of Warranty and Liability, which may not be modified except by written agreement signed by a duly authorized representative of SYNGENTA.

DIRECTIONS FOR USE
RESTRICTED USE PESTICIDE

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

See individual crops for specific pollinator protection application restrictions. If none exist under the specific crop, for foliar applications, follow these application directions for crops that are contracted to have pollinator services or for food/feed CROPS & commercially grown ornamentals that are attractive to pollinators:

FOR CROPS UNDER CONTRACTED POLLINATION SERVICES

Do not apply this product while bees are foraging. Do not apply this product until flowering is complete and all petals have fallen unless the following condition has been met:

If an application must be made when managed bees are at the treatment site, the beekeeper providing the pollination services must be notified no less than 48 hours prior to the time of the planned application so that the bees can be removed, covered, or otherwise protected prior to spraying.

FOR FOOD/FEED CROPS AND COMMERCIALLY GROWN ORNAMENTALS NOT UNDER CONTRACT FOR POLLINATION SERVICES BUT ARE ATTRACTIVE TO POLLINATORS

Do not apply this product while bees are foraging. Do not apply this product until flowering is complete and all petals have fallen unless one of the following conditions is met:

- **The application is made to the target site after sunset**
- **The application is made to the target site when temperatures are below 55˚F**
- **The application is made in accordance with a government-initiated public health response**
- **The application is made in accordance with an active state-administered apiary registry program where beekeepers are notified no less than 48 hours prior to the time of the planned application so that the bees can be**

removed, covered, or otherwise protected prior to spraying

- **The application is made due to an imminent threat of significant crop loss, and a documented determination consistent with an IPM plan or predetermined economic threshold is met. Every effort should be made to notify beekeepers no less than 48 hours prior to the time of the planned application so that the bees can be removed, covered, or otherwise protected prior to spraying.**

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** 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 ai of thiamethoxam-containing products per acre per growing season. This seasonal load restriction for New York State does not supersede any lower seasonal load specified in the crop use directions.
- This labeling must be in the possession of the user at the time of application.
- Removable chemical extraction probes (also known as “stingers”) used in suction/extraction systems must be rinsed within the pesticide container prior to removal.

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) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 24 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:

- Coveralls over short-sleeved shirt and short pants
- Chemical-resistant gloves made of barrier laminate or Viton ≥ 14 mils
- Chemical-resistant footwear plus socks
- Chemical-resistant headgear for overhead exposure

FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN POOR INSECT CONTROL, CROP INJURY, OR ILLEGAL RESIDUES.

INFORMATION

SHAKE WELL BEFORE USING.

RESISTANCE MANAGEMENT

For resistance management, please note that Endigo ZC contains both a Group 4A/ Thiamethoxam and Group 3A/Lambda-cyhalothrin insecticide. Any insect population may contain individuals naturally resistant to Endigo ZC and other Group 4A or Group 3A insecticides. The resistant individuals may dominate the insect population if these insecticides are used repeatedly in the same fields. Appropriate resistance-management strategies should be followed.

To delay insecticide resistance, take the following steps:

- Rotate the use of Endigo ZC or other Group 3A or Group 4A insecticides within a growing season, or among growing seasons, with different groups that control the same pests.
- Use tank mixtures with insecticides from a different group that are equally effective on the target pest when such use is permitted. Do not rely on the same mixture repeatedly for the same pest population. Consider any known cross-resistance issues (for the targeted pests) between the individual components of a mixture. In addition, consider the following recommendations provided by the Insecticide Resistance Action Committee (IRAC):
    - Individual insecticides selected for use in mixtures should be highly effective and be applied at the rates at which they are individually registered for use against the target species.
    - Mixtures with components having the same IRAC mode of action classification are not recommended for insect resistance management.
    - When using mixtures, consider any known cross-resistance issues between the individual components for the targeted pest(s).
    - Mixtures become less effective if resistance is already developing to one or both active ingredients, but they may still provide pest management benefits.
    - The insect resistance management benefits of an insecticide mixture are greatest if the two components have similar periods of residual insecticidal activity. Mixtures of insecticides with unequal periods of residual insecticide activity may offer an insect resistance management benefit only for the period where both insecticides are active.
- Adopt an integrated pest management program for insecticide use that includes scouting, uses historical information related to pesticide use, crop rotation, record

keeping, and which considers cultural, biological, and other chemical control practices.

- Monitor after application for unexpected target pest survival. If the level of survival suggests the presence of resistance, consult with your local university specialist or certified pest control advisor.
- Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or IPM recommendations for the specific site and pest problems in your area.
- For further information or to report suspected resistance, contact Syngenta at 1-866-796-4368.

In order to maintain susceptibility to these classes of chemistry:

- Avoid using Group 3A and/or Group 4A insecticides exclusively for season long control of insect species with more than one generation per crop season.
- For insect species with successive or overlapping generations, apply Endigo ZC or other Group 3A and/or Group 4A insecticides using a "treatment window" approach. A treatment window is a period of time as defined by the stage of crop development and/or the biology of the pests of concern. Within the treatment window, depending on the length of residual activity, there may either be single or consecutive applications (seed treatment, soil, or foliar, unless otherwise stated in the Directions for Use) of the Group 3A and/or Group 4A insecticides. Do not exceed the maximum Endigo ZC allowed per growing season.
- Following a treatment window of Group 3A and/or Group 4A insecticides, rotate to a treatment window of effective products with a different mode of action before making additional applications of Group 3A and/or Group 4A insecticides.
- A treatment window rotation, along with other Integrated Pest Management (IPM) practices for the crop and use area, is considered an effective strategy for preventing or delaying a pest's ability to develop resistance to these classes of chemistry.
- If resistance is suspected, do not reapply Endigo ZC or other Group 3A or Group 4A insecticides.

Other Insect Resistance Management (IRM) practices include:

- Incorporating IPM techniques into your insect control program.
- Monitoring treated insect populations for loss of field efficacy.
- Using tank-mixtures or premixes with insecticides from a different target site of action group as long as the involved products are all registered for the same crop outlet and effective rates are applied.

For additional information on Insect Resistance Management:

- Contact your local extension specialist, certified crop advisor and/or product manufacturer for additional insect resistance management recommendations.
- Visit the Insecticide Resistance Action Committee (IRAC) on the web at: http://www.irac-online.org/.

SPRAY DRIFT MANAGEMENT

MANDATORY SPRAY DRIFT MANAGEMENT

Aerial Applications:

- Do not release spray at a height greater than 10 feet above the vegetative canopy, unless a greater application height is necessary for pilot safety.
- Applicators are required to select nozzle and pressure that deliver medium or coarser droplets according to the most current version of the American Society of Agricultural & Biological Engineers Standard 641 (ASABE S641).
- Do not apply when wind speeds exceed 15 mph at the application site. If the wind speed is greater than 10 mph, the boom length must be 65% or less of the wingspan for fixed wing aircraft and 75% or less of the rotor diameter for helicopters. Otherwise, the boom length must be 75% or less of the wingspan for fixed-wing aircraft and 90% or less of the rotor diameter for helicopters.
- If the windspeed is 10 miles per hour or less, applicators must use ½ swath displacement upwind at the downwind edge of the field. When the windspeed is between 11-15 miles per hour, applicators must use ¾ swath displacement upwind at the downwind edge of the field.
- Do not apply during temperature inversions.

Airblast Applications:

- Sprays must be directed into the canopy.
- Do not apply when wind speeds exceed 15 mph at the application site.
- User must turn off outward pointing nozzles at row ends and when spraying outer row.
- Do not apply during temperature inversions.

Ground Boom Applications:

- User must only apply with the release height recommended by the manufacturer, but no more than 4 feet above the ground or crop canopy.
- Applicators are required to use a Medium or coarser droplet size according to the most current version of the American Society of Agricultural & Biological Engineers Standard 572 (ASABE S572).
- **Do not** apply when wind speeds exceed 15 mph at the application site.
- **Do not** apply during temperature inversions.

Boomless Ground Applications:

- Applicators are required to select nozzle and pressure that deliver a Medium or coarser droplet size according to the most current version of the American Society of Agricultural & Biological Engineers Standard 572 (ASABE S572) for all applications.
- **Do not** apply when wind speeds exceed 15 miles per hour at the application site.
- **Do not** apply during temperature inversions.

SPRAY DRIFT ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT.
BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

Importance of Droplet Size

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

Controlling Droplet Size – Ground Boom

- Volume - Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- Pressure - Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
- Spray Nozzle - Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

Controlling Droplet Size – Aircraft

- Adjust Nozzles - Follow nozzle manufacturers' recommendations for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.

Boom Height – Ground Boom

For ground equipment, the boom should remain level with the crop and have minimal bounce.

Release Height – Aircraft

Higher release heights increase the potential for spray drift.

Shielded Sprayers

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

Temperature and Humidity

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

Temperature Inversions

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind

conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

Wind
Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS.
Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

Handheld Technology Applications
Take precautions to minimize spray drift.

VEGETATIVE FILTER STRIPS

Construct and maintain a vegetative filter strip, according to the width specified below, of grass or other permanent vegetation between the field edge and nearby down gradient aquatic habitat (such as, but not limited to, lakes; reservoirs; rivers; streams; marshes or natural ponds; estuaries; and commercial fish farm ponds).

Only apply products containing Lambda-cyhalothrin onto fields where a maintained vegetative filter strip of at **least 25** feet exists between the field edge and where a down gradient aquatic habitat exists. This minimum required width of 25 feet may be reduced or removed under the following conditions:

- For Western irrigated agriculture, a maintained vegetative filter strip of at least 10 feet wide is required. Western irrigated agriculture is defined as irrigated farmland in the following states: WA, OR, CA, ID, NV, UT, AZ, MT, WY, CO, NM, and TX (west of I-35).
    - For Western irrigated agriculture, if a sediment control basin is present, a vegetative filter strip is not required.
- In all other areas, a vegetative filter strip with a minimum width of 25 feet is required, unless the following conditions are met. The vegetative filter strip requirement may be reduced from 25 feet to 15 feet if at least one of the following applies:
    - The area of application is considered prime farmland (as defined in 7 CFR § 657.5).
    - Conservation tillage is being implemented on the area of application. Conversation tillage is defined as any system that leaves at least 30% of the soil surface covered by residue after planting. Conservation tillage practices can include mulch-till, no-till, or strip-till.
    - A functional terrace system is maintained on the area of application.
    - Water sediment control basins for the area of application are functional and maintained.
    - The area of application is less than or equal to 10 acres.

For further guidance on vegetated filter strips, refer to the following publication for

information on constructing and maintaining effective buffers: Conservation Buffers to Reduce Pesticide Losses. Natural Resources Conservation Services. https://www.regulations.gov/document?D=EPA-HQ-OPP-2008-0331-0175

In the state of New York, a 25-ft vegetated, non-cropped buffer strip untraversed by drainage tiles must be maintained between a treated field and a coastal salt marsh or stream that drains into a coastal salt marsh, for both aerial or ground application. For aerial applications, the 25-ft vegetated non-cropped buffer strip for runoff protection would be part of the larger 150-ft- buffer strip required for spray drift.

Ground Application

- Do not apply within 25 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, streams, marshes, ponds, estuaries, and commercial fish ponds).

Ultra Low Volume (ULV) Aerial Application

- Do not apply within 450 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, streams, marshes, ponds, estuaries, and commercial fish ponds). Applications made by mosquito control districts and other public health officials are exempt from this requirement.

Non-ULV Aerial Application

- Do not apply within 150 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, streams, marshes, ponds, estuaries, and commercial fish ponds).

APPLICATION PROCEDURES

Select spray nozzles which will provide accurate and uniform spray deposition. Use spray nozzles that provide medium-sized droplets and reduce drift. To help ensure accuracy, calibrate sprayer before each use. For information on spray equipment and calibration, consult nozzle manufacturers and/or State Extension Service specialists.

Apply Endigo ZC using sufficient water volume to provide thorough and uniform coverage. In situations where a dense canopy exists and/or pest pressure is high, use greater water volumes. The use of a spray adjuvant may increase spray coverage but is not required. Do not make applications under conditions where uniform coverage cannot be obtained or where excessive spray drift may occur.

MIXING PROCEDURES

Prepare no more spray mixture than is needed for the immediate operation. Thoroughly clean spray equipment before using this product. Maintain agitation throughout the spraying operation. Flush the spray equipment thoroughly following each use and apply the rinsate to a previously treated area. Keep product container tightly closed when not in use.

Endigo ZC Alone

Add 1/2 of the required amount of water to the mix tank. With the agitator running, add the desired amount of Endigo ZC to the tank. Continue agitation while adding the remainder of the water. Begin application of the solution after Endigo ZC has completely dispersed into the mix water. Maintain agitation until all of the mixture has been applied.

Endigo ZC + Tank Mixtures

When tank-mixing with any other agricultural products, always add Endigo ZC last. Fill the tank with one half to two thirds volume of the mixing diluent. Start the agitator running before adding any tank mix partners. Make sure all other products are fully dispersed in the mixing diluent before adding the specified rate of Endigo ZC to the tank. Add the remainder of the mixing diluent volume. Agitate the mixing and spray equipment continuously. Follow the precautions and limitations of the most restricted product in the tank mixture.

Add tank mix partners in this order: products packaged in water-soluble packaging, wettable powders, wettable granules, dry flowables, liquid flowables, liquids, emulsifiable concentrates and surfactants / adjuvants. Always allow each tank mix partner to become fully dispersed before adding the next product. Provide sufficient agitation while adding the remainder of the water. Maintain agitation until all the mixture has been applied.

If using Endigo ZC in a tank mixture, observe all directions for use, crop/sites, use rates, dilution ratios, precautions, and limitations that appear on the tank mix product label. Do not exceed any label dosage rate, and follow the most restrictive label precautions and limitations. Do not mix Endigo ZC with any product that prohibits such mixing. Tank mixtures or other applications of products referenced on this label are permitted only in those states in which the referenced products are labeled.

Adjuvants

Endigo ZC is an aqueous-based formulation. Do not use any type of non-emulsifiable oils in combination with Endigo ZC. If adjuvants are used, use the following types:

- Nonionic Surfactant (NIS) containing at least 75% surface agent
- Non-phytotoxic Crop Oil Concentrate (COC), including once refined Vegetable Oil Concentrate (VOC)
- Methylated Sunflower Oils (MSO) containing a minimum of 17% emulsifier

Adjuvants other than NIS or COC may be used providing the product meets all of the following criteria:

- Contains only EPA-exempt ingredients.
- Is non-phytotoxic to the target crop.
- Is compatible in mixture. (May be established through a jar test.)
- Is supported locally for use with Endigo ZC on the target crop through proven field trials and through university and extension recommendations.

Diluents

In addition, the following may be used as diluents:

- Crop Oil Concentrate
- Methylated Sunflower Oils
- Urea-Ammonium Nitrate

Do not use the following in combination with Endigo ZC as diluents or adjuvants:

- Non-emulsifiable oils
- Diesel Fuel
- Straight Mineral Oil

Compatibility (Jar Test)

Endigo ZC is compatible with most commonly used pesticides, crop oils, adjuvants, and nutritional sprays. However, since it is not possible to test all possible mixtures, pre-test to assure the physical compatibility and lack of phytotoxic effect of any proposed mixtures with Endigo ZC. To determine the physical compatibility of Endigo ZC with other products, use a jar test, as described below.

Using a quart jar, add the proportionate amounts of the products to 1 qt. of water. Add wettable powders and water-dispersible granular products first, then liquid flowables,

and emulsifiable concentrates last. After thoroughly mixing, let stand for at least 5 minutes. If the combination remains mixed or can be remixed readily, it is physically compatible. Once compatibility has been proven, use the same procedure for adding required ingredients to the spray tank.

The crop safety of all potential tank mixes on all crops has not been tested. Before applying any tank mixture not specified on this label, confirm the safety to the target crop.

CHEMIGATION

Sprinkler Irrigation Application

Apply Endigo ZC at rates and timing described elsewhere in this label. As local specifications differ, consult your local state extension service or other local experts for specifications on adjuvant or diluent types, (see **MIXING PROCEDURES**) rates and mixing instructions. These specifications should be proven, through university and extension field trials, to be effective with Endigo ZC applied by chemigation.

Check the irrigation system to ensure uniform application of water to all areas. Thorough coverage of foliage is required for good control. Maintain good agitation in the pesticide supply tank prior to and during the entire application period.

Apply by injecting the specified rate of Endigo ZC into the irrigation system using a metering device that will introduce a constant flow and by distributing the product to the target area in 0.1–0.2 acre-inch of water. Use the least amount of water required for proper distribution and coverage. Inject the product into the main irrigation line ahead of a right angle turn in the line to ensure adequate dispersion or mixing in the irrigation water. Once the application is completed, flush the entire irrigation and injection system with clean water before stopping the system.

In addition to the above directions, if application is being made during a normal irrigation set of a stationary sprinkler, inject the specified rate of Endigo ZC for the area covered into the system only during the end of the irrigation set for sufficient time to provide adequate coverage and product distribution.

Do not apply Endigo ZC through an irrigation system connected to a public water system. 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.

Use Precautions: Sprinkler Irrigation Application

- Apply this product only through (sprinkler including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move) irrigation system(s). 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.

- 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.

- 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 back-flow.

- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

- 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.

- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

- 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.

- Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump or a Venturi injector) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

- Do not apply when wind speed favors drift beyond the area intended for treatment or non-uniform distribution of treated water.

CROP USE DIRECTIONS

Pollinator Precautions

- Endigo ZC is highly toxic to bees exposed to direct treatment or residues on blooming crops**/plants 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 **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**/plants** 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.

Pollinator Best Management Practices

Following best management practices can help reduce risk to terrestrial pollinators. Examples of best management practices include applying pesticides in the evening and at night when pollinators are not foraging and checking to confirm hive locations before spraying. For additional resources on pollinator best management practices, visit https://www.epa.gov/pollinator-protection/find-best-management-practices-protect-pollinators.

Managed pollinator protection plans are developed by states/tribes to promote communication between growers, landowners, farmers, beekeepers, pesticide users, and other pest management professionals to reduce exposure of bees to pesticides. If available, visit state plans for additional information on how to protect pollinators.

How to Report Bee Kills

It is recommended that users contact both the state lead agency and the U.S. Environmental Protection Agency to report bee kills due to pesticide application. Bee kills can be reported to EPA at beekill@epa.gov. To contact your state lead agency, see the current listing of state pesticide regulatory agencies at the National Pesticide Information Center's website: http://npic.orst.edu/reg/state_agencies.html.

Crop	Pests	Rate (fl oz/A)
Barley	Army Cutworm Cutworm species	3.5 – 4.0
	Armyworm Bird Cherry-Oat Aphid[1] Cereal Leaf Beetle English Grain Aphid[1] Fall Armyworm Flea Beetle species Grass Sawfly Grasshopper species Hessian Fly[4] Orange Blossom Wheat Midge Russian Wheat Aphid[1] Stink Bug species Yellowstriped Armyworm	3.5 – 4.5
	Chinch Bug Corn Leaf Aphid Greenbug[1,3] Mite species[2]	4.5

Use Restrictions:

- **Maximum Endigo ZC Allowed per Application**: **Do not** exceed a total of 4.5 fl oz/Acre of Endigo ZC or 0.03 lb ai of lambda-cyhalothrin-containing products or 0.06 lb ai of foliar-applied thiamethoxam-containing products per acre per application.
- **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 ai of lambda-cyhalothrin-containing products or 0.125 lb ai of foliar-applied thiamethoxam-containing products per acre per growing season.
- **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.
- **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 7 days after treatment. **Do not** feed treated straw to meat or dairy animals within 30 days after the last treatment.

[1]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.
[2]Suppression only
[3]See **Resistance Management** section.
[4]Make applications when adults emerge.

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

Crop	Pests	Rate (fl oz/A)
Head & Stem *Brassica* 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
	Aphid species Armyworm Corn Earworm Diamondback Moth[3] Fall Armyworm[1] Flea Beetle species Grasshopper species Japanese Beetle (Adult) Leafhopper species Meadow Spittlebug Plant Bug species including Lygus species[3] Spider Mite species[2] Stink Bug species Vegetable Weevil (Adult) Yellowstriped Armyworm	4.0 – 4.5
	Thrips species[2] Whitefly species[2,3]	4.5

Use Restrictions:

- **Maximum Endigo ZC Allowed per Application**: **Do not** exceed a total of 4.5 fl oz/Acre of Endigo ZC or 0.03 lb ai of lambda-cyhalothrin-containing products or 0.06 lb ai of foliar-applied thiamethoxam-containing products per acre per application.
- **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 ai of lambda-cyhalothrin-containing products or 0.172 lb ai 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 specified rate range for heavy infestations.
- **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.
- **Do not** apply as a foliar broadcast application using a mechanically pressurized handgun on Brassica (head and stem) crops.

[1]For control of first and second instar only
[2]Suppression only. For control of thrips or whiteflies tank mix with 2 – 2.5 oz/A of Actara Insecticide.
[3]See **Resistance Management** section.

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

Crop	Pests	Rate (fl oz/A)
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 (*Lygus lineolaris*)	4.5 - 5.5
	Aphid species Brown Stink Bug Red Banded Stink Bug Red Shouldered Stink Bug Western Tarnished Plant Bug (*Lygus hesperus*) Whitefly species	5.0 – 6.0

Use Restrictions:

- **Maximum Endigo ZC Allowed per Application**: **Do not** exceed a total of 6.0 fl oz/Acre of Endigo ZC or 0.04 lb ai of lambda-cyhalothrin-containing products or 0.08 lb ai of foliar-applied thiamethoxam-containing products per acre per application.
- **Maximum Endigo ZC Allowed per Growing Season**: **Do not** exceed a total of 13.5 fl oz of Endigo ZC or 0.2 lb ai of lambda-cyhalothrin-containing products or 0.125 lb ai of foliar-applied thiamethoxam-containing products per acre per growing season.
- **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 higher rates within the specified 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
- **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 2 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	Pests	Rate (fl oz/A)
Cucurbit Vegetables Chayote Chinese waxgourd Citron melon Cucumber Edible gourd Gherkin *Momordica* species Muskmelon Pumpkin Squash: summer and winter Watermelon	Armyworm species[1] 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[1] Melonworm Pickleworm Plant Bug species Rindworm species complex Saltmarsh Caterpillar Squash Beetle Squash Bug species Squash Vine Borer species Stink Bug species Thrips species[1,2] Tobacco Budworm[1] Webworm species	4.0 – 4.5
	Aphid species Leafminer species[1,3] Whitefly species[3] Spider Mite species[3]	4.5

Use Restrictions:

- **Maximum Endigo ZC Allowed per Application**: **Do not** exceed a total of 4.5 fl oz/Acre of Endigo ZC or 0.03 lb ai of lambda-cyhalothrin-containing products or 0.06 lb ai of foliar-applied thiamethoxam-containing products per acre per application.
- **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 ai of lambda-cyhalothrin-containing products or 0.172 lb ai 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 specified 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.

- **Do not** apply as a foliar broadcast application using a mechanically pressurized handgun on Cucurbit Vegetables.

[1]See **Resistance Management** section.
[2]Does not include Western Flower Thrips
[3]Suppression only

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

Crop	Pests	Rate (fl oz/A)
Fruiting Vegetables 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[4] Fall Armyworm[1] Flea Beetle species Grasshopper species Hornworm species Japanese Beetle (Adult) Leafhopper species Meadow Spittlebug Plant Bug species Southern Armyworm[1] Stalk Borer[4] Stink Bug species Tomato Fruitworm Vegetable Weevil (Adult) Yellowstriped Armyworm[1]	4.0 – 4.5
	Leafminer species[2] Pepper Weevil[2] Spider Mite species[2] Thrips species[5] Tobacco Budworm[3] Tomato Pinworm[2,3] Tomato Psyllid[2,3] Whitefly species[2]	4.5

Use Restrictions:

- **Maximum Endigo ZC Allowed per Application**: **Do not** exceed a total of 4.5 fl oz/Acre of Endigo ZC or 0.03 lb ai of lambda-cyhalothrin-containing products or 0.06 lb ai of foliar-applied thiamethoxam-containing products per acre per application.
- **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 ai of lambda-cyhalothrin-containing products or 0.172 lb ai 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 specified 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.
- **Do not** apply as a foliar broadcast application using a mechanically pressurized handgun on Fruiting Vegetables.

[1]For control of first and second instar only
[2]Suppression only. For control, tank-mix with 2.0 – 2.5 oz/A of Actara Insecticide.

[3]See **Resistance Management** section.
[4]For control before the larva bores into the plant stalk or fruit
[5]Does not include Western Flower Thrips

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

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

Use Restrictions:

- **Maximum Endigo ZC Allowed per Application**: **Do not** exceed a total of 4.5 fl oz/Acre of Endigo ZC or 0.03 lb ai of lambda-cyhalothrin-containing products or 0.06 lb ai of foliar-applied thiamethoxam-containing products per acre per application.
- **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 ai of lambda-cyhalothrin-containing products or 0.172 lb ai 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 specified 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.
- **Do not** apply as a foliar broadcast application using a mechanically pressurized handgun on Lettuce (head and leaf).

[1]For control of first and second instar only
[2]Suppression only. For whitefly control, tank-mix with 2.0 – 2.5 oz/A of Actara Insecticide.
[3]See **Resistance Management** section.

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

Crop	Pests	Rate (fl oz/A)
Pome Fruits Apple Crabapple Loquat Mayhaw Oriental Pear Pear Quince	Aphid species[1] 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[1] Omnivorous Leafroller Orange Tortrix Oriental Fruit Moth Pear Psylla[1] Sawfly species Periodical Cicada Plant Bug species Plum Curculio[1] 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	5.0 – 6.0

Use Restrictions:

- **Maximum Endigo ZC Allowed per Application**: **Do not** exceed a total of 6.0 fl oz/Acre of Endigo ZC or 0.04 lb ai of lambda-cyhalothrin-containing products or 0.08 lb ai of foliar-applied thiamethoxam-containing products per acre per application.
- **Maximum Endigo ZC Allowed per Growing Season: Do not** exceed a total of 28.0 fl oz/Acre of Endigo ZC or 0.2 lb ai lambda-cyhalothrin-containing products or 0.258 lb ai of thiamethoxam-containing products per acre per growing season. **Do not** apply more than 0.16 lb ai 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 ai/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 specified rate range for heavy infestations.
    - For scales, time the applications to coincide with the crawler stage.
    - 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.
- **Do not** apply as a foliar broadcast application using a mechanically pressurized handgun on orchards.
- **Do not** apply as a soil, drench, or ground-directed application using a mechanically pressurized handgun on orchards.

[1]Suppression only. For control, tank-mix with 2.0 oz/A of Actara Insecticide.

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

Crop	Pests	Rate (fl oz/A)
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[4] Threecornered Alfalfa Hopper Thrips species[5] Velvetbean Caterpillar Woollybear Caterpillar	3.5 – 4.0
	Armyworm[1] Bean Leaf Beetle Blister Beetle species Brown Marmorated Stink Bug European Corn Borer Fall Armyworm[1] Grasshopper species Green Stink Bug Japanese Beetle (Adult) Plant Bug species Silverspotted Skipper Southern Green Stink Bug Stink Bug species Tobacco Budworm[3] Webworm species Yellowstriped Armyworm[1]	4.0 – 4.5
	Brown Stink Bug Lesser Cornstalk Borer[2] Red Banded Stink Bug Spider Mite species[2]	4.5

Use Restrictions:

- **Maximum Endigo ZC Allowed per Application**: **Do not** exceed a total of 4.5 fl oz/Acre of Endigo ZC or 0.03 lb ai of lambda-cyhalothrin-containing products or 0.06 lb ai of foliar-applied thiamethoxam-containing products per acre per application.
- **Maximum Endigo allowed per growing season**: **Do not** exceed a total of 9.0 fl oz of Endigo ZC or 0.06 lb ai of lambda-cyhalothrin-containing products or 0.125 lb ai of foliar-applied 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 specified rate range for heavy infestations.
- **Pre-Harvest Interval (PHI):** 30 Days
- **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 2 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.
- **Do not** apply as a foliar broadcast application using a mechanically pressurized handgun on Soybeans.

[1] Use the higher rates within the listed rate range for large larvae.
[2] Suppression only
[3] See **Resistance Management** section.
[4] Use lower rates for early season applications and/or lighter populations.
[5] Does not include Western Flower Thrips

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

Crop	Pests	Rate (fl oz/A)
Stone Fruit 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
	Apple Maggot (adult)[1] Cherry Fruit Fly species (adult)[1] Plum Curculio[1]	5.5 – 6.0

Use Restrictions:

- **Maximum Endigo ZC Allowed per Application**: **Do not** exceed a total of 6.0 fl oz/Acre of Endigo ZC or 0.04 lb ai of lambda-cyhalothrin-containing products or 0.08 lb ai of foliar-applied thiamethoxam-containing products per acre per application.
- **Maximum Endigo ZC Allowed per Growing Season: Do not** exceed a total of 19.0 fl oz/Acre of Endigo ZC or 0.2 lb ai lambda-cyhalothrin-containing products or 0.172 lb ai of thiamethoxam-containing products per acre per growing season.
    - **Do not** apply more than 0.16 lb ai 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 specified 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.
- **Do not** apply as a foliar broadcast application using a mechanically pressurized handgun on orchards.
- **Do not** apply as a soil, drench, or ground-directed application using a mechanically pressurized handgun on orchards.

[1]Suppression only. For control, tank-mix with 2.0 oz/A of Actara Insecticide.

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

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

Use Restrictions:

- **Maximum Endigo ZC Allowed per Application**: **Do not** exceed a total of 4.5 fl oz/Acre of Endigo ZC or 0.03 lb ai of lambda-cyhalothrin-containing products or 0.06 lb ai of foliar-applied thiamethoxam-containing products per acre per application.
- **Maximum Endigo ZC Allowed per Growing Season: Do not** exceed a total of 4.5 fl oz/Acre of Endigo ZC or 0.09 lb ai lambda-cyhalothrin-containing products or 0.047 lb ai of foliar-applied thiamethoxam-containing products per acre per growing season.
- **Application Timing:** Apply before pests reach damaging levels. Apply higher rates within the specified 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 gallons of water per acre.
- **Do not** apply as a foliar broadcast application using a mechanically pressurized handgun on Tobacco.

[1]For control of first and second instars only
[2]Suppression only
[3]See **Resistance Management** section.

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

Crop	Pests	Rate (fl oz/A)
Tree Nuts 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[1] Stink Bug species Walnut Aphid Walnut Husk Fly species (Adult)	5.0 – 6.0
Pecan	Aphid species Hickory Shuckworm Pecan Casebearer Pecan Phylloxera Pecan Spittlebug Pecan Weevil Stink Bug species	5.0 – 6.0
	Black Pecan Aphid	6.0

Use Restrictions:

- **Maximum Endigo ZC Allowed per Application**: **Do not** exceed a total of 6.0 fl oz/Acre of Endigo ZC or 0.04 lb ai of lambda-cyhalothrin-containing products or 0.08 lb ai of foliar-applied thiamethoxam-containing products per acre per application.
- **Maximum Endigo ZC Allowed per Growing Season**: **Do not** exceed a total of 13.5 fl oz of Endigo ZC or 0.16 lb ai (or 0.12 lb ai post-bloom) of lambda-cyhalothrin-containing products or 0.125 lb ai of thiamethoxam-containing products per acre per growing season.
- **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 specified 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
- **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 or 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.
- **Do not** apply as a foliar broadcast application using a mechanically pressurized handgun on orchards.
- **Do not** apply as a soil, drench, or ground-directed application using a mechanically pressurized handgun on orchards.
- **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.

[1]Use 6.0 fl oz for *Lygus hesperus.*

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

Crop	Pests	Rate (fl oz/A)
Tuberous and Corm Vegetables Arracacha Arrowroot Canna Cassava, Bitter and Sweet Chayote (root) Chinese artichoke Chufa Dasheen Ginger Jerusalem artichoke Leren Potato Sweet potato Tanier Turmeric Yam bean Yams	Colorado Potato Beetle[1] Cutworm species Flea Beetle species (adults) Leafhopper species Saltmarsh Caterpillar Sweet Potato Hornworm Woolybear Caterpillar species	3.5 – 4.5
	Armyworm species[1] Blister Beetle species Corn Earworm Cricket species Cucumber Beetle species (adults) European Corn Borer Grasshopper species Looper species[1] Lygus Bug species[1] Plant Bug species Potato Psyllid Potato Tuberworm Stink Bug species Sweet Potato Leaf Beetle (adults) Sweet Potato Vine Borer Thrips species[1,2] Tortoise Beetle species Webworm species Weevil species (adults)	4.0 – 4.5
	Aphid species Leafminer species[1,3] Spider Mite species[3] Whitefly species	4.5

Use Restrictions:

- **Maximum Endigo ZC Allowed per Application**: **Do not** exceed a total of 4.5 fl oz/Acre of Endigo ZC or 0.03 lb ai of lambda-cyhalothrin-containing products or 0.06 lb ai of foliar-applied thiamethoxam-containing products per acre per application.
- **Maximum Endigo ZC Allowed per Growing Season**: **Do not** exceed a total of 10.0 fl oz of Endigo ZC or 0.12 lb ai of lambda-cyhalothrin-containing products or 0.094 lb ai of foliar-applied 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. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds. Apply higher rates within the specified rate range for heavy infestations.
- Insects that bore or tunnel into leaves, vines, stems, tubers or corms 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):** 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 10 GPA for ground applications or 2 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 the higher rate within the listed rate range for longer residual.

- **Do not** apply as a foliar broadcast application using a mechanically pressurized handgun on Tuberous and Corm Vegetables.

[1] See **Resistance Management** section.
[2] Does not include Western Flower Thrips
[3] Suppression only

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

ROTATIONAL RESTRICTIONS

Treated areas may be replanted immediately following harvest, or as soon as practical following the last application with: alfalfa, barley, *Brassica*, (cole) leafy and head and stem vegetables, canola, cotton, corn, cucurbit vegetables, dry bulb onions, fruiting vegetables, leafy vegetables, legume vegetables, lettuce (head and stem), mint (peppermint and spearmint), oil seed crops (black mustard seed, borage seed, crambe seed, field mustard seed, flax seed, Indian mustard seed, Indian rapeseed seed, rapeseed seed, and safflower seed), peanuts, rice, root vegetables, sorghum, soybean, strawberry, sunflower, tobacco, tuberous and corm vegetables, and wheat. Any cover crop planted for erosion control or soil improvement may be planted as soon as practical following the last application. However, the cover crop may not be grazed or harvested for food or feed. For all other crops, a 120-day plant-back interval must be observed.

STORAGE AND DISPOSAL

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

Pesticide Storage

Store in original containers only. Keep container closed when not in use. Do not store near food or feed. In case of spill or leak on floor or paved surfaces, soak up with sand, earth, or synthetic absorbent. Remove to chemical waste area. **DO NOT ALLOW PRODUCT TO FREEZE.**

Pesticide Disposal

Pesticide wastes may be hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

Container Handling [(less than or equal to 5 gallons)]

Non-refillable 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 mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or mix tank or store rinsate for later use and 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, or by other procedures allowed by state and local authorities.

Container Handling [(greater than 5 gallons)]
Refillable container. Refill this container with pesticide only. Do not reuse 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 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, or by other procedures allowed by state and local authorities.

CONTAINER IS NOT SAFE FOR FOOD, FEED, OR DRINKING WATER!

For non-emergency (e.g., current product information), call
Syngenta Crop Protection at 1-866-796-4368.

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

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