67760-67

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

Cheminova, Inc.
Oak Hill Park
1700 Route 23, Suite 300
Wayne, New Jersey 07470

SEP 2 3 2008

Dear Jennifer DeCarlo:

Subject: Updated Spray Drift Language for Pyrethroid Agricultural Use Product as per EPA letter dated February 21, 2008

Dear Jennifer DeCarlo:

The Agency is in receipt of your Applications for Pesticide Notification dated July 22, 2008 for the following products:
Proaxis CHA (EPA Reg. No. 67760-67)
Proaxis EX (EPA Reg. No. 62719-522)
Proaxis Insecticide (EPA Reg. No. 74921-2)
Proaxis Insecticide (EPA Reg. No. 74921-3)

Registration Division (RD) has conducted a review of this request for it applicability under PRN 98-10 and finds that the action(s) requested fall within the scope of PRN 98-10. The labels submitted with the applications has been stamped "Notification" and will be placed in our records.

Note under Buffer Zones the correct webmail address is: www.in.nrcs.usda.gov/technical /agronomy/newconbuf.pdf. Also note "streams" should read "permanent streams and "ponds" to read "natural ponds".

If you have any questions, please call me at (703) 305-6100.

Sincerely,

Regina Fausti-Smith for

George T. LaRocca
Product Manager 13
Insecticide Branch
Registration Division (7505P)

Enclosure

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Please read instructions on reverse before completing form. Form Approved, OMB No. 2070-0060, Approval expires 05-31-98

EPA United States Environmental Protection Agency Washington, DC 20460

☐ Registration ☒ Amendment ☐ Other

OPP Identifier Number

Application for Pesticide - Section 1

1. Company/Product Number	2. EPA Product Manager	3. Proposed Classification
67760-67	**George LaRocca**	☒ None ☐ Restricted
4. Company/Product (Name) **Proaxis CHA**	PM# **13**	

5. Name and Address of Applicant *(Include ZIP Code)*
Cheminova Inc.
1700 Route 23, Suite 300
Wayne, NJ 07470
☐ *Check if this is a new address*

6. **Expedited Review**. In accordance with FIFRA Section 3(c)(3)(b)(I), my product is similar or identical in composition and labeling to:
EPA Reg. No. _____
Product Name _____

NOTIFICATION
SEP 23 2008

Section – II

☒ Amendment - Explain below.
☐ Resubmission in response to Agency letter dated _____
☐ Notification - Explain below.
☐ Final printed labels in response to Agency letter dated _____
☐ "Me Too" Application
☐ Other - Explain below

Explanation: Use additional page(s) if necessary. (For Section I and Section II.)

***Application for Label Amendment**
***Changes per Letter dated February 21, 2008 for Updated Spray Drift Language for Pyrethroid Products**
***Contact: Jennifer L. DeCarlo: jennifer.decarlo@cheminova.com or fax: 973-305-1382**

Section – III

1. Material This Product Will Be Packaged In:

Child-Resistant Packaging	Unit Packaging	Water Soluble Packaging	2. Type of Container
☐ Yes* ☒ No **Certification must be submitted*	☐ Yes ☒ No	☐ Yes ☒ No	☐ Metal ☐ Plastic ☐ Glass ☐ Paper ☐ Other (Specify)
	If "Yes" Unit Packaging wgt. / No. per container	If "Yes" Package wgt. / No. per container	

3. Location of Net Contents Information	4. Size(s) Retail Container	5. Location of Label Directions
☒ Label ☒ Container	2.5 gallon - bulk	☒ On Label ☐ On labeling accompanying product

6. Manner in Which Label is Affixed to Product ☒ Lithograph ☒ Paper glued ☒ Stenciled ☐ Other _____

Section – IV

1. Contact Point *(Complete items directly below for identification of individual to be contacted, if necessary, to process this application)*

Name	Title	Telephone No. (Include Area Code)
Jennifer L. DeCarlo	**Regulatory Affairs Manager**	**973-305-6600, X 225**

Certification

I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statements may be punishable by fine or imprisonment or both under applicable law.

2. Signature	3. Title	6. Date Application Received
Jennifer L. DeCarlo	**Regulatory Affairs Manager**	(Stamped)
4. Typed Name **Jennifer L. DeCarlo**	5. Date **August 26, 2008**	

EPA Form 8570-1 (Rev. 8-94) Previous editions are obsolete

White- EPA File Copy (original) Yellow- Applicant Copy

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CHEMINOVA

Cheminova, Inc.
Oak Hill Park
1700 Route 23, Suite 300
Wayne, New Jersey 07470

Phone: 973-305-6600
Fax: 973-305-1382
Customer service:
1-800-548-6113
Order Desk:
1-888-548-6112

August 26, 2008

Mr. George LaRocca, Product Manager, Team 13
Document Processing Desk (AMEND)
Office of Pesticide Programs
Document Processing Room S-4900
One Potomac Yard (South Building)
2777 South Crystal Drive
Arlington, VA 22202

Subject: **Proaxis CHA EPA Reg. No. 67760-67**
Proaxis EX EPA Reg. No. 62719-522
Proaxis Insecticide EPA Reg. No. 74921-3
Prolex Insecticide EPA Reg. No. 74921-2
Label Amendment

Dear Mr. LaRocca,

In response to EPA's letter that was issued on February 21, 2008, we are submitting the enclosed amendments for Proaxis CHA (EPA Reg. No. 67760-67), Proaxis EX (EPA Reg. No. 62719-522, Proaxis Insecticide (EPA Reg. No. 74921-3) and Prolex Insecticide (EPA Reg. No. 74921-2) to include the changes outlined in Attachment 2 for revised spray drift language for pyrethroid labels.

Please find enclosed the following in support of this amendment:

- Application for amendment for each product
- One copy of revised labeling highlighting the requested changes for each product
- Five copies of revised labeling for each product

If you have any questions or require any additional information, please contact me at 973-305-6600 x225 or by e-mail at jennifer.decarlo@cheminova.com.

Sincerely,

Jennifer L. DeCarlo
Regulatory Affairs Manager, North America

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.

Proaxis™ CHA

Insecticide

For control of insect pests in alfalfa, canola, cole crops, corn, cotton, fruiting vegetables, legume vegetables, lettuce, onion, peanut, pome fruits, rice, sorghum (grain), soybean, stone fruits, sugarcane, sunflower, tobacco, tree nuts including pecans, wheat, triticale, conifer and deciduous trees (plantations, nurseries and seed orchards) and non-cropland areas adjacent to crops.

Active Ingredient:	
Gamma-cyhalothrin: Cyclopropanecarboxylic acid, 3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethyl,cyano(3-phenoxyphenyl) methyl ester	5.9%
Inert Ingredients	94.1%
Total	100.0%

Contains 0.5 pound of active ingredient per gallon.
Contains petroleum distillate.

Keep Out Of Reach Of Children

CAUTION PRECAUCION

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.)

IN CASE OF A MEDICAL EMERGENCY INVOLVING THIS PRODUCT, CALL TOLL FREE, DAY OR NIGHT, 1-866-303-6950.

Refer to inside label booklet for additional Precautionary Statements and Directions for Use including Storage and Disposal.

Notice: Read the entire label. Use only according to label directions. **Before using this product, read Disclaimer at end of label booklet. If terms are unacceptable, return at once unopened.**

Agricultural Chemical: Do Not Ship or Store with Food, Feeds, Drugs, or Clothing.

Shake Well Before Using

EPA Reg. No. 67760-67

EPA Est. _____

Cheminova Inc.
1700 Route 23, Suite 300
Wayne, NJ 07470

Net Contents ___ gal

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(Page 1 through end):

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Precautionary Statements
Hazards to Humans and Domestic Animals
CAUTION
Causes moderate eye irritation. Harmful if swallowed. Prolonged or frequently repeated skin contact may cause allergic reaction in some individuals. Avoid contact with eyes, skin, or clothing.

Personal Protective Equipment (PPE)
Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for Category F or G on an EPA chemical resistance category selection chart.

Applicators and other handlers must wear:
- Long-sleeved shirt and long pants
- Chemical-resistant gloves, such as barrier laminate or Viton ≥14 mils
- Shoes plus socks
- Protective eyewear

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 Statements
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:
- Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum or using tobacco.
- Remove and wash contaminated clothing before reuse.

First Aid
If swallowed: Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give **any** liquid to the person. Do not give anything by mouth to an unconscious person.
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.

Note to Physician: Induced vomiting as first aid for this substance may result in increased risk of chemical pneumonia or pulmonary edema caused by aspiration of the hydrocarbon solvent. Vomiting should be induced only under professional supervision.

Skin exposure may also result in a sensation described as a tingling, itching, burning, or prickly feeling. Onset may occur immediately to 4 hours after exposure and may last 2 to 30 hours, without damage. Wash exposed areas once with soap and water. Relief from the skin sensation may be obtained by applying an oil-based cream.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-866-303-6950 for emergency medical treatment information.

Environmental Hazards
This pesticide is extremely toxic to fish and aquatic organisms and toxic to wildlife. 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 neighboring areas. Do not contaminate water when disposing of equipment wash waters.

This product is highly toxic to bees exposed to direct treatment or residues 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.

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

DIRECTIONS FOR USE

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

Do not apply this product 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.

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 (REI). 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 into treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls
- Chemical-resistant gloves, such as barrier laminate or Viton ≥14 mils
- Shoes plus socks

Storage and Disposal

Prohibitions: Do not contaminate water, food, or feed by storage and 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 are acutely 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 Disposal: Triple rinse (or equivalent); then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

GENERAL INFORMATION

Proaxis™ CHA insecticide is a microencapsulated synthetic pyrethroid insecticide that controls insects by contact and ingestion. Proaxis CHA is intended for control of insect pests in alfalfa, canola, cole crops, corn, cotton, fruiting vegetables, legume vegetables, lettuce, onion, peanut, pome fruits, rice, grain sorghum, soybean, stone fruits, sugarcane, sunflower, tobacco, tree nuts including pecans, wheat, triticale, conifer and deciduous trees (plantations, nurseries and seed orchards) and non-cropland areas adjacent to crops.

Initial and residual insect control is contingent upon thorough crop coverage. Apply with ground or air equipment, using sufficient water to obtain full coverage of foliage. Apply in a minimum of 2 gallons per acre by air or 10 gallons per acre by ground unless otherwise specified in this label. When foliage is dense or pest pressure is high (heavier insect or egg pressure, larger larval stages), use of higher application volumes and/or higher label use rates may improve initial and residual control.

For cutworm control, Proaxis CHA may be applied before, during, or after planting. For soil incorporated applications, use higher rates in rate range for improved control.

GENERAL USE PRECAUTIONS AND RESTRICTIONS

Resistance Management
Some insects are known to develop resistance to products used repeatedly for control. Because the development of resistance cannot be predicted, the use of this product should conform to resistance management strategies established for the use area. Consult your local or State agricultural authorities for details.

If resistance to this product develops in your area, this product, or other products with a similar mode of action, may not provide adequate control. If poor performance cannot be attributed to improper application or extreme weather conditions, a resistant strain of insect may be present. If you experience difficulty with control and resistance is a reasonable cause, immediately consult your local company representative or agricultural advisor for the best alternative method of control for your area.

Buffer Zones

Vegetative Buffer Strip
Construct and maintain a minimum 10-foot-wide vegetative filter strip of grass or other permanent vegetation between the field edge and down gradient aquatic habitat (such as, but not limited to, lakes; reservoirs; rivers; permanent streams; marshes or natural ponds; estuaries; and commercial fish farm ponds).

Only apply products containing gamma-cyhalothrin onto fields where a maintained vegetative buffer strip of at least 10 feet exists between the field and down gradient aquatic habitat.

For guidance, refer to the following publication for information on constructing and maintaining effective buffers:
Conservation Buffers to Reduce Pesticide Losses. Natural Resources Conservation Services. USDA, NRCS. 2000. Forth Worth, Texas. 21pp.
http://www.in.nrcs.usda.gov/technical/agronomy/newconbuf.pdf

Buffer Zone for Ground Application (groundboom, overhead chemigation, or airblast)
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).

Buffer Zone for 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).

Buffer Zone for 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).

Spray Drift Requirements
Observe the following precautions when spraying in the vicinity of aquatic areas such as lakes; reservoirs; rivers; permanent streams, marshes, or natural ponds; estuaries; and commercial fish farm ponds.

Wind Direction and Speed

Only apply this product if the wind direction favors on-target deposition.

Do not apply when the wind velocity exceeds 15 mph.

Temperature Inversion

Do not make aerial or ground applications into temperature inversions.

Inversions are characterized by stable air and increasing temperatures with height above the ground. Mist or fog may indicate the presence of an inversion in humid areas. The applicator may detect the presence of an inversion by producing smoke and observing a smoke layer near the ground surface.

Droplet Size

Use only Medium or coarser spray nozzles (for ground and non-ULV aerial application) according to ASAE (S572) definition for standard nozzles. In conditions of low humidity and high temperatures, applicators should use a coarser droplet size.

Additional Requirements for Ground Applications

Wind speed must be measured adjacent to the application site on the upwind side, immediately prior to application.

For ground boom applications, apply using a nozzle height of no more than 4 feet above the ground or crop canopy.

For airblast applications, turn off outward pointing nozzles at row ends and when spraying the outer two rows. To minimize spray loss over the top in orchard applications, spray must be directed into the canopy.

Additional Requirements for Aerial Applications

The spray boom should be mounted on the aircraft as to minimize drift caused by wingtip or rotor vortices. The minimum practical boom length should be used and must not exceed 75% of the wing span or 80% rotor diameter.

Flight speed and nozzle orientation must be considered in determining droplet size.

Spray must be released at the lowest height consistent with pest control and flight safety. Do not release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety.

When applications are made with a cross-wind, the swath will be displaced downwind. The applicator must compensate for this displacement at the downwind edge of the application area by adjusting the path of the aircraft upwind.

Shielded Sprayers: Shielding the boom or individual nozzles can reduce the effects of wind. However, it is the responsibility of the applicator to verify that the shields are preventing drift and not interfering with uniform deposition of the product.

Air Assisted (Air Blast) Field Crop Sprayers: It is the responsibility of the applicator to determine that a sprayer is suitable for the intended application, is configured properly, and that drift is not occurring.

Note: Air assisted field sprayers can affect product performance by affecting spray coverage and canopy penetration. Consult the application equipment manufacturer and/or State Extension Service.

Air Assisted (Air Blast) Orchard / Tree Nursery: In addition to the general drift management principles already described, the following specific practices will further reduce the potential for drift:

- Adjust deflectors and aiming devices so that spray is only directed into the canopy.
- Spray must be shut off during row turns.
- Block off upward pointed nozzles when there is no over-hanging canopy.
- Use only enough air volume to penetrate the canopy and provide good coverage.
- Do not allow spray to go beyond the edge of the cultivated area. Spray the outside downwind row(s) only from outside the planting.

Tank-mix Application
When tank mixing with any other agricultural products, always add Proaxis CHA insecticide last. Fill the tank with one-half to two-thirds volume of the mixing diluent. Make sure all other products are fully dispersed in the mixing diluent before adding the recommended rate of Proaxis CHA insecticide to the tank. Add the remainder of the mixing diluent volume. For best results, it is recommended that mixing and spray equipment have continuous agitation. Follow the precautions and limitations of the most restricted product in the tank mixture.

While Proaxis CHA insecticide has good flexibility for tank mixing with other agricultural products, a jar test for physical compatibility is recommended for untried mixtures using proper ratios and mixing sequences of all ingredients to be included in the mixture.

Proaxis CHA insecticide is an aqueous-based formulation. It is recommended that no type of non-emulsifiable oils be used in combination with Proaxis CHA insecticide. If adjuvants are used, use only: Nonionic Surfactant (NIS) containing at least 75% surface agent or Non-phytotoxic Crop Oil Concentrate (COC), including once-refined Vegetable Oil Concentrate (VOC), or Methylated Sunflower Oils (MSO) containing a minimum of 17% emulsifier.

Adjuvants other than NIS or COC may be used providing the product meets the following criteria:
1. Contains only EPA exempt ingredients.
2. Is non-phytotoxic to the target crop.
3. Is compatible in mixture. (May be established through a jar test.)
4. Is supported locally for use with Proaxis CHA insecticide on the target crop through proven field trials and through university and extension recommendations.

In addition, the following may be used as diluents:
- Crop Oil Concentrate
- Methylated Sunflower Oils
- Urea-Ammonium Nitrate

It is recommended that the following **not** be used in combination with Proaxis CHA insecticide as diluents or adjuvants:
- Non-emulsifiable oils
- Diesel Fuel
- Straight Mineral Oil

Chemigation
Apply Proaxis CHA insecticide at rates and timing described elsewhere in this label. As local recommendations differ, consult your local State Extension Service or other local experts for

recommendations on adjuvant or diluent types (see **"Tank-mix Application"**), rates, and mixing instructions. These recommendations should be proven, through university and extension field trials, to be effective with Proaxis CHA insecticide applied by chemigation.

Sprinkler Irrigation Application
Check the irrigation system to ensure uniform application of water to all areas. Thorough coverage of foliage is required for good control. Good agitation in the pesticide supply tank should be maintained prior to and during the entire application period.

Apply by injecting the recommended rate of Proaxis CHA insecticide 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 to 0.2 acre-inch of water. In general, use the least amount of water required for proper distribution and coverage. It is recommended that the product be injected into the center of the main irrigation line ahead of at least one 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 recommendations, if application is being made during a normal irrigation set of a stationary sprinkler, the recommended rate of Proaxis CHA insecticide for the area covered should be injected into the system only during the end of the irrigation set for sufficient time to provide adequate coverage and product distribution.

It is **not** recommended that Proaxis CHA insecticide be applied 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
1. Apply this product only through sprinkler irrigation systems including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move. Do not apply this product through any other type of irrigation system.
2. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.
3. If you have any questions about calibration, you should contact State Extension Service specialists, equipment manufacturers, or other experts.
4. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.
5. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.
6. The system must contain a functional check valve, vacuum relief valve, and low-pressure drain appropriately located on the irrigation pipeline to prevent water-source contamination from backflow.
7. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back through the injection pump.
8. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve or interlock 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.
9. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
10. The irrigation line or water pump must include a functional pressure switch or interlock that will stop the water pump motor or injector when the water pressure decreases to the point where pesticide distribution is adversely affected.
11. Systems must use a chemical injector or metering pump, such as a positive displacement injection pump (e.g., diaphragm pump), effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

12. Any alternatives to the above-required safety devices must conform to the list of EPA- or state agency-approved alternative devices.
13. Do not apply when wind speed favors drift beyond the area intended for treatment or nonuniform distribution of treated water.
14. Do not apply through chemigation systems connected to public water systems.

CROP-SPECIFIC USE DIRECTIONS

Rate Conversion Chart			
lb ai/acre	**fl oz/acre**	**pints/acre**	**treated acres/gallon**
0.0075	1.92	0.12	66
0.01	2.56	0.16	50
0.0125	3.20	0.20	40
0.015	3.84	0.24	33
0.02	5.12	0.32	25

Maximum Seasonal Use Rates for Gamma and Lambda Cyhalothrin on Labeled Crops:

Crop	Maximum Rate for Either Product Used Alone (lb/ai/acre) †	
	Gamma-cyhalothrin (e.g., Proaxis EX)	**Lambda-cyhalothrin ††**
Alfalfa	0.06	0.12
Canola	0.045	0.09
Cole Crops	0.12	0.24
Corn	0.06	0.12
Sweet Corn	0.24	0.48
Cotton	0.1	0.2
Fruiting Vegetables (except cucurbits)	0.18	0.36
Legume Vegetables	0.06	0.12
Lettuce (head and leaf)	0.15	0.3
Onion (bulb) and Garlic	0.12	0.24
Peanut	0.06	0.12
Pome Fruits	0.1	0.2
Rice	0.06	0.12
Sorghum (grain)	0.04	0.08
Soybean	0.03	0.06
Stone Fruits	0.1	0.2
Sugarcane	0.08	0.16
Sunflower	0.06	0.12
Tobacco (Air Dried)	0.045	0.09
Tree Nuts including pecans	0.08	0.16
Wheat, Wheat Hay and Triticale	0.03	0.06
Conifer and Deciduous Trees (plantations, nurseries and seed	0.12	0.24

orchards)		
Non-cropland areas adjacent to crops	0.1	0.2

† **Note:** If both gamma-cyhalothrin and lambda-cyhalothrin are used on a crop during the same crop growing season, the amounts of each that can be used can be calculated as shown in the following examples:

Example 1: If the maximum use rate for lambda-cyhalothrin = 0.12 lb ai/acre/year and 0.06 lb ai has been applied, (0.12 – 0.06) ÷ 2 = 0.03 lb ai of gamma-cyhalothrin could be applied during the remainder of the crop use season.

Example 2: If the maximum use rate for gamma-cyhalothrin = 0.06 lb ai/acre/year and 0.03 lb ai has been applied, (0.06 – 0.03) X 2 = 0.06 lb ai of lambda-cyhalothrin could be applied during the remainder of the crop use season.

†† Includes any lambda-cyhalothrin product approved for crop uses.

SPECIFIC DIRECTIONS FOR USE FOR LABELED USES OF PROAXIS CHA ARE PROVIDED IN THE FOLLOWING TABLES (CROPS AND/OR USE SITES ARE LISTED ALPHABETICALLY):

Alfalfa, Including Alfalfa grown for seed		
Note: Numbers in parenthesis refer to footnotes below table.		
	Rate	
Target Pests	**(lb ai/acre)**	**(fl oz/acre)**
alfalfa caterpillar cutworm spp. green cloverworm leafhopper spp. looper spp. threecornered alfalfa hopper velvetbean caterpillar webworm spp.	0.0075-0.0125	1.92 - 3.20
alfalfa seed chalcid (adult) alfalfa weevil armyworm bean leaf beetle (adult) blister beetle spp. blue alfalfa aphid clover leaf weevil spp. clover root borer (adult) clover root curculio spp. (adult) clover stem borer (adult) corn earworm cowpea aphid cowpea curculio (adult) cowpea weevil (adult) cucumber beetle spp. (adult) Egyptian alfalfa weevil fall armyworm (1) grape colaspis (adult)	0.01 - 0.015	2.56 - 3.84
grasshopper spp. green June beetle (adult) green peach aphid (3) Japanese beetle (adult) meadow spittlebug Mexican bean beetle pea aphid pea weevil (adult) plant bug spp., including Lygus spp. (3) spotted alfalfa aphid stink bug spp. sweet clover weevil (adult) thrips spp. western yellowstriped armyworm whitefringed beetle spp. (adult) yellowstriped armyworm		

beet armyworm (1) (3) blotch leafminer (3) spider mites (2)	0.015	3.84

[1] For control of first and second instars only.
[2] Suppression only.
[3] See resistance statement under "General Use Precautions and Restrictions."

Remarks:

- Apply only to fields planted to pure stands of alfalfa.
- Apply as required by scouting. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.
- Apply with ground or air equipment, using sufficient water to obtain full coverage of foliage. Apply in a minimum of 2 gallons per acre by air or 10 gallons per acre by ground. When foliage is dense and/or pest populations are high, 5 to 10 gallons per acre by air or 20 gallons per acre by ground and higher label use rates are recommended. Use higher rates in recommended use rate range for increased residual control.
- Avoid application when bees are actively foraging by applying during the early morning or during the evening hours. Be aware of bee hazard resulting from a cool evening and/or morning dew. It may be advisable to remove bee shelters during and for 2 to 3 days following application. Avoid direct application to bee shelters.
- Do not apply more than 0.015 pound active ingredient (0.24 pint) per acre per cutting. Do not apply more than 0.06 pound active ingredient (0.96 pint) per acre per season.
- **Preharvest Interval:** Do not apply within 1 day of harvest for forage or within 7 days of harvest for hay.

Canola		
	Rate	
Target Pests	**(lb ai/acre)**	**(fl oz/acre)**
armyworm spp. cabbage seedpod weevil cutworm spp. diamondback moth flea beetle grasshoppers lygus bug	0.0075 - 0.015	1.92- 3.84
cabbage aphid	0.015	3.84

Remarks:

- Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic threshold.
- Apply with ground or air equipment using sufficient water to obtain full coverage of foliage. When applying by air, apply in a minimum of 2 gallons of water per acre.
- **Preharvest Interval:** Do not apply within 7 days of harvest.
- Do not apply more than 0.045 pound active ingredient (0.72 pint) per acre per year.

Cole Crops **Brassica (head and stem), including but not limited to broccoli, Brussels sprouts, cabbage, cavalo broccoli, cauliflower, Chinese broccoli (gai lon), Chinese cabbage (napa), Chinese mustard cabbage (gai choy) and kohlrabi**		
Note: Numbers in parenthesis refer to footnotes below table.		
	Rate	
Target Pests	**(lb a.i./acre)**	**(fl oz/acre)**
alfalfa looper cabbage looper cabbage webworm cutworm spp. imported cabbageworm southern cabbageworm	0.0075-0.0125	1.92 - 3.20
aphid spp. (2) (3) armyworm beet armyworm (1) (3) corn earworm diamondback moth (3) fall armyworm (1) flea beetle spp. grasshopper spp. Japanese beetle (adult) leafhopper spp. meadow spittlebug plant bug spp., including Lygus spp. (3) spider mite spp. (2) stink bug spp. thrips spp. (2) vegetable weevil (adult) whitefly spp. (2) (3) yellowstriped armyworm	0.01 - 0.015	2.56 - 3.84

[1] For control of first and second instars only.
[2] Suppression only.
[3] See resistance statement under "General Use Precautions and Restrictions."

Remarks:

- Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.
- Apply with ground or air equipment, using sufficient water to obtain full coverage of foliage. When applying by air, apply in a minimum of 2 gallons of water per acre.
- **Preharvest Interval:** Do not apply within 1 day of harvest.
- Do not apply more than 0.12 pound active ingredient (1.92 pints) per acre per season.

Corn (At Plant Soil Application) Field corn, Popcorn, Seed corn, Sweet corn		
Note: Numbers in parenthesis refer to footnotes below table.		
Target Pests	**Rate**	
corn rootworm larvae Western Northern Southern Mexican cutworm spp. lesser cornstalk borer red imported fire ant (1) seedcorn beetle seedcorn maggot white grub spp. wireworm spp. (1)	0.0025 lb ai per 1000 ft of row †	0.66 fl oz per 1000 ft of row †

† Suppression only.

Remarks:

- **Banded Applications:** Apply at planting as a 5 to 7 inch T-band sprayed across the open seed furrow between the furrow opener and the press wheel or as a band application behind the press wheel.
- **In-Furrow Applications:** Apply into the seed furrow through spray nozzles or microtubes, behind the planter furrow opener and in front of the press wheel.
- Apply a minimum spray volume of 3 gallons per acre.
- **Pre-harvest Interval:** Do not harvest or graze livestock or cut treated crops for feed within 21 days of at plant application.
- Do not apply more than 0.045 pound active ingredient (0.72 pint) per acre per crop at plant. For field corn, popcorn, and seed corn, do not apply more than 0.06 lb active ingredient per acre per crop from at plant and foliar applications. For sweet corn, do not apply more than 0.24 pound active ingredient per acre per crop from at plant and foliar applications.

† Fluid Ounces and Pounds Active Ingredient per Acre of Proaxis CHA applied at 0.66 fl oz per 1000 ft of Row for Various Row Spacings						
Row spacing	**40"**	**38"**	**36"**	**34"**	**32"**	**30"**
Linear ft/acre	13,068	13,756	14,520	15,374	16,335	17,424
Fluid oz/acre	8.6	9.1	9.6	10.1	10.8	11.5
Pounds ai/acre	0.034	0.035	0.037	0.040	0.042	0.045

Corn (Foliar Application) Field corn, Popcorn, Seed corn		
Note: Numbers in parenthesis refer to footnotes below table.		
	Rate	
Target Pests	**(lb ai/acre)**	**(fl oz/acre)**
corn earworm (1) cutworm spp. green cloverworm meadow spittlebug western bean cutworm (1)	0.0075 - 0.0125	1.92 - 3.20
armyworm (2) bean leaf beetle cereal leaf beetle corn leaf aphid (3) English grain aphid (3) European corn borer (1) fall armyworm (2) flea beetle spp. grasshopper spp. hop vine borer (1) Japanese beetle (adult) Mexican corn rootworm beetle (adult) northern corn rootworm beetle (adult) oat bird-cherry aphid (3) sap beetle (adult) southern corn rootworm beetle (adult) southwestern corn borer (1) stalk borer (1) stink bug spp. tobacco budworm (1) (4) webworm spp. western corn rootworm beetle (adult) yellowstriped armyworm (2)	0.01 - 0.015	2.56 - 3.84
beet armyworm (2) (4) chinch bug greenbug (3) (4)	0.015	3.84

[1] For control before larvae bore into the plant stalk or ear.
[2] For control of first and second instars only.
[3] Suppression only.
[4] See resistance statement under "General Use Precautions and Restrictions."

Remarks:

- Apply as required by scouting, or locally prescribed corn growth stages, usually at intervals of 7 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds or other locally recommended methods.
- Apply with ground or air equipment, using sufficient water and application methods to obtain full coverage of target location. When applying by air, apply in a minimum of 2 gallons of water per acre.
- For chinch bug control, begin applications when bugs migrate from small grains or grass weeds to small corn. Direct spray to the base of corn plants. Repeat applications at 3- to 5-day intervals if

needed. Proaxis CHA insecticide may only suppress heavy infestations and/or subsequent migrations.

- For control of adult corn rootworm beetles (*Diabrotica* species) as part of an aerial-applied corn rootworm control program, use upper end of rate range at 3.84 fluid ounces per acre (0.015 pound active ingredient per acre).
- **Preharvest Interval:** Do not apply within 21 days of harvest.
- Do not allow livestock to graze in treated areas or harvest treated corn forage as food for meat or dairy animals within 1 day after last treatment. Do not feed treated corn fodder or silage to meat or dairy animals within 21 days after the last treatment.
- Do not apply more than 0.06 pound active ingredient (0.96 pint) per acre per crop from at plant and foliar applications. Do not apply more than 0.03 pound active ingredient (0.48 pint) after silk initiation. Do not apply more than 0.015 pound active ingredient (0.24 pint) after corn has reached the milk stage (yellow kernels with milky fluid).

Sweet Corn (Foliar Application)		
Note: Numbers in parenthesis refer to footnotes below table.		
	Rate	
Target Pests	**(lb ai/acre)**	**(fl oz/acre)**
aphid spp. (2) (3) aster leafhopper beet armyworm (1) (3) chinch bug common cornstalk borer corn earworm cutworm spp. European corn borer fall armyworm (1) flea beetle spp. grasshopper spp. Japanese beetle (adult) Mexican corn rootworm beetle (adult) northern corn rootworm beetle (adult) sap beetle (adult) southern armyworm (1) southern corn rootworm beetle (adult) southwestern corn borer spider mite spp. (2) stink bug spp. tarnished plant bug webworm spp. western bean cutworm western corn rootworm beetle (adult) yellowstriped armyworm (1)	0.01 - 0.015	2.56 - 3.84
corn silkfly (adult) (2)	0.015	3.84

[1] For control of first and second instars only.
[2] Suppression only.
[3] See resistance statement under "General Use Precautions and Restrictions."

Remarks:

- Apply as required by scouting, or locally prescribed corn growth stages, usually at intervals of 4 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds or other locally recommended methods and should be targeted for control before insects enter the stalk or ear.
- Apply with ground or air equipment, using sufficient water and application methods to obtain full coverage of foliage and ears (if present). When applying by air, apply in a minimum of 2 gallons of water per acre.
- For control of adult corn rootworm beetles (*Diabrotica* species) as part of an aerial-applied corn rootworm control program, use a minimum of 3.2 fluid ounces per acre (0.0125 pound active ingredient per acre).
- **Preharvest Interval:** Do not apply within 1 day of harvest.
- Do not allow livestock to graze in treated areas or harvest treated corn forage as food for meat or dairy animals within 1 day after last treatment. Do not feed treated corn fodder or silage to meat or dairy animals within 21 days after the last treatment.
- Do not apply more than 0.24 pound active ingredient (3.84 pints) per acre per crop from at plant and foliar applications.

Cotton		
Note: Numbers in parenthesis refer to footnotes below table.		
	Rate	
Target Pests	**(lb a.i./acre)**	**(fl oz/acre)**
cutworm spp. soybean thrips tobacco thrips	0.0075 - 0.01	1.92 - 2.56
cabbage looper cotton fleahopper cotton leafperforator cotton leafworm lygus bug spp. (3) pink bollworm (adult) saltmarsh caterpillar	0.01 - 0.015	2.56 - 3.84
bandedwing whitefly (2) (3)	0.0125 - 0.02	3.20 - 5.12
beet armyworm (1) (3) boll weevil brown stink bug cotton aphid (2) (3) cotton bollworm European corn borer fall armyworm green stink bug southern green stink bug sweetpotato whitefly (2) (3) tobacco budworm (3) twospotted spider mite (2)		

[1] For control of first and second instars only.
[2] Suppression only.
[3] See resistance statement under "General Use Precautions and Restrictions."

Remarks:

- Apply as required by scouting, usually at intervals of 5 to 7 days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.
- Apply with ground or air equipment, using sufficient water to obtain full coverage of foliage.

- Applications may also be made with equipment adapted and calibrated for ULV sprays. Proaxis CHA insecticide may be mixed with once-refined vegetable oil and applied in a minimum of at least 1 quart of finished spray per acre.
- Under light bollworm/budworm infestation levels, 0.01 pound active ingredient per acre may be applied in conjunction with intense field monitoring.
- For boll weevil control, spray on a 3- to 5-day schedule.
- When applied according to label directions for control of cotton bollworm and tobacco budworm, Proaxis CHA insecticide also provides ovicidal control of unhatched *Heliothis* spp. eggs.
- **Preharvest Interval:** Do not apply within 21 days of harvest.
- Do not graze livestock in treated areas.
- Do not apply more than 1.6 pints (0.1 pound active ingredient) per acre per season.
- 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.

Fruiting Vegetables (Except Cucurbits) Tomato, tomatillo, peppers (bell and non-bell), eggplant, ground cherry, pepino		
Note: Numbers in parenthesis refer to footnotes below table.		
	Rate	
Target Pests	**(lb a.i./acre)**	**(fl oz/acre)**
cabbage looper cutworm spp. hornworm spp.	0.0075-0.0125	1.92 - 3.20
aphid spp. (2) (3) beet armyworm (1) (3) blister beetle spp. Colorado potato beetle (3) cucumber beetle spp. (adult) European corn borer (4) fall armyworm (1) flea beetle spp. grasshopper spp. Japanese beetle (adult) leafhopper spp.	0.01 - 0.015	2.56 - 3.84
leafminer spp. (2) meadow spittlebug pepper weevil (adult) (2) plant bug spp. southern armyworm (1) spider mite spp. (2) stalk borer (4) stink bug spp. thrips (3) tobacco budworm (3) tomato fruitworm tomato pinworm tomato psyllid (2) (3) vegetable weevil (adult) whitefly spp. (2) (3) yellowstriped armyworm (1)		

[1] For control of first and second instars only.
[2] Suppression only.
[3] See resistance statement under "General Use Precautions and Restrictions."
[4] For control before larvae bore into the plant stalk or fruit.

Remarks:

- Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.
- Apply with ground or air equipment, using sufficient water to obtain full coverage of foliage. When applying by air, apply in a minimum of 2 gallons of water per acre.
- **Preharvest Interval:** Do not apply within 5 days of harvest.
- Do not apply more than 0.18 pound active ingredient (2.88 pints) per acre per season.

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Legume Vegetables			
Note: Numbers in parenthesis refer to footnotes below table.			
		Rate	
Crop/Variety	**Target Pests**	**(lb a.i./acre)**	**(fl oz/acre)**
Edible Podded (Only) ***Canavalia gladiata*** - sword bean ***Canavalia ensiformis*** - jackbean ***Glycine max*** - soybean - immature seed **Edible Podded, Succulent Shelled or Dried Shelled** ***Phaseolus* spp.** - Includes: field, kidney, lima, navy, pinto, runner, snap, tepary and wax beans **Vigna spp.** - Includes: adzuki, asparagus, moth, mung, rice, urd and yardlong beans, black-eye pea, catjang, Chinese longbean, cowpea, crowder pea, and southern pea ***Pisum* spp.** - Includes dwarf, edible-pod, English, field, garden, green, snow and sugar snap peas ***Cajanus cajan*** - pigeon peas **Succulent Shelled or Dried Shelled** ***Vicia faba*** - broadbean (favabean) **Dried Shelled (Only)** ***Lupinus* spp.** - Includes: grain, sweet, white and sweet white lupines ***Cicer arietimum*** - chickpea (garbanzo bean) ***Cyamopsis tetragonoloba*** - guar ***Lablab purpureus***- lablab bean (hyacinth bean) ***Lens esculata*** - lentils	cutworm spp. green cloverworm imported cabbageworm Mexican bean beetle saltmarsh caterpillar velvetleaf caterpillar	0.0075 - 0.0125	1.92- 3.20
	alfalfa caterpillar aphid spp. (4) armyworm (2) bean leaf beetle bean leafskeletonizer blister beetle spp. corn earworm corn rootworm beetle spp. (adult) cucumber beetle spp. (adult) curculio and weevil spp. (1) (foliage and pod feeding adults and larvae) European corn borer (1) fall armyworm (2) flea beetle spp. (adult) flea hopper spp. grasshopper spp. Japanese beetle (adult) leafhopper spp. leaftier spp. looper spp. meadow spittlebug painted lady butterfly (larvae) plant bug spp. including lygus spp. (4) stalk borer (1) stink bug spp. threecornered alfalfa hopper thrips spp. (4) tobacco budworm (4) webworm spp. western bean cutworm western yellowstriped armyworm (2) yellowstriped armyworm (2)	0.01 - 0.015	2.56- 3.84
	beet armyworm (2) (3) (4) soybean looper (3) (4) lesser cornstalk borer (3) leafminer spp. (3) (4) whitefly spp. (3) (4) spider mite spp. (3)	0.015	3.84

[1] For control before larvae bore into the plant stalk or pods.
[2] For control of first and second instars only.

[3] Suppression only.
[4] See resistance statement under "General Use Precautions and Restrictions."

Remarks:

- Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.
- Apply with ground or air equipment, using sufficient water to obtain full coverage of foliage. When applying by air, apply in a minimum of 2 gallons of water per acre.
- **Preharvest Interval:**
  For edible podded and succulent shelled legume vegetables, do not apply within 7 days of harvest.
  For dried shelled legume vegetables, do not apply within 21 days of harvest.
- Do not apply more than 0.06 pound active ingredient (0.96 pint) per acre per season.
- For succulent and dried shelled peas and bean, do not graze livestock in treated areas or harvest vines for forage or hay.

Lettuce (head and leaf)		
Note: Numbers in parenthesis refer to footnotes below table.		
	Rate	
Target Pests	**(lb a.i./acre)**	**(fl oz/acre)**
alfalfa looper cabbage looper cutworm spp. green cloverworm imported cabbageworm saltmarsh caterpillar	0.0075-0.0125	1.92 - 3.20
aphid spp. (2) (3) armyworm beet armyworm (1) (3) corn earworm diamondback moth (3) European corn borer	0.01 - 0.015	2.56 - 3.84
fall armyworm (1) flea beetle spp. grasshopper spp. Japanese beetle (adult) leafhopper spp. meadow spittlebug plant bug spp., including Lygus spp. (3) southern armyworm spider mite spp. (2) stink bug spp. tobacco budworm (3) vegetable weevil (adult) whitefly spp. (2) (3)		

[1] For control of first and second instars only.
[2] Suppression only.
[3] See resistance statement under "General Use Precautions and Restrictions."

Remarks:

- Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.
- Apply with ground or air equipment, using sufficient water to obtain full coverage of foliage. When applying by air, apply in a minimum of 2 gallons of water per acre.
- **Preharvest Interval:** Do not apply within 1 day of harvest.
- Do not apply more than 0.15 pound active ingredient (2.4 pints) per acre per season.

Onion (bulb) and Garlic		
Note: Numbers in parenthesis refer to footnotes below table.		
	Rate	
Target Pests	**(lb a.i./acre)**	**(fl oz/acre)**
cutworm spp. leafminer spp. (adult) onion maggot (adult) seedcorn maggot (adult)	0.0075-0.0125	1.92 - 3.20
aphid spp. (2) armyworm spp. (1) flower thrips (2) onion thrips plant bug spp. stink bug spp. tobacco thrips western flower thrips (2) (3)	0.01 - 0.015	2.56 - 3.84

[1] For control of first and second instars only.
[2] Suppression only.
[3] See resistance statement under "General Use Precautions and Restrictions."

Remarks:

- Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.
- Use the higher label rates as thrips population increases and avoid rescue situations.
- Apply with ground or air equipment, using sufficient water and application methods to obtain full coverage of foliage. When applying by air, apply in a minimum of 2 gallons of water per acre.
- For control of thrips by aerial application, the addition of 1% COC v/v, 0.25% NIS v/v or a silicone adjuvant may enhance the deposition of the spray and increase plant coverage. Follow adjuvant manufacturer's use directions.
- **Preharvest Interval:** Do not apply within 14 days of harvest.
- Do not apply more than 0.12 pound active ingredient (1.92 pints) per acre per season.

Peanut		
Note: Numbers in parenthesis refer to footnotes below table.		
	Rate	
Target Pests	**(lb a.i./acre)**	**(fl oz/acre)**
cutworm spp. green cloverworm potato leafhopper red-necked peanut worm velvetbean caterpillar	0.0075-0.0125	1.92 - 3.20
bean leaf beetle corn earworm fall armyworm (1) grasshopper spp. southern corn rootworm (adult) stink bug spp. tobacco thrips vegetable weevil whitefringed beetle (adult)	0.01 - 0.015	2.56 - 3.84
aphid spp. (2) beet armyworm (1) (3) lesser cornstalk borer (2) soybean looper (2) (3) spider mite spp. (2)	0.015	3.84

[1] For control of first and second instars only.
[2] Suppression only.
[3] See resistance statement under "General Use Precautions and Restrictions."

Remarks:

- Apply as required by scouting, usually at intervals of 7 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.
- Apply with ground or air equipment, using sufficient water to obtain full coverage of foliage. When applying by air, apply in a minimum of 2 gallons of water per acre.
- **Preharvest Interval:** Do not apply within 14 days of harvest.
- Do not apply more than 0.06 pound active ingredient (0.96 pint) per acre per season.

Pome Fruits Apple, crabapple, loquat, mayhaw, oriental pear, pear, quince		
	Rate	
Target Pests	(lb a.i./acre)	(fl oz/acre)
apple aphid apple maggot (adult) cherry fruit fly spp. (adult) codling moth green fruitworm Japanese beetle leafhopper spp. leafroller spp. lesser appleworm Oriental fruit moth pear psylla pear sawfly periodical cicada plant bug spp. plum curculio rosy apple aphid San Jose scale (fruit infestations only) stink bug spp. tent caterpillar spp. tentiform leaf miner spp. tufted apple budworm	0.01 - 0.02	2.56 - 5.12

Remarks:

- Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.
- Apply with ground or air equipment, using sufficient water to obtain full coverage of foliage or target area. When applying by air, apply in a minimum of 5 gallons of water per acre.
- **Preharvest interval:** Do not apply within 21 days of harvest.
- Do not apply more than 0.1 lb ai (1.6 pints) per acre per year. Do not apply more than 0.08 lb ai (1.28 pints) per acre per year post bloom.

Rice		
	Rate	
Target Pests	(lb ai/acre)	(fl oz/acre)
chinch bug fall armyworm grasshopper spp. greenbug leafhopper spp. oat bird-cherry aphid rice stink bug rice water weevil (adult) true armyworm yellowstriped armyworm	0.0125 - 0.02	3.20 - 5.12

Remarks:

- Apply as required by scouting. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds. Determine the need for repeat applications, usually at intervals of 5 to 7 days, by scouting.
- Proaxis CHA insecticide can be used safely when propanil products are being used for weed control.
- Apply by air or by ground equipment, using sufficient water to obtain full coverage of foliage. When applying by air, apply in a minimum of 2 gallons of water (or total carrier volume) per acre, but ensure sufficient volume is used to provide adequate coverage. The addition of emulsifiable crop oil at 1 pint per acre when lower aerial application volumes are used is recommended to improve coverage, reduce evaporation, and improve efficacy.
- For control of rice water weevil in dry seeded rice, make a foliar application as indicated by scouting for the presence of adults and/or feeding scars, usually within a time-frame of 0 to 5 days after permanent flood establishment. Do not exceed 10 days from starting permanent flood until insecticide application unless scouting indicates weevils have not been previously present. Adults may also be treated at later stages of rice development to reduce overwintering populations.
- For control of rice water weevil in water seeded rice, make the first foliar application after pinpoint flood as indicated by scouting for the presence of adults and/or feeding scars usually when rice has emerged 0.5 inch above the waterline. Under conditions of prolonged migration into the field, start field scouting for rice water weevil adults and/or feeding scars 3 to 5 days after the initial treatment and, if needed, apply a second application within 7 to 10 days of the first application. Adults may also be treated at later stages of rice development to reduce over-wintering populations.
- **California:** In addition to above directions for control of rice water weevil in water seeded rice, Proaxis CHA may be applied at the 1 - 3 leaf growth stage, with the majority at the 2 leaf growth stage. Adults are vulnerable on levees and in the water. Larvae are vulnerable while feeding on the leaf prior to entering the soil. Monitor for adults, based upon field history and density of population. Monitor field edges and levee areas for adults. Treat in the following manner: a) spray the inside perimeter of the field, or b) spray the entire field.
- Greenbug is known to have many biotypes. Proaxis CHA insecticide may provide only suppression. If satisfactory control is not achieved with the first application of Proaxis CHA insecticide, a resistant biotype may be present. Use alternate chemistry for control.
- Do not release flood water within 7 days of an application.
- Do not apply more than 0.06 pound active ingredient (0.96 pint) per acre per season. Do not apply more than 0.04 pound active ingredient (0.64 pint) per acre within 28 days of harvest or more than 0.02 pound active ingredient (0.32 pint) per acre within 21 days of harvest.
- **Preharvest Interval:** Do not apply within 21 days of harvest.
- Do not use treated rice fields for the aquaculture of edible fish and crustaceans.
- Do not apply as an ultra-low volume (ULV) spray.

Sorghum (grain)		
Note: Numbers in parenthesis refer to footnotes below table.		
Target Pests	**Rate**	
	(lb a.i./acre)	**(fl oz/acre)**
cutworm spp. sorghum midge	0.0075 - 0.01	1.92 - 2.56
armyworm beet armyworm (1) (3) corn earworm European corn borer (2) fall armyworm (1) flea beetle spp. grasshopper spp. lesser cornstalk borer (2) southwestern corn borer (2) stink bug spp. webworm spp. yellowstriped armyworm (1)	0.01 - 0.015	2.56 - 3.84
chinch bug	0.015	3.84

[1] For control of first and second instars only.
[2] For control before larvae bore into the plant stalk.
[3] See resistance statement under "General Use Precautions and Restrictions."

Remarks:

- Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.
- Apply with ground or air equipment, using sufficient water and application methods to obtain full coverage of target location. When applying by air, apply in a minimum of 2 gallons of water per acre.
- For sorghum midge control, begin applications when 25% of the sorghum heads have emerged and are in tip bloom. Repeat applications at 5-day intervals if needed.
- For chinch bug control, begin applications when bugs migrate from small grains or grass weeds to small sorghum. Direct spray to the base of sorghum plants. Repeat applications at 3- to 5-day intervals if needed. Proaxis CHA insecticide may only suppress heavy infestations and/or subsequent migrations.
- **Preharvest Interval:** Do not apply within 30 days of harvest.
- Do not apply more than 0.04 pound active ingredient (0.64 pint) per acre per season. Do not apply more than 0.03 pound active ingredient (0.48 pint) per acre per season after crop emergence. Do not apply more than 0.01 pound active ingredient (0.16 pint) per acre per season once crop is in soft dough stage.

Soybean		
Note: Numbers in parenthesis refer to footnotes below table.		
	Rate	
Target Pests	**(lb a.i./acre)**	**(fl oz/acre)**
bean leaf beetle cabbage looper corn earworm cutworm spp. green cloverworm Mexican bean beetle Mexican corn rootworm beetle (adult) northern corn rootworm beetle (adult) painted lady (thistle) caterpillar potato leafhopper saltmarsh caterpillar southern corn rootworm beetle (adult) soybean aphid (4) threecornered alfalfa hopper thrips spp. velvetbean caterpillar western corn rootworm beetle (adult) woollybear caterpillar	0.0075-0.0125	1.92 - 3.20
armyworm (1) blister beetle spp. European corn borer fall armyworm (1) grasshopper spp. Japanese beetle (adult)	0.0125 - 0.015	3.20 - 3.84
plant bug spp. silverspotted skipper stink bug spp. tobacco budworm (3) webworm spp. yellowstriped armyworm (1)		
beet armyworm (1) (3) lesser cornstalk borer (2) soybean looper (2) (3) spider mite spp. (2)	0.015	3.84

[1] For control of first and second instars only.
[2] Suppression only.
[3] See resistance statement under "General Use Precautions and Restrictions."
[4] Use a rate in the lower end of the rate range for early season applications and/or lighter populations.

Remarks:

- Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.
- Do not graze or harvest treated soybean forage, straw, or hay for livestock feed.

- Apply with ground or air equipment, using sufficient water to obtain full coverage of foliage. When applying by air, apply in a minimum of 2 gallons of water per acre.
- For control of adult corn rootworm beetles (*Diabrotica* species) as part of an aerial-applied corn rootworm control program, use a minimum of 2.56 fluid ounces per acre (0.01 pound active ingredient per acre).
- **Preharvest Interval:** Do not apply within 45 days of harvest.
- *Do not apply more than 0.03 pound active ingredient (0.48 pint) per acre per season.*

Stone Fruits **Apricot, sweet and tart cherry, nectarine, peach, plum, chickasaw plum, damson plum, Japanese plum, plumcot, prune**		
	Rate	
Target Pests	**(lb a.i./acre)**	**(fl oz/acre)**
American plum borer black cherry aphid cherry fruit fly spp. (adult) green fruitworm Japanese beetle leafhopper spp. leafroller spp. Oriental fruit moth peach twig borer peachtree borer spp. periodical cicada plant bug spp. plum curculio rose chafer stink bug spp. tent caterpillar spp.	0.01 - 0.02	2.56 - 5.12

Remarks:

- Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.
- Apply with ground or air equipment, using sufficient water to obtain full coverage of foliage or target area. When applying by air, apply in a minimum of 5 gallons of water per acre.
- **Preharvest interval:** Do not apply within 14 days of harvest.
- Do not apply more than 0.1 lb ai (1.6 pints) per acre per year. Do not apply more than 0.08 lb ai (1.28 pints) per acre per year post bloom.

Sugarcane		
Note: Numbers in parenthesis refer to footnotes below table.		
	Rate	
Target Pests	**(lb a.i./acre)**	**(fl oz/acre)**
rice borer (1) sugarcane beetle (adult) (2) sugarcane borer (1) yellow sugarcane aphid (3)	0.0125 - 0.02	3.2 - 5.12

[1] For control before larvae bore into the plant stalk.
[2] *Suppression only of beetles active above ground.*
[3] See resistance statement under "General Use Precautions and Restrictions."

Remarks:

- Apply as required by scouting, usually at intervals of 7 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.
- Apply with ground or air equipment, using sufficient water to obtain full coverage of the foliage or target area. When applying by air, apply in a minimum of 2 gallons of water per acre.
- **Preharvest Interval:** Do not apply within 21 days of harvest.
- Do not apply more than 0.08 pound active ingredient (1.28 pints) per acre per season.

Sunflower		
Note: Numbers in parenthesis refer to footnotes below table.		
	Rate	
Target Pests	**(lb a.i./acre)**	**(fl oz/acre)**
cutworm spp. sunflower beetle	0.0075-0.0125	1.92 - 3.20
banded sunflower moth fall armyworm (1) grasshopper spp. head-clipper weevil (adult) Japanese beetle (adult) leafhopper spp. meadow spittlebug painted lady (thistle) caterpillar seed weevil (adult) spotted cabbage looper stem weevil (adult) stink bug spp. sunflower maggot (adult) sunflower moth woollybear caterpillar	0.01 - 0.015	2.56 - 3.84
beet armyworm (1) (3) spider mite spp. (2)	0.015	3.84

[1] For control of first and second instars only.
[2] Suppression only.
[3] See resistance statement under "General Use Precautions and Restrictions."

Remarks:

- Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.
- Apply with ground or air equipment, using sufficient water to obtain full coverage of sunflower heads and/or foliage. When applying by air, apply in a minimum of 2 gallons of water per acre.
- **Preharvest Interval:** Do not apply within 45 days of harvest.
- Do not apply more than 0.06 pound active ingredient (0.96 pint) per acre per season. Do not apply more than 0.045 pound active ingredient (0.72 pint) per acre per season after bloom initiation.
- Do not apply as an ultra-low volume (ULV) spray.

Tobacco (Air Dried) Burley tobacco and flue-cured tobacco		
Note: Numbers in parenthesis refer to footnotes below table.		
	Rate	
Target Pests	**(lb a.i./acre)**	**(fl oz/acre)**
aphid spp. (2) (3) armyworm spp. (1) blister beetle spp. cabbage looper corn earworm cucumber beetle spp. (adult) cutworm spp. grasshopper spp. Japanese beetle (adult) katydid spp. plant bug spp. (3) saltmarsh caterpillar stinkbug spp. thrips spp. (2) tobacco budworm tobacco flea beetle (adult) tobacco hornworm tree cricket spp. vegetable weevil (adult) webworm spp.	0.0075 - 0.015	1.92 - 3.84

[1] For control of first and second instars only.
[2] Suppression only.
[3] See resistance statement under "General Use Precautions and Restrictions."

Remarks:

- Apply as required by scouting, usually at intervals of 7 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.
- 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 2 gallons of water per acre.
- **Preharvest Interval:** Do not apply within 40 days of harvest.
- Do not apply more than 0.045 pound active ingredient (0.72 pint) per acre per year.

Tree Nuts **Almond, beech nut, Brazil nut, butternut, cashew, chestnut, chinquapin, filbert (hazelnut), hickory nut, macadamia nut (bush nut), black walnut, English walnut (Persian)**		
Note: Numbers in parenthesis refer to footnotes below table.		
	Rate	
Target Pests	**(lb a.i./acre)**	**(fl oz/acre)**
ants chinch bug codling moth filbertworm leaffooted bug leafroller spp. *navel orangeworm* peach twig borer plant bug spp. stink bug spp. walnut aphid walnut husk fly spp. (adult)	0.01 - 0.02	2.56 - 5.12
Pecan		
	Rate	
Target Pests	**(lb a.i./acre)**	**(fl oz/acre)**
hickory shuckworm pecan aphid spp. pecan casebearer spp. pecan phylloxera spp. pecan spittlebug pecan weevil	0.01 - 0.02	2.56 - 5.12

Remarks:

- Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.
- Apply with ground or air equipment, using sufficient water to obtain full coverage of foliage or target area. When applying by air, apply in a minimum of 5 gallons of water per acre.
- **Preharvest interval:** Do not apply within 14 days of harvest.
- Do not apply more than 0.08 lb ai (1.28 pints) per acre per year. Do not apply more than 0.06 lb ai (0.96 pints) per acre per year post bloom.

Wheat, Wheat Hay, and Triticale		
Note: Numbers in parenthesis refer to footnotes below table.		
	Rate	
Target Pests	**(lb a.i./acre)**	**(fl oz/acre)**
army cutworm cutworm spp.	0.0075-0.0125	1.92 - 3.20
armyworm cereal leaf beetle English grain aphid (1) fall armyworm flea beetle spp. grasshopper spp. oat bird-cherry aphid (1) orange blossom wheat midge Russian wheat aphid (1) stink bug spp. yellowstriped armyworm	0.01 - 0.015	2.56 - 3.84
grass sawfly	0.0125 - 0.015	3.20 - 3.84
chinch bug corn leaf aphid (2) greenbug (1) (2) mite spp. (2)	0.015	3.84

[1] Best control is obtained before insects begin to roll leaves. Once wheat has started to boot, Proaxis CHA insecticide may provide suppression only. Higher rates and increased coverage will be necessary.

[2] See resistance statement under "General Use Precautions and Restrictions."

Remarks:

- Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.
- Apply with ground or air equipment, using sufficient water and application methods to obtain full coverage of foliage. When applying by air, apply in a minimum of 2 gallons of water per acre.
- For chinch bug control, repeat applications at 3- to 5-day intervals if needed. Proaxis CHA insecticide may only suppress heavy infestations and/or migrations.
- Greenbug is known to have many biotypes. Proaxis CHA insecticide may provide suppression only. In this situation, a second application using an alternative chemistry may be needed.
- **Preharvest Interval:** Do not apply within 30 days of harvest.
- Do not apply more than 0.03 pound active ingredient (0.48 pint) per acre per season.

Conifer and Deciduous Trees Plantations, nurseries and seed orchards		
	Rate	
Target Pests	(lb a.i./acre)	(fl oz/acre)
bagworm balsam twig aphid balsam wooly aphid gypsy moth Japanese beetle June beetle spp. leaf beetle spp. leafroller spp. May beetle spp. pales weevil pine chafer pine colaspis beetle pine conelet bug pine leaf chermid pine sawfly spp. pine tip moth spp. pine weevil spp. sawfly spp. spittlebug spp. spruce budworm tent caterpillar spp. tussock moth spp. webworm spp.	0.01 - 0.02	2.56 - 5.12
coneworm spp. seed bug spp.	See "Remarks" for pest-specific use directions	

Remarks

- To control exposed foliage, flower, cone, seed and bark feeding insects, apply as required by scouting. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.
- Apply with ground or air equipment, using sufficient water to obtain full coverage of target site. When applying by air, apply in a minimum of 2 gallons of water per acre.
- Do not apply more than 0.12 lb ai (1.92 pints) per acre per year.

Coneworm/Seed bug spp. in Seed Orchards:

- For high volume sprayers, dilute 5.12 fl oz per 100 gallons of water and apply 5 to 10 gallons of finished spray per tree.
- For low volume sprayers, dilute 20 fl oz per 100 gallons of water and apply 100 gallons of finished spray volume per acre.
- For aerial application, apply 15 fl oz per acre in a minimum of 10 gallons of finished spray per acre.
- Do not apply more than 0.25 lb active ingredient (4 pints) per acre per year.

Non-Cropland Areas Adjacent to Crops (Excluding Public Land)		
	Rate	
Target Pests	(lb a.i./acre)	(fl oz/acre)
Refer to crop-specific use directions	Use rates in crop-specific use directions	Use rates in crop-specific use directions

Remarks:

- Spray non-cropland adjacent to agricultural areas to control migratory insects that may threaten crops.
- When treating areas adjacent to crops, refer to the specific use directions for the adjacent crop for target pests, rates, and spray recommendations.
- Use highest labeled rates for dense/tall foliage, high insect populations and/or larger larval stages.
- Repeat as necessary to maintain control.
- Do not exceed 0.1 lb ai (1.6 pints) per acre per year.
- Do not graze livestock in treated areas.

DISCLAIMER

The label instructions for use of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and should be followed carefully. However, 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 weather conditions, presence of other materials, or the manner of use or application all of which are beyond the control of **Cheminova**. All risks shall be assumed by the user.

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