

100-1319

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

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

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

JUL 16 2009

Dear Dr. Wilson:

Subject: Master & Supplemental Labeling Amendment; Revised Directions for Use
Voliam Flexi Insecticide
EPA Registration No. 100-1319
Date Submitted: May 19, 2009

The master labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable. A stamped copy is enclosed for your records. Please submit one (1) final printed copy for the above mentioned label before releasing the product for shipment.

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

1. Include on the supplemental label an expiration date of January 16, 2011.

A stamped copy is enclosed for your records. Please submit one (1) final printed copy for the referenced label, incorporating the above changes, before releasing the product for shipment. If you have any questions regarding this letter, please call me at (703) 306-0415.

Sincerely,

A handwritten signature in black ink, appearing to read "Kable Bo Davis".

Kable Bo Davis
Entomologist
Insecticide-Rodenticide Branch
Registration Division (7505P)

Enclosure- Stamped Master & Supplemental Labeling

(Booklet)

VOLIAM® Flexi
Insecticide

GROUP 4A 28 INSECTICIDE

For control of listed insect pests infesting various crops

Active Ingredient:	
Thiamethoxam ¹	20.0%
Chlorantraniliprole ²	20.0%
Other Ingredients:	60.0%
Total:	100.0%

¹CAS No. 153719-23-4

²CAS No. 500008-45-7

Voliam Flexi is a water-dispersible granule:

KEEP OUT OF REACH OF CHILDREN.

CAUTION

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.)

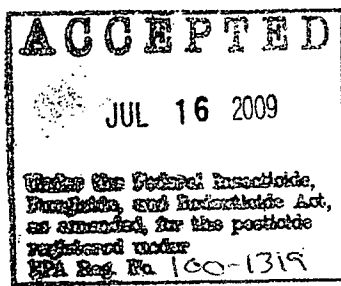
See additional precautionary statements and directions for use in booklet.

EPA Reg. No. 100-1319

EPA Est. XXXX

SCP 1319A-M(draft-b)

Net Weight



FIRST AID	
If in eyes	<ul style="list-style-type: none"> • 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.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	
<p>HOT LINE NUMBER</p> <p>For 24 Hour Medical Emergency Assistance (Human or Animal) or Chemical Emergency Assistance (Spill, Leak, Fire, or Accident), Call 1-800-888-8372</p>	

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

CAUTION

Causes moderate eye irritation. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling, and before drinking, eating, chewing gum, using tobacco, or using the toilet.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Chemical-resistant gloves

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions exist for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

Engineering Control 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 hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Environmental Hazards

This pesticide is toxic to wildlife and highly toxic to aquatic invertebrates, oysters and shrimp.

This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are foraging adjacent to the treatment area.

Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift or runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when cleaning equipment or disposing of equipment wash waters.

- **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 ground water. This product is classified as having high potential for reaching surface water via 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>).

- **Ground Water Advisory**

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

- **Spray Drift Advisory**

Do not allow this product to drift.

Physical or 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, Inc. 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, subject to the inherent risks referred to above, 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

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.

This labeling must be in the possession of the user at the time of application.

RESTRICTIONS

- Use this product only in commercial and farm plantings.
- Not for use in home plantings.
- Not for use on ornamental plants or plants being grown for ornamental purposes.
- Do not use in greenhouses.
- Do not treat plants grown for transplanting.
- Do not apply to crops grown from thiamethoxam treated seed.

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 12 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
- Chemical-resistant gloves made of any waterproof material – Category A (e.g., natural rubber, ≥ 14 mils)
- Shoes plus socks

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

INFORMATION

Voliam Flexi is a foliar-applied insecticide with dual modes of action that controls key lepidopteran insects, and listed sucking and chewing insect pests. Foliar application of Voliam Flexi exhibits excellent translaminar and locally systemic movement into plant tissue as well as accumulation on the leaf surface. Penetration into the leaf tissue forms a reservoir of active ingredient which results in extended residual control. Effective crop protection results from rapid feeding inhibition.

For best performance, always follow these directions:

- Apply Voliam Flexi when insect pest populations begin to build, but before populations reach economically damaging levels. Economic thresholds for pests controlled by Voliam Flexi may be available from your local agricultural authorities.
- Use of adjuvants is only allowed on certain crops – see specific crop instructions for adjuvants in the **Crop Use Directions** section of this label.
- Voliam Flexi is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply Voliam Flexi or allow it to drift to blooming crops or weeds while bees are foraging adjacent to the treated area.
- Thorough spray coverage is essential for optimal performance. Apply Voliam Flexi in sufficient water to ensure good coverage. See specific application information in the **Crop Use Directions** section of this label. The use of higher water volumes will generally result in better coverage, especially under adverse conditions (e.g., hot, dry) or where a dense plant canopy exists.
- Voliam Flexi is rainfast once the spray solution has dried on treated plants.
- Voliam Flexi may aid in the suppression of some pests. Suppression can mean either inconsistent control (good to poor), or consistent control at a level below that generally considered acceptable for commercial control.
- Voliam Flexi has a wide margin of plant safety when used in accordance with this label.

RESISTANCE MANAGEMENT

Some insect pests are known to develop resistance to products after repeated use. Because resistance development cannot be predicted, the use of this product should conform to sound resistance management strategies established for the crop and use area. Syngenta encourages responsible product stewardship to ensure effective long-term control of the insects on this label.

Voliam Flexi contains a Group 4A insecticide (thiamethoxam, belonging to the neonicotinoid class of chemistry) and a Group 28 insecticide (chlorantraniliprole, belonging to the diamide class of chemistry). Insect biotypes with acquired or inherent resistance to Group 4A or Group 28 insecticides may eventually dominate the insect population if Group 4A or Group 28 insecticides are used repeatedly as the predominant method of control for targeted species. This may result in partial or total loss of control of those species by Voliam Flexi or other Group 4A or Group 28 insecticides.

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.

In order to maintain susceptibility to these classes of chemistry:

- Avoid using Group 4A and/or Group 28 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 Voliam Flexi or other Group 4A and/or Group 28 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, unless otherwise stated in the Directions for Use; soil; foliar) of the Group 4A and/or Group 28 insecticides. Do not exceed the maximum Voliam Flexi allowed per growing season.
- Following a treatment window of Group 4A and/or Group 28 insecticides, rotate to a treatment window of effective products with a different mode of action before making additional applications of Group 4A and/or Group 28 insecticides.
- It is recommended that Group 28 insecticides are only used during half of the crop growing season.
- A treatment window rotation, along with other 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 Voliam Flexi or other Group 4A or Group 28 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.illac-online.org/>.

APPLICATION PROCEDURES AND SPRAY EQUIPMENT

Ground Application

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

Apply Voliam Flexi 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, as allowed under specific **Crop Use Directions** section of this label, may improve 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.

*Precautions: (1) When using water volumes of 5-10 gals., fine-sized droplets may be used to improve spray coverage. (2) Select nozzles, which produce the desired droplet sizes at the normal rated pressure range. (3) When spraying fine-sized droplets, carefully check **all** nozzles for flow and calibrate the sprayer. (4) The sprayer should travel at a uniform speed across the field. (5) Monitor environmental conditions and follow **Spray Drift Precautions** carefully.*

Aerial Application

Apply Voliam Flexi in water, using the minimum spray volume indicated in the **Crop Use Directions** section of this label. Increase spray volume where practical to improve coverage. Do not make application under conditions where uniform coverage cannot be obtained or where excessive spray drift may occur.

Spray Drift Precautions

As with all crop protection products, it is important to avoid off-target movement. Do not allow spray to drift onto adjacent land, crops, or aquatic areas. To avoid spray drift:

- Make applications when wind velocity favors on-target product deposition (approximately 3-10 mph). Do not apply when wind velocity exceeds 10 mph. Do not make applications when wind gusts approach 10 mph.
- Do not make applications when wind direction is toward the aquatic area to reduce the risk of exposure to sensitive aquatic areas.
- Do not cultivate or plant crops within 25 ft. of the aquatic area as to allow growth of a vegetative filter strip.
- Do not make applications during temperature inversions. Inversions are characterized by stable air and increasing temperatures with increased 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.
- Use the largest droplet size consistent with good pest control. Small droplets are more prone to spray drift, and can be minimized by appropriate nozzle selection, by orienting nozzles away from the air stream as much as possible, and by avoiding excessive spray boom pressure.
- Apply as close to target plants as practical to obtain a good spray pattern for adequate coverage. Do not make applications more than 10 ft. above the crop canopy.
- For aerial applications, mount the spray boom on the aircraft so as to minimize drift caused by wing tip vortices. The minimum practical boom length must be used and must not exceed 75% of wing span or rotor diameter.

Application through Irrigation Systems (Chemigation) – Potatoes Only

Voliam Flexi alone or in combination with other products which are registered for application through sprinkler irrigation may be applied through irrigation systems. Apply this product only through center pivot, solid set, hand move, or moving wheel irrigation systems. Do not apply Voliam Flexi through any other type of irrigation system. Lack of effectiveness or illegal pesticide residues 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.

Using Water from Public Water Systems: DO NOT APPLY VOLIAM FLEXI THROUGH ANY IRRIGATION SYSTEM **PHYSICALLY 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. Voliam Flexi may be applied through irrigation systems, which may be **supplied** by a public water system **only if** the water from the public water system is discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and to top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe. Before beginning chemigation, always make sure that the air gap exists and that there is no blockage of the overflow of the reservoir tank.

Any irrigation system using water supplied from a public water system must also meet the following requirements.

Operating Instructions for All Specified Types of Irrigation Systems

1. The system must be calibrated to uniformly apply the rates specified. If you have questions about calibration, contact State Extension Service specialists, equipment manufacturers, or other experts.
2. 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.
3. The pesticide injection pipeline must contain a functional, automatic, quick-closing check-valve to prevent the flow of fluid back toward the injection pump.
4. 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.
5. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
6. 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.

7. Systems must use a 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.
8. Do not apply when wind speed favors drift beyond the area intended.

Calibration and Application Instructions

Voliam Flexi must be applied under the schedule specified in the specific crop use directions, not according to the irrigation schedule unless the events coincide.

Set the equipment to apply the minimum amount of water per acre. Run the system at 85 - 90% of the manufacturer's maximum rated travel speed.

The following calibration and application techniques are provided for user reference, but do not constitute a warranty of fitness for application through sprinkler irrigation equipment. Check with state and local regulatory agencies for potential use restrictions before applying any agricultural chemical through sprinkler irrigation equipment.

Center Pivot Irrigation Equipment

Notes: (1) Use only drive systems that provide uniform water distribution. (2) Do not use end guns when chemigating Voliam Flexi through center pivot systems because of non-uniform application. (3) Plug the first nozzle closest to the well-head to protect the water source.

1. Determine the size of the area to be treated.
2. Determine the time required to apply 0.1 – 0.25 inches of water over the area to be treated when the system and injection equipment are operated at normal pressures as specified by the equipment manufacturer. Run the system at 80 - 95% of the manufacturer's rated maximum travel speed.
3. Using water, determine the injection pump output when operated at normal line pressure.
4. Determine the amount of Voliam Flexi, and any tank mix partners, required to treat the area covered by the irrigation system.
5. Add the required amount of Voliam Flexi, any tank mix partners, and sufficient water to meet the injection time requirements to the solution tank. (See **Mixing Procedures** section of this label.)
6. Make sure the system is fully charged with water before starting injection of the Voliam Flexi solution. Time the injection to last at least as long as it takes to bring the system to full pressure.

7. Maintain constant agitation in the solution tank during the injection period.
8. Inject the specified amount of Voliam Flexi per acre continuously for one complete revolution of the system.
9. Stop the injection equipment after treatment is completed. Continue to operate the system until the Voliam Flexi solution has cleared all of the sprinkler heads.
10. Allow time for all lines to flush the pesticide through all nozzles before turning off irrigation water.

Solid Set, Hand Move, and Moving Wheel Irrigation Equipment

1. Determine the acreage covered by the sprinklers.
2. Fill injector solution tank with plain water and calibrate the flow rate of the system to deliver the contents of the tank over a 20-40 minute time interval.
3. Determine the amount of Voliam Flexi required to treat the area covered by the irrigation system.
4. Add the required amount of Voliam Flexi, and any other tank mix partners, into the same quantity of water used to calibrate the injection period. (See **Mixing Procedures** section of this label.)
5. Operate the system at the same pressure and time interval established during the calibration.
6. Inject specified amount of Voliam Flexi per acre for either a 20-40 minute period at the end of a regular irrigation set, or as a 20-40 minute injection as a separate application not associated with a regular irrigation to maximize retention of the insecticide by the foliage.
7. Stop injection equipment after treatment is completed. Continue to operate the system until the Voliam Flexi solution has cleared the last sprinkler head. To ensure lines are flushed and free from remaining pesticides, a dye indicator may be injected into the lines to mark the end of the application period.

MIXING PROCEDURES

Prepare no more spray mixture than is needed for the immediate operation. Thoroughly clean spray equipment before using this product. Vigorous agitation is necessary for proper dispersal of the product. Maintain maximum agitation throughout the spraying operation. Do not let the spray mixture stand overnight in the spray tank. 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.

Voliam Flexi Alone

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

Voliam Flexi + Tank Mixtures

Add 1/2 of the required amount of water to the mix tank. Start the agitator running before adding any tank mix partners. Add tank mix partners in this order: products packaged in water-soluble packaging, wettable powders, wettable granules (dry flowables) such as Voliam Flexi, 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 of the mixture has been applied.

Note: When using Voliam Flexi in tank mixtures, add all products in water-soluble packaging to the tank before any other tank mix partner, including Voliam Flexi. Allow the water-soluble packaging to completely dissolve and the product(s) to completely disperse before adding any other tank mix partner to the tank.

If using Voliam Flexi in a tank mixture, observe all directions for use, crop/sites, use rates, dilution ratios, precautions, and limitations, which 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 this product with any product which 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.

Use of adjuvants is only allowed on certain crops – see specific crop instructions for adjuvants in the **Crop Use Directions** section of this label.

When an adjuvant is to be used with this product, use an adjuvant that meets the standard of the Chemical Producers and Distributors Association (CPDA) adjuvant certification program.

Compatibility

Voliam Flexi is compatible with most commonly used pesticides, crop oils, adjuvants, and nutritional sprays. However, since it is not possible to test all possible mixtures, the user should pre-test to assure the physical compatibility and lack of phytotoxic effect of any proposed mixtures with Voliam Flexi. To determine the physical compatibility of Voliam Flexi 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. Confirm the safety to the target crop before applying any tank mixture not specified on this label.

CROP USE DIRECTIONS

Pollinator Precautions

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

Crop	Pest	Rate Per Acre Per Application
Brassica (Cole) Leafy Vegetables		
Head & Stem Brassica Broccoli Broccoli, Chinese Brussels sprouts Cabbage Cabbage, Chinese (napa) Cabbage, Chinese mustard Cauliflower Cavalo broccolo Kohlrabi Leafy Brassica Greens Broccoli raab Cabbage, Chinese (bok choy) Collards Kale Mizuna Mustard greens Mustard spinach Rape greens	Alfalfa Looper Aphids Beet Armyworm Cabbage Looper Cabbage Webworm Corn Earworm Diamondback Moth Fall Armyworm Flea Beetles Imported Cabbageworm Sugarbeet Armyworm Thrips Whiteflies Yellowstriped Armyworm	4.0 – 7.0 oz./A

Use Restrictions:

- **Maximum Voliam Flexi WG Allowed per Growing Season:** Do not exceed a total of 14.0 oz. of Voliam Flexi or 0.172 lb. a.i. of thiamethoxam containing products or 0.2 lb a.i. of chlorantraniliprole 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 for heavy infestations.
- **Pre-Harvest Interval (PHI):**
 3 Days for Head & Stem Brassicas
 7 Days for Leafy Brassica Greens
- **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 5 GPA for aerial applications.
- Adjuvants may be used with Voliam Flexi applications to Head and Stem Brassica.

Refer to Pollinator Precautions section.

Refer to Resistance Management section.

Crop	Pest	Rate Per Acre Per Application
<p>Cucurbit Vegetables Chayote Chinese waxgourd Citron melon Cucumber Gherkin Gourd, edible (hyotan, cucuzza, hechima, Chinese okra) <i>Momordica</i> species (balsam apple, balsam pear, bittermelon, Chinese cucumber) Muskmelon (hybrids and/or cultivars of <i>Cucumis melo</i>) includes true cantaloupe, cantaloupe, casaba, Crenshaw melon, golden pershaw melon, honeydew melon, honey balls, mango melon, Persian melon, pineapple melon, Santa Claus melon, and snake melon) Pumpkin Squash: summer (crookneck squash, scallop squash, straightneck squash, vegetable marrow, zucchini) and winter (butternut squash, calabaza, hubbard squash, acorn squash, spaghetti squash) Watermelon (includes hybrids and/or varieties of <i>Citrullus lanatus</i>)</p>	<p>Aphids Cabbage Looper Corn Earworm Cucumber Beetles¹ Flea Beetles Leafminers¹ Melonworm Pickleworm Rindworm species complex Tobacco Budworm Whiteflies</p>	<p>4.0 – 7.0 oz./A</p>

Use Restrictions:

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- **Application Timing:** Apply before pests reach damaging levels. Scout fields and treat again if populations rebuild to potentially damaging levels. Apply higher rates for heavy infestations.
- **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 5 GPA for aerial applications.
- **Do not** use an adjuvant with applications of Voliam Flexi to Cucurbit Vegetables, except on cucumber, Chinese waxgourd, gherkin and *Momordica* species.

¹Suppression

Refer to Pollinator Precautions section.

Refer to Resistance Management section.

Crop	Pest	Rate Per Acre Per Application
Fruiting Vegetables Eggplant Groundcherry Pepino Peppers (bell, cooking, pimento, and sweet) Tomatillo Tomato	Aphids Beet Armyworm Colorado Potato Beetle European Corn Borer Fall Armyworm Flea Beetles Hornworms Leafhoppers Leafminers ¹ Loopers Pepper Weevil Southern Armyworm Stinkbugs Tobacco Budworm Tomato Fruitworm Tomato Pinworm Whiteflies Yellowstriped Armyworm	4.0 – 7.0 oz./A

Use Restrictions:

- **Maximum Voliam Flexi WG Allowed per Growing Season:** Do not exceed a total of 14.0 oz. of Voliam Flexi or 0.172 lb. a.i. of thiamethoxam containing products or 0.2 lb a.i. of chlorantraniliprole 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 for heavy infestations.
- **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 5 GPA for aerial applications.
- **Do not** use an adjuvant with applications of Voliam Flexi to chili pepper or pimento.
- Adjuvants may be used with Voliam Flexi applications to eggplant, groundcherry, pepino, bell pepper, cooking pepper, sweet pepper, tomatillo, and tomato.

¹Suppression

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

Crop	Pest	Rate Per Acre Per Application
Grapes	Grape Berry Moth Grape Leaffolder Japanese Beetle Leafhoppers Mealybugs Omnivorous Leafroller <i>Phylloxera</i> species Sharpshooters Western Grapeleaf Skelotimizer	4.5 oz./A

Use Restrictions:

- **Maximum Voliam Flexi Allowed per Growing Season:** Do not exceed a total of 9.0 oz. of Voliam Flexi or 0.109 lb. a.i. of foliar applied thiamethoxam containing products or 0.2 lb. a.i. of chlorantraniliprole 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 for heavy infestations.
- **Pre-Harvest Interval (PHI):** 14 days
- **Minimum Interval between Applications:** 14 days.
- **Water Volume:** Use sufficient water volume to ensure thorough coverage of foliage. Do not use less than 30 or more than 200 GPA for ground applications. Use 5 GPA for aerial applications.
- **Do not** use an adjuvant with applications of Voliam Flexi to grapes.
- Make no more than 2 applications per season.

Refer to Pollinator Precautions section.

Refer to Resistance Management section.

Crop	Pest	Rate Per Acre Per Application
Leafy Vegetables Amaranth Arugula Cardoon Celery Celery, Chinese Celtuce Chervil Chrysanthemum: edible-leaved & garland Corn Salad Cress: garden and upland (yellow rocket, winter cress) Dandelion Dock (sorel) Endive (escarole) Fennel, Florence (finochio) Lettuce: head & leaf Orach Parsley Purslane: garden & winter Radicchio (red chicory) Rhubarb Spinach: New Zealand & Vine(Malabar, Indian) Swiss chard	Aphids Beet Armyworm Cabbage Looper Corn Earworm Diamondback Moth European Corn Borer Fall Armyworm Flea Beetles Imported Cabbageworm Leafhoppers Southern Armyworm Sugarbeet Armyworm Tobacco Budworm Whiteflies	4.0 – 7.0 oz./A

Use Restrictions:

- **Maximum Voliam Flexi WG Allowed per Growing Season:** Do not exceed a total of 14.0 oz. of Voliam Flexi or 0.172 lb. a.i. of thiamethoxam containing products or 0.2 lb a.i. of chlorantraniliprole 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 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 5 GPA for aerial applications.
- **Do not use an adjuvant with applications of Voliam Flexi to Spinach: New Zealand & Vine, Amaranth, Arugula, Chervil, Chrysanthemum: edible-leaved & garland, Corn Salad, Cress: Garden & upland, Dandelion, Dock, Endive, Orach, Parsley, Purslane: Garden & Winter.**

- Adjuvants may be used with Voliam Flexi applications to Lettuce: Head & Leaf, Celery, Chinese celery, Swiss chard, Cardoon, Celtuce, Fennel, Radicchio, and Rhubarb.

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

Crop	Pest	Rate Per Acre Per Application
Pome Fruit Apples Crabapples Loquat Mayhaw Quince Pear Oriental pear (<i>Pyrus pyrifolia</i>)	Codling Moth Green Fruitworm Leafhoppers Oblique Banded Leafroller Oriental Fruit Moth Spotted Tentiform Leafminer Tufted Apple Budmoth	4.0 – 7.0 oz./A
	Apple Aphid Apple Grain Aphid Comstock mealybug Green Peach Aphid Rosy Apple Aphid European Apple Sawfly Plum Curculio Leafminers Mullein Bug (<i>Campylomma</i> species)	6.0 – 7.0 oz./A
	Pear Psylla	7.0 oz./A

Use Restrictions

- **Maximum Voliam Flexi Allowed per Growing Season:** Do not exceed a total of 16.0 oz. of Voliam Flexi or 0.25 lb. a.i. of thiamethoxam containing products or 0.2 lb. a.i. of chlorantraniliprole containing products per acre per growing season.
- **Application Timing:** Apply before pests reach damaging levels. Apply higher rates for heavy infestations.
 - **Comstock mealybug:** Make application immediately following petal fall to control first generation crawlers.
 - **Leafminers:** To control first generation populations, make application immediately following petal fall. For control of second and third generations, make applications to coincide with egg deposition. Apply higher rates for heavy infestations.
 - **Plum curculio:** Make application immediately following petal fall. Apply higher rates for heavy infestations. Additional applications of a different insecticide may be necessary if pest pressure continues.
 - **Rosy apple aphid:** Apply when aphid colonies are first observed at the green tip through pink growth stage before leaf curling occurs.
- **Pre-Harvest Interval (PHI):** 35 days.
- **Minimum Interval Between Applications:** 10 days.
- **Water Volume:** Use sufficient water volume to ensure thorough coverage of foliage. For best results, apply 75-150 gallons water per acre. Do not apply dilute applications of more than 200 GPA.

- **Do not** apply by air.
- **Do not** use an adjuvant with applications of Voliam Flexi within 60 days of harvest in pome fruit.
- Make no more than 4 applications per season.

Refer to Pollinator Precautions section.

Refer to Resistance Management section.

Crop	Pest	Rate Per Acre Per Application
Potato	Aphids Beet Armyworm Cabbage Looper Colorado Potato Beetle European corn borer Flea Beetles Potato Leafhopper	4.0 oz./A

Use Restrictions:

- **Maximum Voliam Flexi Allowed per Growing Season:** Do not exceed a total of 8.0 oz. of Voliam Flexi or 0.094 lb. a.i. of foliar applied thiamethoxam containing products or 0.2 lb. a.i. of chlorantraniliprole 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 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 10 GPA for ground applications or 5 GPA for aerial applications.
- Do not apply Voliam Flexi more than once for Colorado Potato Beetle control via overhead chemigation.

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

Crop	Pest	Rate Per Acre Per Application
Stone Fruit Apricot Cherry, sweet & tart Nectarine Peach Plum Plum, Chickasaw Plum, Damson Plum, Japanese Plumcot Prune (fresh)	Aphids Codling Moth Green Fruitworm Leafhoppers Oriental Fruit Moth Peach Twig Borer	4.0 – 7.0 oz./A
	Cherry Fruit Fly Plum Curculio Stink Bugs Tarnished Plant Bug Thrips	6.0 – 7.0 oz./A

Use Restrictions:

- **Maximum Voliam Flexi Allowed per Growing Season:** Do not exceed a total of 14.0 oz. of Voliam Flexi or 0.172 lb. a.i. of thiamethoxam containing products or 0.2 lb a.i. of chlorantraniliprole 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 for heavy infestations.
- **Pre-Harvest Interval (PHI):** 14 days
- **Minimum Interval Between Applications:** 10 days
- **Water Volume:** Use sufficient water volume to ensure thorough coverage of foliage. For best results, apply 75-150 gallons water per acre. Do not apply dilute applications of more than 200 GPA.
- Do not apply by air.
- For sweet cherry and tart cherry: Do not use an adjuvant with applications of Voliam Flexi.
- Make no more than 3 applications per season.

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 any of the crops listed on this label. 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 rotational crops intended for food or feed, the plant-back intervals listed below must be observed

Immediate Plant-Back Interval:

All crops on this label plus the following: cotton, Root and Tuber Vegetables (Crop Group 1) except beet, sugar.

30- Day Plant Back Interval:

Legume vegetables (Crop Group 6), soybean, barley (ID, ND, OR, SD, and WA only), wheat, sorghum and strawberry.

120- Day Plant-Back Interval:

Tops of Root and Tuber Vegetables (Crop Group 2), Bulb Vegetables (Crop Group 3), Cereal Grains (Crop Group 15) except wheat, cowpea, pea, field, okra.

12 month Plant-Back Interval:

All other crops.

STORAGE AND DISPOSAL

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

Pesticide Storage

Store in a cool, dry place.

Pesticide Disposal


Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be used 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 in proper disposal methods.

For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes. In the event of a major spill, fire, or other emergency, call 1-800-888-8372, day or night.

Container Handling

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 a mix tank. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Offer for recycling if available 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.

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For non-emergency (e.g., current product information) call
Syngenta Crop Protection at 1-800-334-9481.

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

SCP 1319A-M(draft-b)

Voliam Flexi 1319M(draft-b)clean-lg-7-16-09 000100-01319.20090716.b.pdf

(Non-detachable container label)

VOLIAM® Flexi
Insecticide

GROUP 4A 28 INSECTICIDE

For control of listed insect pests infesting various crops

Active Ingredient:	
Thiamethoxam ¹	20.0%
Chlorantraniliprole ²	20.0%
Other Ingredients:	60.0%
Total:	100.0%

¹CAS No. 153719-23-4

²CAS No. 500008-45-7

Voliam Flexi is a water-dispersible granule.

KEEP OUT OF REACH OF CHILDREN.

CAUTION

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.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. Refer to supplemental labeling under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

EPA Reg. No. 100-1319
EPA Est. XXXXX

SCP 1319A-M(draft-b)

Net Weight

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

CAUTION

Causes moderate eye irritation. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling, and before drinking, eating, chewing gum, using tobacco, or using the toilet.

FIRST AID	
If in eyes	<ul style="list-style-type: none"> • 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.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	
<p>HOT LINE NUMBER For 24 Hour Medical Emergency Assistance (Human or Animal) or Chemical Emergency Assistance (Spill, Leak, Fire, or Accident), Call 1-800-888-8372</p>	

Environmental Hazards

This pesticide is toxic to wildlife and highly toxic to aquatic invertebrates, oysters and shrimp.

This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are foraging adjacent to the treatment area.

Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift or runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when cleaning equipment or disposing of equipment washwater.

STORAGE AND DISPOSAL

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

Pesticide Storage

Store in a cool, dry place.

Pesticide Disposal

Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be used 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 in proper disposal methods.

For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes. In the event of a major spill, fire, or other emergency, call 1-800-888-8372, day or night.

Container Handling

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 a mix tank. Fill the container $\frac{1}{4}$ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Offer for recycling if available 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.

Refer to Surface Water Advisory, Ground Water Advisory, Spray Drift Advisory, Chemigation and Physical or Chemical Hazards sections in booklet.

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Manufactured for:
Syngenta Crop Protection Inc.
P.O. Box 18300
Greensboro, NC 27419-8300

SCP 1319A-M(draft-b)

Voliam Flexi 1319M(draft-b)clean-ig-7-16-09 000100-01319.20090716.b.pdf

SUPPLEMENTAL LABEL



Syngenta Crop Protection, Inc.
P.O.Box 18300
Greensboro, NC 27419-8300

SUPPLEMENTAL LABEL FOR VOLIAM® FLEXI INSECTICIDE TO ADD:

- CHEMIGATION APPLICATION PROCEDURES FOR POTATOES ONLY
- DIRECTIONS FOR USE FOR BRASSICA (COLE) LEAFY VEGETABLES, CUCURBIT VEGETABLES, FRUITING VEGETABLES, AND LEAFY VEGETABLES.

Active Ingredient:	
Thiamethoxam ¹	20.0%
Chlorantraniliprole ²	20.0%
Other Ingredients:	60.0%
Total:	100.0%

¹CAS No. 153719-23-4
²CAS No. 500008-45-7

Voliam Flexi is a water-dispersible granule.

KEEP OUT OF REACH OF CHILDREN.

CAUTION

EPA Reg. No. 100-1319

SCP 1319A-S(draft-b supplemental)

All applicable directions, restrictions and precautions on the EPA-registered label must be followed.

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

ACCEPTED
with COMMENTS
In EPA Letter Dated:
JUL 16 2009
 Under the Federal Insecticide,
 Fungicide, and Rodenticide Act,
 as amended, for the pesticide
 registered under EPA Reg. No.
100-1319

DIRECTIONS FOR USE

APPLICATION THROUGH IRRIGATION SYSTEMS (CHEMIGATION) – POTATOES ONLY

Voliam Flexi alone or in combination with other products which are registered for application through sprinkler irrigation may be applied through irrigation systems. Apply this product only through center pivot, solid set, hand move, or moving wheel irrigation systems. Do not apply Voliam Flexi through any other type of irrigation system. Lack of effectiveness or illegal pesticide residues 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.

Using Water from Public Water Systems: DO NOT APPLY VOLIAM FLEXI THROUGH ANY IRRIGATION SYSTEM PHYSICALLY 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. Voliam Flexi may be applied through irrigation systems, which may be **supplied** by a public water system **only if** the water from the public water system is discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and to top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe. Before beginning chemigation, always make sure that the air gap exists and that there is no blockage of the overflow of the reservoir tank.

Any irrigation system using water supplied from a public water system must also meet the following requirements.

Operating Instructions for All Specified Types of Irrigation Systems

1. The system must be calibrated to uniformly apply the rates specified. If you have questions about calibration, contact State Extension Service specialists, equipment manufacturers, or other experts.
2. 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.
3. The pesticide injection pipeline must contain a functional, automatic, quick-closing check-valve to prevent the flow of fluid back toward the injection pump.
4. 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.
5. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
6. 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.
7. Systems must use a 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.
8. Do not apply when wind speed favors drift beyond the area intended.

Calibration and Application Instructions

Voliam Flexi must be applied under the schedule specified in the specific crop use directions, not according to the irrigation schedule unless the events coincide.

Set the equipment to apply the minimum amount of water per acre. Run the system at 85 - 90% of the manufacturer's maximum rated travel speed.

The following calibration and application techniques are provided for user reference, but do not constitute a warranty of fitness for application through sprinkler irrigation equipment. Check with state and local regulatory agencies for potential use restrictions before applying any agricultural chemical through sprinkler irrigation equipment.

Center Pivot Irrigation Equipment

Notes: (1) Use only drive systems that provide uniform water distribution. (2) Do not use end guns when chemigating Voliam Flexi through center pivot systems because of non-uniform application. (3) Plug the first nozzle closest to the well-head to protect the water source.

1. Determine the size of the area to be treated.
2. Determine the time required to apply 0.1 – 0.25 inches of water over the area to be treated when the system and injection equipment are operated at normal pressures as specified by the equipment manufacturer. Run the system at 80 - 95% of the manufacturer's rated maximum travel speed.
3. Using water, determine the injection pump output when operated at normal line pressure.
4. Determine the amount of Voliam Flexi, and any tank mix partners, required to treat the area covered by the irrigation system.
5. Add the required amount of Voliam Flexi, any tank mix partners, and sufficient water to meet the injection time requirements to the solution tank. (See **Mixing Procedures** section in booklet.)
6. Make sure the system is fully charged with water before starting injection of the Voliam Flexi solution. Time the injection to last at least as long as it takes to bring the system to full pressure.
7. Maintain constant agitation in the solution tank during the injection period.
8. Inject the specified amount of Voliam Flexi per acre continuously for one complete revolution of the system.
9. Stop the injection equipment after treatment is completed. Continue to operate the system until the Voliam Flexi solution has cleared all of the sprinkler heads.
10. Allow time for all lines to flush the pesticide through all nozzles before turning off irrigation water.

Solid Set, Hand Move, and Moving Wheel Irrigation Equipment

1. Determine the acreage covered by the sprinklers.
2. Fill injector solution tank with plain water and calibrate the flow rate of the system to deliver the contents of the tank over a 20-40 minute time interval.
3. Determine the amount of Voliam Flexi required to treat the area covered by the irrigation system.
4. Add the required amount of Voliam Flexi, and any other tank mix partners, into the same quantity of water used to calibrate the injection period. (See **Mixing Procedures** section in booklet.)

5. Operate the system at the same pressure and time interval established during the calibration.
6. Inject specified amount of Voliam Flexi per acre for either a 20-40 minute period at the end of a regular irrigation set, or as a 20-40 minute injection as a separate application not associated with a regular irrigation to maximize retention of the insecticide by the foliage.
7. Stop injection equipment after treatment is completed. Continue to operate the system until the Voliam Flexi solution has cleared the last sprinkler head. To ensure lines are flushed and free from remaining pesticides, a dye indicator may be injected into the lines to mark the end of the application period.

CROP USE DIRECTIONS

Crop	Pest	Rate Per Acre Per Application
Brassica (Cole) Leafy Vegetables		
Head & Stem Brassica Broccoli Broccoli, Chinese Brussels sprouts Cabbage Cabbage, Chinese (napa) Cabbage, Chinese mustard Cauliflower Cavalo broccolo Kohlrabi Leafy Brassica Greens Broccoli raab Cabbage, Chinese (bok choy) Collards Kale Mizuna Mustard greens Mustard spinach Rape greens	Alfalfa Looper Aphids Beet Armyworm Cabbage Looper Cabbage Webworm Corn Earworm Diamondback Moth Fall Armyworm Flea Beetles Imported Cabbageworm Sugarbeet Armyworm Thrips Whiteflies Yellowstriped Armyworm	4.0 - 7.0 oz./A

Use Restrictions:

- **Maximum Voliam Flexi WG Allowed per Growing Season:** Do not exceed a total of 14.0 oz. of Voliam Flexi or 0.172 lb. a.i. of thiamethoxam containing products or 0.2 lb a.i. of chlorantraniliprole 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 for heavy infestations.
- **Pre-Harvest Interval (PHI):**
 3 Days for Head & Stem Brassicas
 7 Days for Leafy Brassica Greens
- **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 5 GPA for aerial applications.
- Adjuvants may be used with Voliam Flexi applications to Head and Stem Brassica.

Refer to Pollinator Precautions section in booklet.

Refer to Resistance Management section in booklet.

Crop	Pest	Rate Per Acre Per Application
Cucurbit Vegetables Chayote Chinese waxgourd Citron melon Cucumber Gherkin Gourd, edible (hyotan, cucuzza, hechima, Chinese okra) <i>Momordica</i> species (balsam apple, balsam pear, bittermelon, Chinese cucumber) Muskmelon (hybrids and/or cultivars of <i>Cucumis</i> <i>melo</i>) includes true cantaloupe, cantaloupe, casaba, Crenshaw melon, golden pershaw melon, honeydew melon, honey balls, mango melon, Persian melon, pineapple melon, Santa Claus melon, and snake melon) Pumpkin Squash: summer (crookneck squash, scallop squash, straightneck squash, vegetable marrow, zucchini) and winter (butternut squash, calabaza, hubbard squash, acorn squash, spaghetti squash) Watermelon (includes hybrids and/or varieties of <i>Citrullus lanatus</i>)	Aphids Cabbage Looper Corn Earworm Cucumber Beetles ¹ Flea Beetles Leafminers ¹ Melonworm Pickleworm Rindworm species complex Tobacco Budworm Whiteflies	4.0 – 7.0 oz./A

Use Restrictions:

- **Maximum Voliam Flexi WG Allowed per Growing Season:** Do not exceed a total of 14.0 oz. of Voliam Flexi or 0.172 lb. a.i. of thiamethoxam containing products or 0.2 lb. a.i. of chlorantraniliprole 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 for heavy infestations.
- **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 5 GPA for aerial applications.
- **Do not** use an adjuvant with applications of Voliam Flexi to Cucurbit Vegetables, except on cucumber, Chinese waxgourd, gherkin and *Momordica* species.

¹Suppression

Refer to Pollinator Precautions section in booklet.

Refer to Resistance Management section in booklet.

Crop	Pest	Rate Per Acre Per Application
Fruiting Vegetables Eggplant Groundcherry Pepino Peppers (bell, cooking, pimento, and sweet) Tomatillo Tomato	Aphids Beet Armyworm Colorado Potato Beetle European Corn Borer Fall Armyworm Flea Beetles Hornworms Leafhoppers Leafminers ¹ Loopers Pepper Weevil Southern Armyworm Stinkbugs Tobacco Budworm Tomato Fruitworm Tomato Pinworm Whiteflies Yellowstriped Armyworm	4.0 – 7.0 oz./A

Use Restrictions:

- **Maximum Voliam Flexi WG Allowed per Growing Season:** Do not exceed a total of 14.0 oz. of Voliam Flexi or 0.172 lb. a.i. of thiamethoxam containing products or 0.2 lb a.i. of chlorantraniliprole 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 for heavy infestations.
- **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 5 GPA for aerial applications.
- **Do not use an adjuvant with applications of Voliam Flexi to chili pepper or pimento.**
- Adjuvants may be used with Voliam Flexi applications to eggplant, groundcherry, pepino, bell pepper, cooking pepper, sweet pepper, tomatillo, and tomato.

¹Suppression

Refer to Pollinator Precautions section in booklet.

Refer to Resistance Management section in booklet.

Crop	Pest	Rate Per Acre Per Application
Leafy Vegetables	Aphids	4.0 – 7.0 oz./A
Amaranth	Beet Armyworm	
Arugula	Cabbage Looper	
Cardoon	Corn Earworm	
Celery	Diamondback Moth	
Celery, Chinese	European Corn Borer	
Celtuce	Fall Armyworm	
Chervil	Flea Beetles	
Chrysanthemum:	Imported Cabbageworm	
edible-leaved & garland	Leafhoppers	
Corn Salad	Southern Armyworm	
Cress: garden and upland	Sugarbeet Armyworm	
(yellow rocket, winter	Tobacco Budworm	
cress)	Whiteflies	
Dandelion		
Dock (sorel)		
Endive (escarole)		
Fennel, Florence (finocchio)		
Lettuce: head & leaf		
Orach		
Parsley		
Purslane: garden & winter		
Radicchio (red chicory)		
Rhubarb		
Spinach: New Zealand &		
Vine(Malabar, Indian)		
Swiss chard		

Use Restrictions:

- **Maximum Voliam Flexi WG Allowed per Growing Season:** Do not exceed a total of 14.0 oz. of Voliam Flexi or 0.172 lb. a.i. of thiamethoxam containing products or 0.2 lb a.i. of chlorantraniliprole 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 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 5 GPA for aerial applications.
- **Do not** use an adjuvant with applications of Voliam Flexi to Spinach: New Zealand & Vine, Amaranth, Arugula, Chervil, Chrysanthemum: edible-leaved & garland, Corn Salad, Cress: Garden & upland, Dandelion, Dock, Endive, Orach, Parsley, Purslane: Garden & Winter.
- Adjuvants may be used with Voliam Flexi applications to Lettuce: Head & Leaf, Celery, Chinese celery, Swiss chard, Cardoon, Celtuce, Fennel, Radicchio, and Rhubarb.

Refer to Pollinator Precautions section in booklet.

Refer to Resistance Management section in booklet.

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