

**U.S. ENVIRONMENTAL PROTECTION AGENCY**

**Office of Pesticide Programs  
Registration Division (7505P)  
Ariel Rios Building  
1200 Pennsylvania Ave., NW  
Washington, D.C. 20460**

EPA Reg. Number:

**62719-666**

Date of Issuance:

**JUL 22 2013**

**NOTICE OF PESTICIDE:**

Registration  
 Reregistration  
(under FIFRA, as amended)

Term of Issuance: **Conditional**

Name of Pesticide Product:

**GF-3028**

Name and Address of Registrant (include ZIP Code):

**Dow AgroSciences LLC  
9330 Zionsville Road  
Indianapolis, IN 46268**

**Note:** Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act. Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on her motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

The Basic Confidential Statement of Formulas (CSFs) dated 14 September 2012 are acceptable.

This product is conditionally registered in accordance with FIFRA section 3(C)(7)(A), provided that you:

1. Submit and/or cite all data required for reregistration/registration review of your product under FIFRA when the Agency requires all registrants of similar products to submit such data. See the data requirements already issued for Spinetoram in the attached DCI ID# GDCI-110008-1143 issued on 10/19/2012.
2. Assure that the establishment number and net contents are added to the final printed label.

You must submit one (1) copy of the final printed label before you release the product for shipment. Products released for shipment after eighteen (18) months from the date of this letter must bear the new label. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA §6(e). Your release for shipment of the product constitutes acceptance of these conditions.

If you have any questions regarding this notice, please contact Melody Banks of my staff at 703-305-5413 or [banks.melody@epa.gov](mailto:banks.melody@epa.gov).

Signature of Approving Official:

Mark Suarez, Product Manager 13  
Insecticide Branch  
Registration Division (7505P)

Date:

**JUL 22 2013**

Q9K / GF-3028 / Prop Sec 3 MSTR / 07-22-13  
file: GF-3028-666 MSTR 22Jul13d.doc

# GF-3028

EPA Reg. No. 62719-666

## Registration Notes:

Proposed Section 3 label.

®Trademark of The Dow Chemical Company ("Dow") or an affiliated company of Dow

**ACCEPTED**  
JUL 22 2013  
Under the Federal Insecticide,  
Fungicide, and Rodenticide Act,  
as amended, for the pesticide  
registered under  
EPA Reg. No. 62719-666

(Base label):

# GF-3028

## INSECTICIDE

<b>Group</b>	<b>5</b>	<b>18</b>	<b>INSECTICIDE</b>
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### Active Ingredients:

methoxyfenozide: Benzoic acid, 3-methoxy-2-methyl-2-(3,5-dimethylbenzoyl)-2-(1,1-dimethylethyl) hydrazide .....	28.30%
spinetoram (a mixture of spinetoram-J and spinetoram-L) .....	5.66%
Other Ingredients .....	66.04%
Total .....	100.00%

Contains 2.5 lb methoxyfenozide and 0.5 lb spinetoram per gallon

**Keep Out of Reach of Children**

## CAUTION

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### Precautionary Statements

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#### Hazards to Humans and Domestic Animals

**Causes Moderate Eye Irritation. Avoid contact with eyes or clothing. Wear protective eyewear. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.**

**Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.**

#### Personal Protective Equipment (PPE)

**Applicators and other handlers must wear:**

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks

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

#### Engineering Controls

When handlers use closed systems, enclosed cabs or aircraft in a manner that meet the requirements listed in the Worker Protection Standards (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 contaminated clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

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#### First Aid

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**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.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-992-5994 for emergency medical treatment information.

### Environmental Hazards

This product is toxic to aquatic invertebrates. Drift and runoff from applications of this product may be hazardous to sensitive aquatic invertebrates in water bodies adjacent to the treatment area.

This product is toxic to bees exposed to treatment for 3 hours following treatment.

This product has properties and characteristics associated with chemicals detected in groundwater. The use of this product in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. This product can contaminate surface water through spray drift. Under some conditions, this product may also have a high potential for runoff into surface water (primarily via dissolution in runoff water) for several months post-application. These include poorly draining or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, areas overlying extremely shallow groundwater, areas with in-field canals or ditches that drain to overlaying tile drainage systems that drain to surface water.

#### Restrictions:

- Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark.
- Do not contaminate water when cleaning equipment or disposing of equipment washwaters.
- Do not apply this pesticide to blooming, pollen-shedding or nectar-producing parts of plants if bees may forage on the plants during this time period.
- Do not apply where runoff is likely to occur.
- Do not apply when weather conditions favor drift from treated areas.
- Do not cultivate within 10 feet of aquatic areas to allow growth of a vegetative filter strip.
- Do not apply by ground within 25 feet, or by air within 150 feet, of lakes, reservoirs, rivers, permanent streams, marshes, or natural ponds; estuaries and commercial fish farm ponds.
- Apply only as specified on the label.

### Agricultural Use Requirements

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

#### (Storage and Disposal for rigid containers 5 gal or less)

### Storage and Disposal

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

**Pesticide Storage:** Store in a cool dry well-ventilated area, but not below 32°F.

**Pesticide Disposal:** Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

**Container Handling:** Nonrefillable container. Do not reuse or refill this container.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at

about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

**(Storage and Disposal for refillable rigid containers larger than 5 gal)**

**Storage and Disposal**

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

**Pesticide Storage:** Store in a cool dry well-ventilated area, but not below 32°F.

**Pesticide Disposal:** Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

**Container Handling:** Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose.

Cleaning the container before final disposal is the responsibility of the person disposing of the container.

*Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water and, if possible, spray all sides while adding water. If practical, agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.*

**(Storage and Disposal for nonrefillable rigid containers larger than 5 gal)**

**Storage and Disposal**

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

**Pesticide Storage:** Store in a cool dry well-ventilated area, but not below 32°F.

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**Container Handling:** Nonrefillable container. Do not reuse or refill this container.

Triple rinse or pressure 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. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

**Refer to label booklet for Directions for Use.**

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

In case of emergency endangering health or the environment involving this product, call 1-800-992-5994.

Agricultural Chemical: Do not ship or store with food, feeds, drugs or clothing.

Shake Well Before Use – Avoid Freezing

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**Produced for  
Dow AgroSciences LLC  
9330 Zionsville Road  
Indianapolis, IN 46268**

**NET CONTENTS \_\_**

(Label booklet cover):

# GF-3028

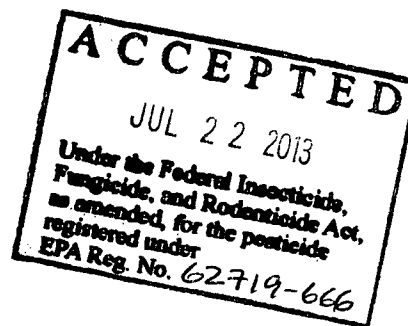
## INSECTICIDE

Group	5	18	INSECTICIDE
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Other Ingredients .....	66.04%
Total .....	100.00%

Contains 2.5 lb methoxyfenozide and 0.5 lb spinetoram per gallon



Keep Out of Reach of Children

## CAUTION

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Refer to inside of label booklet for additional precautionary information including Directions for Use.

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EPA Est. \_\_\_\_\_

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**Precautionary Statements**

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**Hazards to Humans and Domestic Animals****CAUTION**

**Causes Moderate Eye Irritation. Avoid contact with eyes or clothing. Wear protective eyewear. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.**

**Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.**

**Personal Protective Equipment (PPE)**

**Applicators and other handlers must wear:**

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks

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.

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When handlers use closed systems, enclosed cabs or aircraft in a manner that meet the requirements listed in the Worker Protection Standards (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.

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This product is toxic to aquatic invertebrates. Drift and runoff from applications of this product may be hazardous to sensitive aquatic invertebrates in water bodies adjacent to the treatment area.

This product is toxic to bees exposed to treatment for 3 hours following treatment.

This product has properties and characteristics associated with chemicals detected in groundwater. The use of this product in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. This product can contaminate surface water through spray drift.

Under some conditions, this product may also have a high potential for runoff into surface water (primarily via dissolution in runoff water) for several months post-application. These include poorly draining or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, areas overlying extremely shallow groundwater, areas with in-field canals or ditches that drain to overlying tile drainage systems that drain to surface water.

**Restrictions:**

- Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark.
- Do not contaminate water when cleaning equipment or disposing of equipment washwaters.
- Do not apply this pesticide to blooming, pollen-shedding or nectar-producing parts of plants if bees may forage on the plants during this time period.
- Do not apply where runoff is likely to occur.
- Do not apply when weather conditions favor drift from treated areas.
- Do not cultivate within 10 feet of aquatic areas to allow growth of a vegetative filter strip.
- Do not apply by ground within 25 feet, or by air within 150 feet, of lakes, reservoirs, rivers, permanent streams, marshes, or natural ponds; estuaries and commercial fish farm ponds.
- Apply only as specified on the label.

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**Directions for Use**

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It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Read all Directions for Use carefully before applying.

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.

**Not for Sale, Use, or Distribution in Nassau County and Suffolk County in New York State.**

**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 4 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
- Shoes plus socks

**Storage and Disposal**

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

**Pesticide Storage:** Store in a cool dry well-ventilated area, but not below 32°F.

**Pesticide Disposal:** Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

**Nonrefillable containers 5 gallons or less:**

**Container Handling:** Nonrefillable container. Do not reuse or refill this container.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after

the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

**Refillable containers 5 gallons or larger:**

**Container Handling:** Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose.

Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water and, if possible, spray all sides while adding water. If practical, agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

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Triple rinse or pressure 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. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

## Integrated Pest Management (IPM) Programs

GF-3028 is recommended for IPM programs in labeled crops. Apply GF-3028 when field scouting indicates target pest densities have reached the economic threshold, i.e., the point at which the insect population must be reduced to avoid economic losses beyond the cost of control. Other than reducing the target pest species as a food source, GF-3028 does not have a significant impact on certain parasitic insects or the natural predaceous arthropod complex in treated crops, including big-eyed bugs, ladybird beetles, flower bugs, lacewings, minute pirate bugs, damsel bugs, assassin bugs, predatory mites or spiders. The feeding activities of these beneficials will aid in natural control of other insects and reduce the likelihood of secondary pest outbreaks. If GF-3028 is tank mixed with any insecticide that reduces its selectivity in preserving beneficial predatory insects, the full benefit of GF-3028 in an IPM program may be reduced.

Consult your Dow AgroSciences representative, extension specialist, certified crop advisor or your state agricultural experiment station for any additional local use recommendations for your area.

## Insecticide Resistance Management

GF-3028 contains a Group 5 insecticide and a Group 18 insecticide. Insect biotypes with acquired resistance to Group 5 or Group 18 insecticides may eventually dominate the insect population if Group 5 or Group 18 insecticides are used repeatedly in the same field or area, or in successive years as the primary method of control for targeted species. This may result in partial or total loss of control of those species by GF-3028 or other Group 5 or Group 18 insecticides.

Do not use GF-3028 to control thrips, Colorado potato beetle, or pear psylla.

To delay development of insecticide resistance:

- Carefully follow the specific label guidelines within the use directions sections of this label, especially in regard to IRM recommendations.
- Avoid use of the same active ingredient or mode of action (same insecticide group) on consecutive generations of insects. However, multiple applications to reduce a single generation are acceptable. Treat the next generation with a different active ingredient that has a different mode of action or use no treatment for the next generation.
- Avoid using less than labeled rates of any insecticide when applied alone or in tank mixtures.
- Target applications against early insect developmental stages whenever possible.
- Base insecticide use upon comprehensive IPM programs.
- Monitor treated insect populations in the field for loss of effectiveness.
- Consider tank mixtures or premix products containing insecticides with different modes of action (different insecticide groups) provided the products are registered for the intended use.
- Do not treat seedling plants grown for transplant in greenhouses, shade houses, or field plots.
- Contact your local extension specialist, certified crop advisor, and/or manufacturer for insecticide resistance management and/or IPM recommendations for the specific site and resistant pest problems.
- For further information or to report suspected resistance, you may contact Dow AgroSciences by calling 800-258-3033.

### Use Rate Determination

Carefully read, understand and follow label use rates and restrictions. Apply the required amount of GF-3028 with properly calibrated aerial or ground spray equipment that has been adjusted to deliver thorough, uniform coverage. Prepare only the amount of spray solution required to treat the measured acreage. Use lower rates in the rate range for light infestations of the target pest species and use higher rates in the rate range for moderate to heavy infestations. Use the specified amount of GF-3028 per acre regardless of the spray volume used.

### Mixing Directions

Always shake well before use. Avoid freezing.

Application Rate Reference Table

Application Rate of GF-3028 (fl oz/acre)	Methoxyfenozide Active Ingredient Equivalent (lb ai/acre)	Spinetoram Active Ingredient Equivalent (lb ai/acre)	Acres per Gallon of GF-3028
4	0.078	0.016	32.0
5	0.098	0.020	25.6
6	0.117	0.023	21.3
7	0.137	0.027	18.3
8	0.156	0.031	16.0
9	0.176	0.035	14.2
10	0.195	0.039	12.8
11	0.215	0.043	11.6
12	0.234	0.047	10.7
13	0.254	0.051	9.8
14	0.274	0.055	9.1
15	0.293	0.059	8.5
16	0.313	0.063	8.0
17	0.332	0.066	7.5
18	0.352	0.070	7.1

GF-3028 - Alone

Fill the spray tank one-third to one-half full of clean water. Start agitation and and slowly pour the required amount of GF-3028 into the spray tank. Continue agitation while mixing and filling the spray tank to the required spray volume. Maintain sufficient agitation during application to ensure uniformity of the spray mix. Do not allow water or spray mixture to back-siphon into the water source.

**GF-3028 - Tank Mix**

When tank mixing GF-3028 with other materials, a compatibility test (jar test) using relative proportions of the tank mix ingredients should be conducted prior to mixing ingredients in the spray tank. If foliar fertilizers are used, the jar test should be repeated with each batch of fertilizer utilizing the mixing water source. Do not use acidifying buffering agents in tank mixes with GF-3028. Vigorous, continuous agitation during mixing, filling and throughout application is required for all tank mixes. Sparger pipe agitators generally provide the most effective agitation in spray tanks. To prevent foaming in the spray tank, avoid stirring or splashing air into the spray mixture.

**Mixing Order for Tank Mixes:** Fill the spray tank with water to one-fourth to one-third of the required spray volume. Start agitation. Add different formulation types in the order indicated below, allowing time for complete dispersion and mixing after addition of each product. Allow extra dispersion and mixing time for dry flowable products.

Add different formulation types in the following order:

- 1. Water dispersible granules
- 2. Wettable powders
- 3. GF-3028 and other aqueous suspensions

Maintain agitation and fill spray tank to three-fourths of total spray volume. Then add:

- 4. Emulsifiable concentrates and water-based solutions
- 5. Spray adjuvants
- 6. Foliar fertilizers

Finish filling the spray tank. Maintain continuous agitation during mixing, final filling and throughout application. If spraying and agitation must be stopped before the spray tank is empty, the materials may settle to the bottom. Settled materials must be resuspended before spraying is resumed. A sparger agitator is particularly useful for this purpose.

**Premixing:** Dry and flowable formulations may be premixed with water (slurried) and added to the spray tank through a 20 to 35 mesh screen. This procedure assures good initial dispersion of these formulation types.

**Spray Tank pH:** A spray tank pH between 5 and 9 is suggested to achieve maximum performance of GF-3028. If the water source is outside of this pH range, or tank mixing other pesticides, adjuvants, or foliar nutrients will cause the pH to fall outside this range, consider adjusting the spray tank pH to be between 5 and 9 before adding GF-3028. To do this, add all other tank mix components first, then check the spray tank pH and adjust if desired, and then add GF-3028. If you require additional information on how to adjust spray tank pH, contact your Dow AgroSciences representative.

**Use of Adjuvants:** Adjuvants may be used to improve control of lepidopterous leafminers in situations where achieving uniform plant coverage is difficult such as a closed crop canopy, or dense foliage), or penetration into waxy leaf surfaces is required.

- Use only adjuvant products labeled for agricultural use and follow the manufacturer's label directions. A nominal concentration of 1 to 2 quarts per 100 gallons (0.25 to 0.5% v/v) is generally sufficient.
- When using adjuvants, always conduct a jar test to determine the compatibility of the various components in the spray mixture. Crop safety should be evaluated in a small area of the crop whenever there is a significant change in spray mixture ingredients or source of water for the spray mixture.
- Do not use diesel fuel or pure mineral oil.
- When an adjuvant is to be used with this product, Dow AgroSciences recommends the use of a

Chemical Producers and Distributors Association certified adjuvant.

**Application Timing**

The optimum timing of application for GF-3028 depends upon the feeding behavior of the target pest. For cryptic (internal) feeding larvae, application must be made prior to the time that surface feeding occurs, i.e., just before initiation of egg hatch. For foliar or surface feeding larvae, application may be made while active feeding is occurring.

Reapplication may be required to protect new flushes of foliage, or rapidly expanding fruit, and for extended infestations. The reapplication interval will vary depending upon how rapidly the crop is growing, the generation time of the target pest and the duration of the infestation.

GF-3028 is effective against all larval instars; however, it is good practice to make applications to early instars to minimize feeding damage. For best results, begin applications when threshold levels of moths, eggs or larvae occur. Consult the Cooperative Extension Service, or other qualified professional authorities, to determine the appropriate threshold and timing for application in your area.

**Application Directions**

Applications must be in a manner that assures uniform and thorough coverage. Higher water volume and increased spray pressure generally provide better coverage.

Proper application techniques help ensure thorough spray coverage and correct dosage for optimum insect control. The following directions are provided for ground and aerial application of GF-3028. Attention should be given to sprayer speed and calibration, wind speed, and foliar canopy to ensure adequate spray coverage.

Do not apply GF-3028 in greenhouses or other enclosed structures used for growing crops.

**Spray Drift Management**

Adhere to the following buffer zones when applying this product near aquatic habitats (such as lakes, reservoirs, rivers, permanent streams, marshes, or natural ponds; estuaries and commercial fish farm ponds):

Application Method	Buffer Zone (feet)
ground boom	25
overhead chemigation	25
airblast	25
aerial	150

**Wind:** Only apply this product if the wind direction favors on-target deposition. Do not apply when the wind velocity exceeds 10 mph. Wind speed must be measured adjacent to the application site on the upwind side, immediately prior to application.

**Temperature Inversions:** Do not make ground or aerial applications during a temperature inversion. Temperature 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 ASABE (S572.1) definition for standard nozzles. In conditions of low humidity and high temperatures, use a coarser droplet size except where indicated for specific crops.

**Ground Application**

Use calibrated power-operated ground spray equipment capable of providing uniform coverage of the target crop. Orient the boom and nozzles to obtain uniform crop coverage. Apply in a minimum of 5 to 10 gallons per acre (gpa), increasing volume with crop size and/or pest infestation level. Use hollow cone, twin jet flat fan nozzles or other atomizer suitable for insecticide spraying to provide a fine to coarse spray quality (per ASABE S-572.1, see nozzle catalogs). Under certain conditions, drop nozzles may be required to obtain complete coverage of plant surfaces. Follow manufacturer's specifications for ideal nozzle spacing and spray pressure. Minimize boom height to optimize uniformity of coverage and optimize deposition (on-target deposition) to reduce drift.

To avoid drift and achieve maximum performance of this product, make ground applications when the wind velocity favors on-target product depositions (3 to 10 mph). Wind speed must be measured adjacent to the application site on the upwind side immediately prior to application. Do not apply when wind velocity exceeds 10 mph.

**Airblast Sprayer:** When using an airblast sprayer, coverage is also improved by operation of the sprayer at ground speeds that assure that the air volume within the tree canopy is completely replaced by the output from the airblast sprayer. Making applications in an alternate row middle pattern may result in less than satisfactory coverage and poor performance in conditions of high pest infestation levels, extremely large trees and/or dense foliage. 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.

#### **Orchard, Tree and Vine Application**

Apply GF-3028 in a manner that achieves uniform coverage of the entire crop canopy but not past the point of runoff. For optimum control of target pests, complete and uniform spray coverage is essential. The spray volume required to achieve complete and uniform coverage will depend upon tree size and shape, leaf size, and density, and the application equipment used. To determine the required spray volume per acre, contact your state agricultural experiment station, certified pest control advisor, or extension specialist for assistance. Use of tree row volume is appropriate.

#### **Groundboom Application**

For groundboom applications, apply using a nozzle height of no more than 4 feet above the ground or crop canopy and turn off outward pointing nozzles at row ends and when spraying the outer two rows. To minimize spray loss over the top of the crop canopy, direct spray into the canopy. Calibrate airblast application equipment and operate in a manner that achieves full displacement of the air within the crop canopy with air containing spray droplets. Risk of exposure to sensitive aquatic areas can be reduced by avoiding applications when wind directions are toward the aquatic area.

#### **Aerial Application**

Insect control by aerial application may be less than control by ground application because of reduced coverage. Nozzle configuration should provide a medium to fine droplet size per ASABE S-572.1 standard (see USDA-ARS or NAAA handbook). Boom length must be less than 75% of wing or 85% of rotor span and swath adjustment (offset) to compensate for crosswinds. Do not release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety. Use GPS equipment, swath markers or flagging to ensure proper application to the target area. Configure the boom nozzle used (e.g., at NAAA/Operation Safe Fly-In) for both crosswind and near parallel winds. If application is made parallel to the wind direction, adjust swath width downward. Use swath adjustment (offset) to compensate for crosswinds. Do not apply under completely calm wind conditions. It is best to apply when wind speed is between 2 to 10 mph. Under conditions of low humidity and high temperatures, adjust spray volume and droplet size upward to compensate for evaporation of spray droplets.

#### **Chemigation Application**

GF-3028 may be applied through properly equipped chemigation systems for insect control in cranberries. Follow use directions for cranberries in the Uses section of this label. Do not apply this product by chemigation to other labeled crops except as specified in Dow AgroSciences supplemental labeling.

**General Directions for Sprinkler Chemigation:** GF-3028 may be applied through overhead sprinkler irrigation systems that will apply water uniformly, including center pivot, lateral move, end tow, side (wheel) roll, traveler, solid set, micro sprinkler, or hand move. Do not apply this product through any other type of irrigation system. Sprinkler systems that deliver a low coefficient of uniformity such as certain water drive units are not recommended.

For continuously moving systems, the mixture containing GF-3028 must be injected continuously and uniformly into the irrigation water line as the sprinkler is moving. If continuously moving irrigation equipment is used, apply in no more than 0.25 inch of water. For irrigation systems that do not move during operation, apply in no more than 0.25 inch of irrigation immediately before the end of the irrigation cycle.

**Chemigation Preparation:** The following use directions are to be followed when this product is applied through sprinkler irrigation systems. Thoroughly clean the chemigation system and tank of any fertilizer or chemical residues, and dispose of the residues according to state and federal laws. Flush the injection system with soap or a cleaning agent and water. Determine the amount of GF-3028 needed to cover the desired acreage. Mix according to instructions in the Mixing Directions section above. Continually agitate the mixture during mixing and application.

**Chemigation Equipment Calibration:** In order to calibrate the irrigation system and injector to apply the mixture containing GF-3028, determine the following: 1) Calculate the number of acres irrigated by the system; 2) Calculate the amount of product required and premix; 3) Determine the irrigation rate and determine the number of minutes for the system to cover the intended treatment area; 4) Calculate the total gallons of insecticide mixture needed to cover the desired acreage. Divide the total gallons of insecticide mixture needed by the number of minutes (minus time to flush out) to cover the treatment area. This value equals the gallons per minute output that the injector or eductor must deliver. Convert the gallons per minute to milliliters or ounces per minute if needed. Calibrate the injector system with the system in operation at the desired irrigation rate. It is suggested that the injection pump/system be calibrated at least twice before operation and that the system should be monitored during operation.

**Chemigation Operation:** Start the water pump and irrigation system and let the system achieve the desired pressure and speed before starting the injector. Check for leaks and uniformity and make repairs before any chemigation takes place. Start the injection system and calibrate according to manufacturer's specifications. This procedure is necessary to deliver the desired rate per acre in a uniform manner. When the application is finished, allow the entire irrigation and injection system to be thoroughly flushed clean before stopping the system.

**Chemigation Precautions:**

- Lack of effectiveness or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.
- If you have questions about calibration, contact state extension service specialists, equipment manufacturers or other experts.
- Do not connect an irrigation system used for pesticide application (including greenhouse systems) to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place with current certification. Specific local regulations may apply and must be followed.
- A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall operate the system and make necessary adjustments should the need arise and continuously monitor the injection.
- Do not apply when wind speed favors drift beyond the area intended for treatment. End guns must be turned off during the application if they irrigate nontarget areas.
- Do not allow irrigation water to collect or run off and pose a hazard to livestock, wells, or adjoining crops.
- Do not enter treated area during the reentry interval specified in the Agricultural Use Requirements section of this label unless required PPE is worn.
- Do not apply through sprinkler systems that deliver a low coefficient of uniformity such as certain water drive units.



**Chemigation Specific Equipment Requirements:**

- The system must contain an air gap or approved backflow prevention device, or approved functional check valve, vacuum relief valve (including inspection port), and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from back flow. Refer to the American Society of Agricultural Engineer's Engineering Practice 409 for more information or state specific regulations.
- The pesticide injection line must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection chemical supply.
- A pesticide injection pump must also contain a functional interlock, e.g., mechanical or electrical to shut off chemical supply when the irrigation system is either automatically or manually shut down.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection when the water pressure drops too low or water flow stops.
- Use of public water supply requires approval of a backflow prevention device or air gap (preferred) by both state and local authorities.
- Systems must use a metering device, such as a positive displacement injection pump (or flow meter on eductor) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock. An electric powered pump must meet Section 675 for "Electrically Driven or Controlled Irrigation Machines" NEC 70.
- To insure uniform mixing of the insecticide in the water line, inject the mixture in the center of the pipe diameter or just ahead of an elbow or tee in the irrigation line so that the turbulence created at those points will assist in mixing. The injection point must be located after all backflow prevention devices on the water line.
- The tank holding the insecticide mixture should be free of rust, fertilizer, sediment, and foreign material, and equipped with an in-line strainer situated between the tank and the injection point.

**Rainfastness**

As soon as dry, GF-3028 will resist wash-off. However, efficacy or residual control may be reduced with exposure to rainfall or overhead irrigation.

**Endangered Species**

The following applies to use of this product in Michigan (Allegan, Monroe, Montcalm, Muskegon, Newaygo, or Oceana counties) or Wisconsin (Adams, Burnett, Chippewa, Clark, Door, Eau Claire, Green Lake, Jackson, Juneau, Marquette, Monroe, Polk, Portage, Waupaca, Waushara, or Wood counties). This product may have effects on endangered species. When using this product, you must follow the measures contained in the Endangered Species Protection Bulletin for the county in which you are applying the product. To obtain Bulletins, no more than six months before using this product, consult <http://www.epa.gov/esp/> or call 1-800-447-3813. You must use the Bulletin valid for the month in which you will apply the product.

**Rotational Crop Restrictions**

The following rotational crops may be planted at intervals defined below following the final application of GF-3028 at specified rates for a registered use.

Crop	Re-Planting Interval
crops registered for use	no restrictions
all other crops grown for food or feed	30 days

**Note:** When using GF-3028 with other registered pesticides, always refer to rotational restrictions and precautions on the other product's label and comply with the most restrictive rotational guidelines.

**Uses**

**Brassica (Cole) Leafy Vegetables (Crop Group 5)<sup>1</sup>**  
(Not registered in New York)

<sup>1</sup>Brassica (cole) leafy vegetables (crop group 5) including broccoli, broccoli raab, Brussels sprouts, cabbage, cauliflower, cavalo broccolo, Chinese broccoli, Chinese cabbage (bok choy, napa), Chinese mustard cabbage (gai choy), collards, kale, kohlrabi, mizuna, mustard greens, mustard spinach, rape greens.

**In the state of Georgia**, do not apply GF-3028 to: broccoli raab, Chinese cabbage (bok choy), collards, kale, mizuna, mustard greens, mustard spinach, rape greens.

**Application Rate:** The amount of GF-3028 applied per acre will depend upon plant size, volume of foliage present, pest growth stage and pest infestation level. Use a lower rate in the rate range for light infestations, smaller larvae and/or small plants, and a higher rate in the rate range for heavy infestations, larger larvae and/or larger plants.

**Ground Application:** Apply in a minimum of 10 gpa by conventional ground equipment to young crop or small plants. Apply in a minimum of 20 gpa to densely foliated or difficult to cover crops to ensure thorough coverage. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

**Aerial Application:** Apply in a minimum of 10 gpa.

**Resistance Management:** Do not make more than two consecutive applications of Group 5 or Group 18 insecticides. If additional treatments are required after two consecutive applications of Group 5 or Group 18 insecticides, rotate to another class of effective insecticides for at least one application. For diamondback moth, if additional treatments are required after two consecutive applications of Group 5 and/or Group 18 active ingredients, rotate to other classes of effective insecticide active ingredients for at least two applications. Consult your Dow AgroSciences representative, extension specialist, certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area. Make treatment decisions for the entire farm and consider area wide programs if other growers are in close proximity. Do not make more than six applications of GF-3028 per year for diamondback moth over an entire farm (an area of abutting or nearby fields). Avoid applying GF-3028 and other Group 5 and Group 18 insecticides to consecutive generations of all target insect pests.

Pests	Application Rate (fl oz/acre)	Application Timing
cabbage looper <sup>1</sup> cutworms (suppression only) fall armyworm garden webworm Hawaiian beet webworm imported cabbageworm <sup>1</sup>	4 – 8	For early season applications only to young crops and small plants. Apply at first sign of feeding damage or when infestations reach threshold levels as defined by a cooperative extension service or other qualified professional authorities.
light brown apple moth southern armyworm true armyworm yellowstriped armyworm western yellowstriped armyworm	6 – 12	For mid- to late-season applications, heavier infestations, and under conditions in which thorough coverage is more difficult.
diamondback moth <sup>1</sup>	8 – 12	Target eggs at hatch or small larvae. Heavy infestations may require repeat applications, but follow resistance management guidelines.

<sup>1</sup>Control of lepidopterous larvae may be improved with the addition of an adjuvant to the spray mixture. See Use of Adjuvants section under Mixing Directions.

**Restrictions:**

- **Preharvest Interval:** Do not apply within 1 day of harvest.
- Do not apply more than 12 fl oz of GF-3028 per acre per application.

- Do not apply more than a total of 51 fl oz of GF-3028 (1 lb ai methoxyfenozide, 0.2 lb ai spinetoram) per acre per year.
- **Minimum Treatment Interval:** Do not make applications less than 4 days apart.
- **Maximum Number of Applications:** Do not make more than 6 applications per year.
- Do not apply to seedling cole crops grown for transplant within a greenhouse, shade house, or field plot.

**Bushberries (Subgroup 13B)<sup>1</sup>**  
**(Not registered in New York)**

<sup>1</sup>Bushberries (subgroup 13B) blueberry, currant, elderberry, gooseberry, huckleberry, juneberry, lingonberry, salal

**Application Rate:** The amount of GF-3028 applied per acre will depend upon plant size, volume of foliage present, pest growth stage and pest infestation level. Use a lower rate in the rate range for light infestations, smaller larvae and/or small plants, and a higher rate in the rate range for heavy infestations, larger larvae and/or larger plants.

**Ground Application:** Apply in a minimum of 30 gpa by conventional ground equipment. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

**Aerial Application:** Apply in a minimum of 10 gpa. Use a higher carrier volume for heavy infestations and in situations where thorough coverage is difficult to achieve.

**Resistance Management:** Do not make more than two consecutive applications of Group 5 or Group 18 insecticides. If additional treatments are required after two consecutive applications of Group 5 or Group 18 insecticides, rotate to another class of effective insecticides for at least one application. Consult your Dow AgroSciences representative, extension specialist, certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area. Avoid applying GF-3028 and other Group 5 and Group 18 insecticides to consecutive generations of all target insect pests.

Pests	Application Rate (fl oz/acre)	Application Timing
cherry fruitworm cranberry fruitworm	8 – 12	Apply at initiation of egg laying [approximately 400 Day Degrees (DD) base 50°F] following biofix <sup>1</sup> . Make a second application at 100% petal fall (usually 7 to 14 days following the first application).
light brown apple moth obliquebanded leafroller		<b>Spring (overwintering) generation:</b> Make one or two applications at bloom to petal fall to small larvae when threshold levels occur. <b>Summer generation:</b> Begin applications at peak moth flight (200 to 300 DD base 43°F) following biofix.
redbanded leafroller variegated leafroller		For control of other leafrollers, apply at early egg hatch. Make the first application before webbing and sheltering begins. Make a second application to ensure complete coverage of rapidly expanding fruits or foliage.
spanworm		Apply when first signs of feeding damage appear or when infestations reach threshold levels as defined by cooperative extension service or other qualified professional authorities.

green fruitworm		Apply when larvae are first detected in the clusters or when infestations reach threshold levels as defined by cooperative extension service or other qualified professional authorities.
armyworm cutworm European grapevine moth fireworms loopers	6 – 12	Apply when first signs of feeding damage appear or when infestations reach threshold levels as defined by cooperative extension service or other qualified professional authorities.
gypsy moth	4 – 8	Apply to early instars (1st, 2nd, or 3rd) at first signs of infestation.

Biofix is defined as first sustained adult catch in pheromone traps, typically five moths in three traps within a 7-day period. Consult state extension specialists or other qualified authorities for specific information regarding number, placement and management of pheromone traps.

**Restrictions:**

- **Preharvest Interval:** Do not apply within 7 days of harvest.
- Do not apply more than 12 fl oz of GF-3028 per acre per application.
- Do not apply more than a total of 38.25 fl oz of GF-3028 (0.75 lb ai methoxyfenozide, 0.15 lb ai spinetoram) per acre per year
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- **Maximum Number of Applications:** Do not make more than 3 applications per year.

**Cilantro Leaves**

(Not registered in New York)

**Application Rate:** The amount of GF-3028 applied per acre will depend upon plant size, volume of foliage present, pest growth stage and pest infestation level. Use a lower rate in the rate range for light infestations, smaller larvae and/or small plants, and a higher rate in the rate range for heavy infestations, larger larvae and/or larger plants.

**Ground Application:** Apply in a minimum of 10 gpa by conventional ground equipment to young crop or small plants. Apply in a minimum of 20 gpa to densely foliated or difficult to cover crops to ensure thorough coverage. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

**Aerial Application:** Apply in a minimum of 10 gpa.

**Resistance Management:** Do not make more than two consecutive applications of Group 5 or Group 18 insecticides. If additional treatments are required after two consecutive applications of Group 5 or Group 18 insecticides, rotate to another class of effective insecticides for at least one application. Consult your Dow AgroSciences representative, extension specialist, certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area. Avoid applying GF-3028 and other Group 5 and Group 18 insecticides to consecutive generations of all target insect pests.

Pests	Application Rate (fl oz/acre)	Application Timing
beet armyworm cabbage looper cutworms (suppression only) fall armyworm garden webworm imported cabbageworm	4 – 8	For early season applications only to young crops and small plants. Apply at first sign of feeding damage or when infestations reach threshold levels as defined by a cooperative extension service or other qualified professional authorities.

southern armyworm true armyworm yellowstriped armyworm western yellowstriped armyworm	6 – 12	For mid- to late-season applications, heavier infestations, and under conditions in which thorough coverage is more difficult.
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**Restrictions:**

- **Preharvest Interval:** Do not apply within 1 day of harvest.
- Do not apply more than 12 fl oz of GF-3028 per acre per application.
- Do not apply more than a total of 51 fl oz of GF-3028 (1 lb ai methoxyfenozide, 0.2 lb ai spinetoram) per acre per year.
- **Minimum Treatment Interval:** Do not make applications less than 4 days apart.
- **Maximum Number of Applications:** Do not make more than 5 applications per year.

**Citrus Fruits (Crop Group 10)<sup>1</sup>**

<sup>1</sup>Citrus fruits (crop group 10) calamondin, chironja, citrus citron, grapefruit, kumquat, lemon, lime, mandarin, orange, pummelo, satsuma mandarin, sour orange, sweet orange, tangelo, tangerine, tangor

**Application Rate:** The amount of GF-3028 to apply per acre will depend upon tree size and pest infestation level. Use a lower rate in the rate range for light infestations and/or smaller trees and higher rate in the rate range for heavy infestations and/or larger trees.

**Ground Application:** Apply in a minimum of 50 gpa by conventional ground equipment. For best results use 100 to 250 gpa. For low volume applications, apply a minimum of 20 gpa by ground equipment. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Optimum results are achieved when higher spray volumes are used. Calibrate equipment to the desired spray volume.

**Resistance Management:** Do not make more than two consecutive applications of Group 5 or Group 18 insecticides. If additional treatments are required after two consecutive applications of Group 5 or Group 18 insecticides, rotate to another class of effective insecticides for at least one application. Consult your Dow AgroSciences representative, extension specialist, certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area. Avoid applying GF-3028 and other Group 5 and Group 18 insecticides to consecutive generations of all target insect pests.

Pests	Application Rate (fl oz/acre)	Application Timing
avocado leafroller citrus leafminer citrus orange dog worm citrus peelminer cutworms fruit tree leafroller light brown apple moth orange tortrix western tussock moth	6 – 12	Apply at the first observation of the target pests on the flushing leaves.

**Restrictions:**

- **Preharvest Interval:** Do not apply within 1 day of harvest.
- Do not apply more than 12 fl oz of GF-3028 per acre per application.
- Do not apply more than a total of 48 fl oz of GF-3028 (0.94 lb ai methoxyfenozide, 0.188 lb ai spinetoram) per acre per year.
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- **Maximum Number of Applications:** Do not make more than 3 applications per year.
- Do not apply to citrus nurseries or citrus in greenhouses.

**Corn (Field, Sweet, Seed)  
(Not registered in New York)**

**Application Rate:** The amount of GF-3028 applied per acre will depend upon plant size, volume of foliage present, pest growth stage and pest infestation level. Use a lower rate in the rate range for light infestations, smaller larvae and/or small plants, and a higher rate in the rate range for heavy infestations, larger larvae and/or larger plants.

**Resistance Management:** Do not make more than two consecutive applications of Group 5 or Group 18 insecticides. If additional treatments are required after two consecutive applications of Group 5 or Group 18 insecticides, rotate to another class of effective insecticides for at least one application. Consult your Dow AgroSciences representative, extension specialist, certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area. Avoid applying GF-3028 and other Group 5 and Group 18 insecticides to consecutive generations of all target insect pests.

**Specific Use Directions-Field Corn:**

**Ground Application:** Apply in a minimum of 5 gpa by conventional ground equipment to young crop or small plants. Higher carrier volumes may be required to provide thorough coverage to larger, more mature crop. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

**Aerial Application:** Apply in a minimum of 5 gpa. Use sufficient carrier volume to provide thorough, uniform coverage.

**Specific Use Directions-Sweet Corn, Seed Corn:**

**Ground Application:** Apply in a minimum of 10 gpa by conventional ground equipment to young crop or small plants. Apply in a minimum of 20 gpa after initiation of tasseling. Calibrate equipment and spray volume to assure uniform coverage of infested parts of the crop.

**Aerial Application:** Apply in a minimum of 10 gpa.

Pests	Application Rate (fl oz/acre)	Application Timing
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European corn borer southwestern corn borer sugarcane borer true armyworm western bean cutworm	4 – 12	Scout for corn borers and armyworms with enough regularity to monitor egg laying and egg hatch. Apply at first sign of egg hatch (field corn), feeding damage (sweet corn), or when infestations reach threshold levels as defined by a cooperative extension service or other qualified professional authorities. For control of <b>first generation European corn borer</b> and <b>armyworms</b> , direct application at the whorl for early season (first generation) infestations. Apply as broadcast or multi-nozzle over the row application to mid- and late-season infestations. Under heavy infestations, continuous moth flights, or rapid crop growth and development, reapply at 5- to 10-day re-treatment interval.
corn earworm ( <i>Helicoverpa zea</i> )	8 – 12	For control of <b>corn earworm</b> , apply broadcast or direct spray to ear zone. Use sufficient spray volume and nozzle pressure to ensure thorough wetting of the silks. A 2-day re-treatment schedule may be necessary at silking.

**Restrictions:**

**Minimum Treatment Interval:** For corn earworm at silking, do not make applications less than 2 days apart. For control of all other pests, do not make applications less than 4 days apart.

**Field Corn**

- **Preharvest Interval:** Do not apply within 28 days of harvest.
- Do not apply more than 12 fl oz of GF-3028 per acre per application.
- Do not apply more than a total of 32 fl oz of GF-3028 (0.625 lb methoxyfenozide, 0.125 lb ai spinetoram) per acre per year to field corn.
- **Maximum Number of Applications:** Do not make more than 3 applications per year
- **Minimum Treatment Interval:** For corn earworm at silking, do not make applications less than 2 days apart. For all other pests and timings, do not make applications less than 4 days apart.

**Sweet Corn**

- **Preharvest Interval:** Do not apply within 21 days of dry fodder harvest, 3 days of green chop/forage harvest, or 3 days of ear/grain harvest.
- **Do not apply more than 12 fl oz of GF-3028 per acre per application.**
- Do not apply more than a total of 51 fl oz of GF-3028 (1 lb ai methoxyfenozide, 0.2 lb ai spinetoram) per acre per year.
- **Maximum Number of Applications:** Do not make more than 6 applications per year.
- **Minimum Treatment Interval:** For corn earworm at silking, do not make applications less than 2 days apart. For all other pests and timings, do not make applications less than 4 days apart.

**Seed Corn**

- **Preharvest Interval:** Do not apply within 28 days of fodder harvest, 7 days of forage harvest, or 1 day of grain harvest.
- Do not apply more than 12 fl oz of GF-3028 per acre per application.
- Do not apply more than a total of 51 fl oz of GF-3028 (1 lb ai methoxyfenozide, 0.2 lb ai spinetoram) per acre per year.
- **Maximum Number of Applications:** Do not make more than 6 applications per year.
- **Minimum Treatment Interval:** For corn earworm at silking, do not make applications less than 2 days apart. For all other pests and timings, do not make applications less than 4 days apart.

**Cotton**

(Not registered in New York)

**Application Rate:** The amount of GF-3028 applied per acre will depend upon plant size, volume of foliage present, pest growth stage and pest infestation level. Use a lower rate in the rate range for light infestations, smaller larvae and/or small plants, and a higher rate in the rate range for heavy infestations, larger larvae and/or larger plants. Use a higher rate in the rate range and a higher spray volume when one or more of the following is true: tobacco budworms or bollworms are more than 1/4 inch in length; target pest population is 2X above state threshold level; or foliage canopy is tall and/or dense and worms (especially fall armyworm) are present in the lower part of the canopy.

**Ground Application:** Make applications by conventional ground sprayers which are calibrated to deliver a minimum of 5 gpa.

**Aerial Application:** Apply in a minimum of 3 gpa. Use a higher carrier volume or heavy infestations and in situations where thorough coverage is difficult to achieve.

**Resistance Management:** Do not make more than two consecutive applications of Group 5 or Group 18 insecticides. If additional treatments are required after two consecutive applications of Group 5 or Group 18 insecticides, rotate to another class of effective insecticides for at least one application. Consult your Dow AgroSciences representative, extension specialist, certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area. Avoid applying GF-3028 and other Group 5 and Group 18 insecticides to consecutive generations of all target insect pests.

Pests	Application Rate (fl oz/acre)	Application Timing
beet armyworm cabbage looper cotton leafworm cotton leaf perforator saltmarsh caterpillar southern armyworm soybean looper true armyworm yellowstriped armyworm western yellowstriped armyworm	4 – 8	Apply at egg hatch or when first signs of feeding occur.  Under heavy infestations, continuous moth flights and/or egg masses and larvae in all stages of development, a 10- to 14-day re-treatment interval is required to protect new growth until moth flights and/or hits subside.
cotton bollworm ( <i>Helicoverpa zea</i> ) fall armyworm tobacco budworm	6 – 8	

**Restrictions:**

- **Preharvest Interval:** Do not apply within 28 days of harvest.
- Do not apply more than 12 fl oz of GF-3028 per acre per application.
- Do not apply more than a total of 51 fl oz of GF-3028 (1 lb ai methoxyfenozide, 0.2 lb ai spinetoram) per acre per year.
- **Minimum Treatment Interval:** Do not make applications less than 4 days apart.
- **Maximum Number of Applications:** Do not make more than 6 applications per year.

**Cranberry**

(Not registered in New York)



**Application Rate:** The amount of GF-3028 applied per acre will depend upon plant size, volume of foliage present, pest growth stage and pest infestation level. Use a lower rate in the rate range for light infestations, smaller larvae and/or small plants, and a higher rate in the rate range for heavy infestations, larger larvae and/or larger plants.

**Ground Application:** Apply in a minimum of 10 gpa by conventional ground equipment to young crop or small plants. Apply in a minimum of 20 gpa to densely foliated or difficult to cover crops to ensure thorough coverage. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

**Aerial Application:** Apply in a minimum of 10 gpa.

**Chemigation Application:** GF-3028 may be applied through sprinkler irrigation systems to control listed pests. Use specified broadcast application rates. See Chemigation Application section.

**Resistance Management:** Do not make more than two consecutive applications of Group 5 or Group 18 insecticides. If additional treatments are required after two consecutive applications of Group 5 or Group 18 insecticides, rotate to another class of effective insecticides for at least one application. Consult your Dow AgroSciences representative, extension specialist, certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area. Avoid applying GF-3028 and other Group 5 and Group 18 insecticides to consecutive generations of all target insect pests.

Pests	Application Rate (fl oz/acre)	Application Timing
blackheaded fireworm gypsy moth <i>sparganothis</i> fruitworm spanworms spotted fireworm	7 – 12	<b>Spring (overwintering) generation:</b> Make 1 to 2 applications during the flower bud development period depending upon infestation level. <b>Summer generation:</b> Make the first application during the period of peak egg lay to early egg hatch. Reapply 10 to 18 days later.

**Restrictions:**

- **Preharvest Interval:** Do not apply within 21 days of harvest.
- Do not apply more than 12 fl oz of GF-3028 per acre per application.
- Do not apply more than a total of 51 fl oz of GF-3028 (1 lb ai methoxyfenozide, 0.2 lb ai spinetoram) per acre per year.
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- **Maximum Number of Applications:** Do not make more than 6 applications per year.

**Cucurbit Vegetables (Crop Group 9)<sup>1</sup>**  
(Not registered in New York)

<sup>1</sup>Cucurbit vegetables (crop group 9) includes balsam apple, balsam pear, bitter melon, chayote (fruit), Chinese cucumber, Chinese waxgourd (Chinese preserving melon), citron melon, cucumber, edible gourd (including Chinese okra, cucuzza, hechima, hyotan), gherkin, muskmelon (including cantaloupe, casaba, crenshaw melon, golden pershaw melon, honey balls, honeydew melon, mango melon, persian melon, pineapple melon, santa claus melon, snake melon, true cantaloupe), pumpkin, summer squash (including crookneck squash, scallop squash, straightneck squash, vegetable marrow, zucchini), winter squash (including acorn squash, butternut squash, calabaza, hubbard squash, spaghetti squash), watermelon

**Application Rate:** The amount of GF-3028 applied per acre will depend upon plant size, volume of foliage present, pest growth stage and pest infestation level. Use a lower rate in the rate range for light infestations, smaller larvae and/or small plants, and a higher rate in the rate range for heavy infestations, larger larvae and/or larger plants.

**Ground Application:** Apply in a minimum of 10 gpa by conventional ground equipment to young crop or small plants. Apply in a minimum of 20 gpa to densely foliated or difficult to cover crops to ensure thorough coverage. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

**Aerial Application:** Apply in a minimum of 10 gpa.

**Resistance Management:** Do not make more than two consecutive applications of Group 5 or Group 18 insecticides. If additional treatments are required after two consecutive applications of Group 5 or Group 18 insecticides, rotate to another class of effective insecticides for at least one application. Consult your Dow AgroSciences representative, extension specialist, certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area. Avoid applying GF-3028 and other Group 5 and Group 18 insecticides to consecutive generations of all target insect pests.

Pests	Application Rate (fl oz/acre)	Application Timing
beet armyworm cabbage looper melon worm pickle worm rind worm southern armyworm true armyworm yellowstriped armyworm western yellowstriped armyworm	4 – 8	Apply at first sign of infestation, targeting eggs and small larvae, or when infestations reach threshold levels as defined by a cooperative extension service or other qualified professional authorities.

**Restrictions:**

- **Preharvest Interval:** Do not apply within 3 days of harvest.
- Do not apply more than 8 fl oz of GF-3028 per acre per application.
- Do not apply more than a total of 51 fl oz of GF-3028 (1 lb ai methoxyfenozide, 0.2 lb ai spinetoram) per acre per year.
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- **Maximum Number of Applications:** Do not make more than 4 applications per season.

**Foliage of Legume Vegetables (Except Soybean) (Subgroup 7A)<sup>1</sup>**  
(Not registered in New York)

<sup>1</sup>Foliage of legume vegetables (except soybean) (subgroup 7A) includes any cultivar of bean and field pea (except soybean)

**Application Rate:** The amount of GF-3028 applied per acre will depend upon plant size, volume of foliage present, pest growth stage and pest infestation level. Use a lower rate in the rate range for light infestations, smaller larvae and/or small plants, and a higher rate in the rate range for heavy infestations, larger larvae and/or larger plants.

**Ground Application:** Apply in a minimum of 10 gpa by conventional ground equipment to young crop or small plants. Apply in a minimum of 20 gpa to densely foliated or difficult to cover crops to ensure thorough coverage. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

**Aerial Application:** Apply in a minimum of 10 gpa. Use a higher carrier volume for heavy infestations and in situations where thorough coverage is difficult to achieve.

**Application Timing:** Scout at least weekly and consider the impact of both pests and beneficials. Treat

when economic thresholds are exceeded, targeting eggs at hatch or small larvae. Heavy infestations may require repeat applications, but follow resistance management guidelines. Consult your Dow AgroSciences representative, extension service specialist, certified crop advisor or your state agricultural experiment station for any additional local use recommendations for your area.

**Resistance Management:** Do not make more than two consecutive applications of Group 5 or Group 18 insecticides. If additional treatments are required after two consecutive applications of Group 5 or Group 18 insecticides, rotate to another class of effective insecticides for at least one application. Consult your Dow AgroSciences representative, extension specialist, certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area. Avoid applying GF-3028 and other Group 5 and Group 18 insecticides to consecutive generations of all target insect pests.

Pests	Application Rate (fl oz/acre)	Application Timing
alfalfa looper beet armyworm cabbage looper European corn borer fall armyworm southern armyworm tomato hornworm true armyworm yellowstriped armyworm western yellowstriped armyworm	4 – 8	For early season applications only to young crops and small plants. Apply at first sign of feeding damage or when infestations reach threshold levels as defined by a cooperative extension service or other qualified professional authorities.
	6 – 12	For mid- to late-season applications, heavier infestations, and under conditions in which thorough coverage is more difficult.
corn earworm ( <i>Helicoverpa zea</i> )	8 – 12	Apply at first sign of feeding damage or when infestations reach threshold levels as defined by a cooperative extension service or other qualified professional authorities.

**Restrictions:**

- **Preharvest Interval:** Do not apply within 7 days of harvest.
- Do not apply more than 12 fl oz of GF-3028 per acre per application.
- Do not apply more than a total of 51 fl oz of GF-3028 (1 lb ai methoxyfenozide, 0.2 lb ai spinetoram) per acre per year.
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- **Maximum Number of Applications:** Do not make more than 4 applications per year.
- Do not use adjuvants in the tank mix when applying this product to dry peas and beans.
- Do not apply to seedling crops grown for transplant within a greenhouse, shade house, or outdoor transplant bed.
- Do not apply to dry peas by aerial ULV.

**Fruiting Vegetables (Crop Group 8)<sup>1</sup> and Okra**  
(Not registered in New York)

<sup>1</sup>Fruiting vegetables (crop group 8) includes eggplant, groundcherry, pepino, pepper (bell, chili, cooking, sweet), pimiento, tomatillo, tomato

**Application Rate:** The amount of GF-3028 applied per acre will depend upon plant size, volume of foliage present, pest growth stage and pest infestation level. Use a lower rate in the rate range for light infestations, smaller larvae and/or small plants, and a higher rate in the rate range for heavy infestations, larger larvae and/or larger plants.

**Ground Application:** Apply in a minimum of 10 gpa by conventional ground equipment to young crop or small plants. Apply in a minimum of 20 gpa to densely foliated or difficult to cover crops to ensure

thorough coverage. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

**Aerial Application:** Apply in a minimum of 10 gpa.

**Resistance Management:** Do not make more than two consecutive applications of Group 5 or Group 18 insecticides. If additional treatments are required after two consecutive applications of Group 5 or Group 18 insecticides, rotate to another class of effective insecticides for at least one application. Consult your Dow AgroSciences representative, extension specialist, certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area. Avoid applying GF-3028 and other Group 5 and Group 18 insecticides to consecutive generations of all target insect pests.

Pests	Application Rate (fl oz/acre)	Application Timing
beet armyworm cabbage looper European corn borer fall armyworm southern armyworm tomato hornworm true armyworm	4 – 8	For early season applications only to young crops and small plants. Apply at first sign of feeding damage or when infestations reach threshold levels as defined by a cooperative extension service or other qualified professional authorities.
yellowstriped armyworm western yellowstriped armyworm	6 – 12	For mid- to late-season applications, heavier infestations, and under conditions in which thorough coverage is more difficult.
tomato fruitworm ( <i>Helicoverpa zea</i> )	8 – 12	Apply at first sign of feeding damage or when infestations reach threshold levels as defined by a cooperative extension service or other qualified professional authorities.

**Restrictions:**

- **Preharvest Interval:** Do not apply within 1 day of harvest.
- Do not apply more than 12 fl oz of GF-3028 per acre per application.
- Do not apply more than a total of 51 fl oz of GF-3028 (1 lb ai methoxyfenozide, 0.2 lb ai spinetoram) per acre per year.
- **Minimum Treatment Interval:** Do not make applications less than 4 days apart.
- **Maximum Number of Applications:** Do not make more than 6 applications per year.
- Do not apply to seedling fruiting vegetables and okra grown for transplant within a greenhouse, shade house, or outdoor transplant bed.

**Globe Artichoke**

(Not registered in New York)

**Application Rate:** The amount of GF-3028 applied per acre will depend upon plant size, volume of foliage present, pest growth stage and pest infestation level. Use a lower rate in the rate range for light infestations, smaller larvae and/or small plants, and a higher rate in the rate range for heavy infestations, larger larvae and/or larger plants.

**Ground Application:** Apply in a minimum of 75 gpa of water using calibrated ground application equipment that provides thorough coverage.

**Aerial Application:** Apply in a minimum of 10 gpa of water. Use higher water volumes for heavy infestations and in situations where thorough coverage is difficult to achieve.

**Resistance Management:** Do not make more than two consecutive applications of Group 5 or Group 18 insecticides. If additional treatments are required after two consecutive applications of Group 5 or Group 18 insecticides, rotate to another class of effective insecticides for at least one application. Consult your

Dow AgroSciences representative, extension specialist, certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area. Avoid applying GF-3028 and other Group 5 and Group 18 insecticides to consecutive generations of all target insect pests.

Pests	Application Rate (fl oz/acre)	Application Timing
armyworms European corn borer light brown apple moth loopers plume moth	4 – 12	Apply at egg hatch or when first signs of feeding occur. Use a higher rate for heavier infestations and under conditions in which thorough coverage is more difficult. Under conditions of heavy infestations, continuous moth flights and/or egg masses and larvae in all stages of development, reapply at a minimum application interval of 7 days to protect new growth until moth flights subside.

**Restrictions:**

- **Preharvest Interval:** Do not apply within 4 days of harvest.
- Do not apply more than 12 fl oz of GF-3028 per acre per application.
- Do not apply more than a total of 51 fl oz of GF-3028 (1 lb ai methoxyfenozide, 0.2 lb ai spinetoram) per acre per year.
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- **Maximum Number of Applications:** Do not make more than 4 applications per year.

**Grape**

(Not registered in New York)

**Application Rate:** The amount of GF-3028 applied per acre will depend upon plant size, volume of foliage present, pest growth stage and pest infestation level. Use a lower rate in the rate range for light infestations, smaller larvae and/or small plants, and a higher rate in the rate range for heavy infestations, larger larvae and/or larger plants.

**Ground Application:** Apply in a minimum of 40 gpa by airblast or over the row sprayer. If using another type of sprayer, apply in sufficient carrier volume to ensure thorough, uniform cover of the crop. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

**Aerial Application:** Apply in a minimum of 20 gpa. This method should not be used if the density of the foliage prohibits thorough, uniform coverage of the entire vine canopy.

**Resistance Management:** Do not make more than two consecutive applications of Group 5 or Group 18 insecticides). If additional treatments are required after two consecutive applications of Group 5 or Group 18 insecticides, rotate to another class of effective insecticides for at least one application. Consult your Dow AgroSciences representative, extension specialist, certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area. Avoid applying GF-3028 and other Group 5 and Group 18 insecticides to consecutive generations of all target insect pests.

Pests	Application Rate (fl oz/acre)	Application Timing
grape berry moth	6 – 12	For internal feeding lepidoptera larvae, apply at initiation of egg hatch. Reapply within 10 to 18 days to ensure complete coverage of rapidly expanding fruits or foliage.

European grapevine moth grape leaf folder grape leaf skeletonizer light brown apple moth omnivorous leafroller obliquebanded leafroller orange tortrix redbanded leafroller		<p><b>Spring generation:</b> Apply at first sign of larval infestation or to small larvae when threshold levels occur.</p> <p><b>Summer generations:</b> Apply at first egg hatch and before bunch closure. Reapply at 10- to 14-day intervals under high pressure or sustained moth flight.</p>
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**Restrictions:**

- **Preharvest Interval:** Do not apply within 30 days of harvest.
- Do not apply more than 12 fl oz of GF-3028 per acre per application.
- Do not apply more than a total of 38.25 fl oz of GF-3028 (0.75 lb ai methoxyfenozide, 0.15 lb ai spinetoram) per acre per year.
- **Minimum Treatment Interval:** Do not make applications less than 4 days apart.
- **Maximum Number of Applications:** Do not make more than 5 applications per year.

**Green Onion, Leek, and Shallot**  
 (Not registered in New York)

**Application Rate:** The amount of GF-3028 applied per acre will depend upon plant size, volume of foliage present, pest growth stage and pest infestation level. Use a lower rate in the rate range for light infestations, smaller larvae and/or small plants, and a higher rate in the rate range for heavy infestations, larger larvae and/or larger plants.

**Ground Application:** Apply in a minimum of 10 gpa by conventional ground equipment to young crop or small plants. Apply in a minimum of 20 gpa to densely foliated or difficult to cover crops to ensure thorough coverage. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

**Aerial Application:** Apply in a minimum of 10 gpa.

**Resistance Management:** Do not make more than two consecutive applications of Group 5 or Group 18 insecticides. If additional treatments are required after two consecutive applications of Group 5 or Group 18 insecticides, rotate to another class of effective insecticides for at least one application. Consult your Dow AgroSciences representative, extension specialist, certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area. Avoid applying GF-3028 and other Group 5 and Group 18 insecticides to consecutive generations of all target insect pests.

Pests	Application Rate (fl oz/acre)	Application Timing
lepidopterous larvae including: armyworms European corn borer loopers	4 – 8	For early season applications only to young crops and small plants. Apply at first sign of feeding damage or when infestations reach threshold levels as defined by a cooperative extension service or other qualified professional authorities.
	6 – 9	For mid- to late-season applications, heavier infestations, and under conditions in which thorough coverage is more difficult.

**Restrictions:**

- **Preharvest Interval:** Do not apply within 1 day of harvest.
- Do not apply more than 9 fl oz of GF-3028 per acre per application.
- Do not apply more than a total of 51 fl oz of GF-3028 (1 lb ai methoxyfenozide, 0.2 lb ai spinetoram) per acre per year.

- **Minimum Treatment Interval:** Do not make applications less than 4 days apart.
- **Maximum Number of Applications:** Do not make more than 5 applications per year.

**Leafy Vegetables (Except *Brassica*) (Crop Group 4)<sup>1</sup>**  
**(Not registered in New York)**

<sup>1</sup>Leafy vegetables (except *Brassica*) (crop group 4) includes amaranth, arugula, cardoon, celery, celtuce, chervil, Chinese celery, corn salad, dandelion, dock, edible-leaved chrysanthemum, endive (escarole), florence fennel, garden cress, garden purslane, garland chrysanthemum, lettuce (head, leaf), New Zealand spinach, orach, parsley, radicchio, rhubarb, spinach, Swiss chard, upland cress, vine spinach, winter purslane.

**Application Rate:** The amount of GF-3028 applied per acre will depend upon plant size, volume of foliage present, pest growth stage and pest infestation level. Use a lower rate in the rate range for light infestations, smaller larvae and/or small plants, and a higher rate in the rate range for heavy infestations, larger larvae and/or larger plants.

**Ground Application:** Apply in a minimum of 10 gpa by conventional ground equipment to young crop or small plants. Apply in a minimum of 20 gpa to densely foliated or difficult to cover crops to ensure thorough coverage. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

**Aerial Application:** Apply in a minimum of 10 gpa.

**Resistance Management:** Do not make more than two consecutive applications of Group 5 or Group 18 insecticides. If additional treatments are required after two consecutive applications of Group 5 or Group 18 insecticides, rotate to another class of effective insecticides for at least one application. Consult your Dow AgroSciences representative, extension specialist, certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area. Avoid applying GF-3028 and other Group 5 and Group 18 insecticides to consecutive generations of all target insect pests.

Pests	Application Rate (fl oz/acre)	Application Timing
beet armyworm cabbage looper cutworms (suppression only) fall armyworm garden webworm imported cabbageworm	4 – 8	For early season applications only to young crops and small plants. Apply at first sign of feeding damage or when infestations reach threshold levels as defined by a cooperative extension service or other qualified professional authorities.
southern armyworm true armyworm yellowstriped armyworm western yellowstriped armyworm	6 – 12	For mid- to late-season applications, heavier infestations, and under conditions in which thorough coverage is more difficult.

**Restrictions:**

- **Preharvest Interval:** Do not apply within 1 day of harvest.

- Do not apply more than 12 fl oz of GF-3028 per acre per application.
- Do not apply more than a total of 51 of GF-3028 (1 lb ai methoxyfenozide, 0.2 lb ai spinetoram) per acre per year.
- **Minimum Treatment Interval:** Do not make applications less than 4 days apart.
- **Maximum Number of Applications:** Do not make more than 6 applications per year.
- Do not apply to seedling leafy vegetable crops grown for transplant within a greenhouse, shade house, or outdoor transplant bed.

**Leaves of Root and Tuber Vegetables (Crop Group 2)<sup>1</sup> and Turnip Greens  
(Not registered in New York)**

<sup>1</sup>Leaves of root and tuber vegetables (crop group 2) includes bitter cassava, black salsify, carrot, celeriac (celery root), chicory, dasheen (taro), edible burdock, garden beet, oriental radish (daikon), parsnip, radish, rutabaga, sugar beet, sweet cassava, sweet potato, tanier, true yam, turnip, turnip-rooted chervil

**Application Rate:** The amount of GF-3028 applied per acre will depend upon plant size, volume of foliage present, pest growth stage and pest infestation level. Use a lower rate in the rate range for light infestations, smaller larvae and/or small plants, and a higher rate in the rate range for heavy infestations, larger larvae and/or larger plants.

**Ground Application:** Apply in a minimum of 10 gpa by conventional ground equipment to young crop or small plants. Apply in a minimum of 20 gpa to densely foliated or difficult to cover crops to ensure thorough coverage. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

**Aerial Application:** Apply in a minimum of 10 gpa.

**Resistance Management:** Do not make more than two consecutive applications of Group 5 or Group 18 insecticides. If additional treatments are required after two consecutive applications of Group 5 or Group 18 insecticides, rotate to another class of effective insecticides for at least one application. Consult your Dow AgroSciences representative, extension specialist, certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area. Avoid applying GF-3028 and other Group 5 and Group 18 insecticides to consecutive generations of all target insect pests.

Pests	Application Rate (fl oz/acre)	Application Timing
beet armyworm cabbage looper cutworms (suppression only) fall armyworm garden webworm imported cabbageworm	4 – 8	For early season applications only to young crops and small plants. Apply at first sign of feeding damage or when infestations reach threshold levels as defined by a cooperative extension service or other qualified professional authorities.
southern armyworm true armyworm yellowstriped armyworm western yellowstriped armyworm	6 – 12	For mid- to late-season applications, heavier infestations, and under conditions in which thorough coverage is more difficult.



**Restrictions:**

- **Preharvest Interval:** Do not apply within 3 days of harvest.
- Do not apply more than 12 fl oz of GF-3028 per acre per application.
- Do not apply more than a total of 51 fl oz of GF-3028 (1 lb ai methoxyfenozide, 0.2 lb ai spinetoram) per acre per year.
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- **Maximum Number of Applications:** Do not make more than 6 applications per year.
- Do not apply to seedling leafy crops grown for transplant within a greenhouse, shade house, or outdoor transplant bed.

**Legume Vegetables (Succulent or Dried) (Crop Group 6)<sup>1</sup>**  
**(Not registered in New York)**

<sup>1</sup>Legume vegetables (succulent or dried) (crop group 6) includes asparagus bean, blackeyed pea, *Cajanus* spp. (pigeon pea), Chinese longbean, *Cicer arietinum* (chick peas, garbanzo beans), cowpea, green lima bean, jackbean, *Lens* spp. (lentils), *Lupinus* spp. (grain lupine, sweet lupine, white lupine, white sweet lupine), moth bean, *Phaseolus* spp. (kidney beans, lima beans, mung beans, navy beans, pinto beans, snap beans, waxbeans), *Pisum* spp. (dwarf pea, edible-pod pea, English pea, field pea, garden pea, green pea), runner bean, snap bean, snow pea, soybean (immature seed), southern pea, succulent broad bean, sugar snap pea, sword bean, *Vicia faba* (broad beans, fava beans); *Vigna* spp. (asparagus beans, blackeyed pea, cowpeas), wax bean, yardlong bean

**Application Rate:** The amount of GF-3028 applied per acre will depend upon plant size, volume of foliage present, pest growth stage and pest infestation level. Use a lower rate in the rate range for light infestations, smaller larvae and/or small plants, and a higher rate in the rate range for heavy infestations, larger larvae and/or larger plants.

**Ground Application:** Apply in a minimum of 10 gpa by conventional ground equipment to young crop or small plants. Apply in a minimum of 20 gpa to densely foliated or difficult to cover crops to ensure thorough coverage. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

**Aerial Application:** Apply in a minimum of 10 gpa. Use a higher carrier volume for heavy infestations and in situations where thorough coverage is difficult to achieve.

**Resistance Management:** Do not make more than two consecutive applications of Group 5 or Group 18 insecticides. If additional treatments are required after two consecutive applications of Group 5 or Group 18 insecticides, rotate to another class of effective insecticides for at least one application. Consult your Dow AgroSciences representative, extension specialist, certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area. Avoid applying GF-3028 and other Group 5 and Group 18 insecticides to consecutive generations of all target insect pests.

Pests	Application Rate (fl oz/acre)	Application Timing
alfalfa looper beet armyworm cabbage looper European corn borer fall armyworm	4 – 8	For early season applications only to young crops and small plants. Apply at first sign of feeding damage or when infestations reach threshold levels as defined by a cooperative extension service or other qualified professional authorities.

southern armyworm tomato hornworm true armyworm yellowstriped armyworm western yellowstriped armyworm	6 – 12	For mid- to late-season applications, heavier infestations, and under conditions in which thorough coverage is more difficult. For heavy infestations, continuous moth flights, and/or egg masses and larvae in all stages of development, a 7- to 14-day re-treatment interval is required to protect new growth until moth flights and/or larval infestations subside.
corn earworm ( <i>Helicoverpa zea</i> )	8 – 12	Apply at first sign of feeding damage or when infestations reach threshold levels as defined by a cooperative extension service or other qualified professional authorities.

**Restrictions:**

- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- **Maximum Number of Applications:** Do not make more than 4 applications per year.
- Do not use adjuvants in the tank mix when applying this product to dry peas and beans.
- Do not apply to dry peas by aerial ULV.

**Succulent Beans and Peas**

- **Preharvest Interval:** Do not apply within 7 days of harvest.
- Do not apply more than 12 fl oz of GF-3028 per acre per application.
- Do not apply more than a total of 51 fl oz of GF-3028 (1 lb ai methoxyfenozide, 0.2 lb ai spinetoram) per acre per year.

**Dried Beans and Peas**

- **Preharvest Interval:** Do not apply within 28 days of harvest.
- Do not apply more than 12 fl oz of GF-3028 per acre per application.
- Do not apply more than a total of 24 fl oz of GF-3028 (0.47 lb ai methoxyfenozide, 0.094 lb ai spinetoram) per acre per year.

**Peanut**

(Not registered in New York)

**Application Rate:** The amount of GF-3028 applied per acre will depend upon plant size, volume of foliage present, pest growth stage and pest infestation level. Use a lower rate in the rate range for light infestations, smaller larvae and/or small plants, and a higher rate in the rate range for heavy infestations, larger larvae and/or larger plants.

**Ground Application:** Apply in a minimum of 10 gpa by conventional ground equipment. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

**Aerial Application:** Apply in a minimum of 5 gpa. Use a higher carrier volume for heavy infestations and in situations where thorough coverage is difficult to achieve.

**Resistance Management:** Do not make more than two consecutive applications of Group 5 or Group 18 insecticides. If additional treatments are required after two consecutive applications of Group 5 or Group 18 insecticides, rotate to another class of effective insecticides for at least one application. Consult your Dow AgroSciences representative, extension specialist, certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area. Avoid applying GF-3028 and other Group 5 and Group 18 insecticides to consecutive generations of all target insect pests.

Pests	Application Rate (fl oz/acre)	Application Timing
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beet armyworm cabbage looper corn earworm ( <i>Helicoverpa zea</i> ) European corn borer fall armyworm green cloverleaf worm red-necked peanut worm saltmarsh caterpillar southern armyworm soybean looper tobacco budworm true armyworm velvetbean caterpillar yellowstriped armyworm	4 – 8	Apply when first signs of feeding damage appear or when threshold levels of feeding damage occur, targeting eggs at hatch or small larvae.
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**Restrictions:**

- **Preharvest Interval:** Do not apply within 7 days of harvest.
- Do not apply more than a total of 48 fl oz of GF-3028 (1 lb ai methoxyfenozide, 0.188 lb ai spinetoram) per acre per year.
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- **Maximum Number of Applications:** Do not make more than 3 applications per year.
- Do not allow grazing of peanut hay.

**Peppermint and Spearmint**  
(Not registered in New York)

**Application Rate:** The amount of GF-3028 applied per acre will depend upon plant size, volume of foliage present, pest growth stage and pest infestation level. Use a lower rate in the rate range for light infestations, smaller larvae and/or small plants, and a higher rate in the rate range for heavy infestations, larger larvae and/or larger plants.

**Ground Application:** Apply in a minimum of 10 gpa by conventional ground equipment to young crop or small plants. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

**Aerial Application:** Apply in a minimum of 5 gpa. Calibrate aircraft to assure uniform coverage of the target crop.

**Resistance Management:** Do not make more than two consecutive applications of Group 5 or Group 18 insecticides. If additional treatments are required after two consecutive applications of Group 5 or Group 18 insecticides, rotate to another class of effective insecticides for at least one application. Consult your Dow AgroSciences representative, extension specialist, certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area. Avoid applying GF-3028 and other Group 5 and Group 18 insecticides to consecutive generations of all target insect pests.

Pests	Application Rate (fl oz/acre)	Application Timing
armyworms cutworms light brown apple moth loopers	8 - 12	Treat as soon as economic thresholds have been met. Target small larvae and egg masses when possible.

**Restrictions:**

- **Preharvest Interval:** Do not apply within 14 days of harvest.
- Do not apply more than 12 fl oz of GF-3028 per acre per application.

- Do not apply more than a total of 51 fl oz of GF-3028 (1 lb ai methoxyfenozide, 0.2 lb ai spinetoram) per acre per year.
- **Minimum Treatment Interval:** Do not make applications less than 4 days apart.
- **Maximum Number of Applications:** Do not make more than 4 applications per year.

**Pome Fruits (Crop Group 11)<sup>1</sup>**

<sup>1</sup>Pome fruits (crop group 11) includes apple, crabapple, loquat, mayhaw, pear, pear (oriental), quince

**Application Rate:** The amount of GF-3028 to apply per acre will depend upon tree size and pest infestation level. Use a lower rate in the rate range for light infestations and/or smaller trees and higher rate in the rate range for heavy infestations and/or larger trees.

**Ground Application:** Apply by conventional ground sprayers which are calibrated to deliver a minimum of 50 gpa to trellised trees or trees 10 feet tall or less. For trees greater than 10 feet tall use a minimum of 100 gpa.

**Aerial Application:** Apply in a minimum of 20 gpa. However, aerial application should not be used if the size of the tree or density of the foliage prohibits thorough, uniform coverage of the entire tree canopy.

**Resistance Management:** Do not make more than three consecutive applications of Group 5 or Group 18 insecticides within a crop season. If additional treatments are required after three consecutive applications of Group 5 or Group 18 insecticides, rotate to another class of effective insecticides for at least one application. Consult your Dow AgroSciences representative, extension specialist, certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area. Avoid applying GF-3028 and other Group 5 and Group 18 insecticides to consecutive generations of all target insect pests, especially consecutive generations of codling moth, oriental fruit moth and leafrollers.

Pests	Application Rate (fl oz/acre)	Application Timing
codling moth	11.5 – 12.8	Apply at the initiation of egg lay (usually occurs at 100 to 200 DD, base 50°F, following biofix). = Begin applications at or before egg hatch and before the larvae penetrate the fruit. Follow local spray timing advisories or follow biofix dates based upon pheromone trap catches to time sprays appropriately.
lesser appleworm oriental fruit moth	9 – 12	Begin applications before egg hatch and before the larvae penetrate the fruit. Follow local spray timing advisories or biofix dates based upon pheromone trap catches to time sprays appropriately.
obliquebanded leafroller pandemis leafroller	6 – 12	<b>Spring (overwintering) generation:</b> Make 1 to 2 applications during the pink to petal fall period depending upon infestation level. <b>Summer generation:</b> Make the first application during the period of peak egg lay to early egg hatch (usually 200 to 400 DD following biofix).
eyespotted bud moth fruittree leafroller light brown apple moth redbanded leafroller variegated leafroller		For control of surface or foliar feeding leafroller larvae, apply at the initiation of egg hatch when larvae begin to feed.

tufted apple bud moth	6 – 9	Apply at 10 to 30% egg hatch. For heavy infestations, sustained moth flight, or extended residual effectiveness, reapply 10 to 18 days later.
spotted tentiform leafminer western tentiform leafminer		<b>First generation:</b> Apply at pink to petal fall. <b>Second, third generation:</b> Apply at early egg hatch for each generation.
lacanobia fruitworm	8 – 10	Apply at egg hatch or at the first sign of larval infestation.
European corn borer European grapevine moth gypsy moth	4.5 – 9	

**Restrictions:**

- **Preharvest Interval:** Do not apply within 14 days of harvest.
- Do not apply more than 18 fl oz of GF-3028 per acre per application.
- Do not apply more than a total of 51 fl oz of GF-3028 (1 lb ai methoxyfenozide, 0.2 lb ai spinetoram) per acre per year
- **Minimum Treatment Interval:** Do not make applications less than 10 days apart.
- **Maximum Number of Applications:** Do not make more than 4 applications per year. See Resistance Management regarding number of consecutive applications for specific pests.
- Aerial application is allowed only for the last two applications prior to harvest.

**Pomegranate**

(Not registered in New York)

**Application Rate:** The amount of GF-3028 to apply per acre will depend upon tree size and pest infestation level. Use a lower rate in the rate range for light infestations and/or smaller trees and higher rate in the rate range for heavy infestations and/or larger trees.

**Ground Application:** Apply a minimum of 50 gpa by conventional ground equipment to trellised trees or trees 10 feet tall or less. For trees greater than 10 feet tall, use a minimum of 100 gpa. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

**Aerial Application:** Apply in a minimum of 20 gpa. This method should not be used if the size of the tree or density of the foliage prohibits thorough, uniform coverage of the entire tree canopy.

**Resistance Management:** Do not make more than two consecutive applications of Group 5 or Group 18 insecticides. If additional treatments are required after two consecutive applications of Group 5 or Group 18 insecticides, rotate to another class of effective insecticides for at least one application. Consult your Dow AgroSciences representative, extension specialist, certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area. Avoid applying GF-3028 and other Group 5 and Group 18 insecticides to consecutive generations of all target insect pests. Do not apply to pomegranate trees grown in greenhouses and nurseries.

Pests	Application Rate fl oz/acre	Application Timing
European grapevine moth filbert worm light brown apple moth navel orangeworm obliquebanded leafroller omnivorous leafroller	6 – 12	Apply at the initiation of egg hatch when larvae are feeding.
redhumped caterpillar		Apply at initiation of egg hatch or at the first sign of larval infestation. Reapply in 10 to 14 days to ensure complete coverage of rapidly expanding fruits or foliage.

**Restrictions:**

- **Preharvest Interval:** Do not apply within 7 days of harvest.
- Do not apply more than 12 fl oz of GF-3028 per acre per application.
- Do not apply more than a total of 28 fl oz of GF-3028 (0.547 lb ai methoxyfenozide, 0.109 lb ai spinetoram) per acre per year.
- **Minimum Treatment Interval:** Do not make applications less than 10 days apart.
- **Maximum Number of Applications:** Do not make more than 3 applications per year. Do not apply more than 3 sprays targeted at leafrollers per season.

**Popcorn**

(Not registered in New York)

**Application Rate:** The amount of GF-3028 applied per acre will depend upon plant size, volume of foliage present, pest growth stage and pest infestation level. Use a lower rate in the rate range for light infestations, smaller larvae and/or small plants, and a higher rate in the rate range for heavy infestations, larger larvae and/or larger plants.

**Ground Application:** Apply in a minimum of 10 gpa by conventional ground equipment to young crop or small plants. Apply in a minimum of 20 gpa after initiation of tasseling. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

**Aerial Application:** Apply in a minimum of 10 gpa.

**Resistance Management:** Do not make more than two consecutive applications of Group 5 or Group 18 insecticides. If additional treatments are required after two consecutive applications of Group 5 or Group 18 insecticides, rotate to another class of effective insecticides for at least one application. Consult your Dow AgroSciences representative, extension specialist, certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area. Avoid applying GF-3028 and other Group 5 and Group 18 insecticides to consecutive generations of all target insect pests.

Pests	Application Rate fl oz/acre	Application Timing
European corn borer southwestern corn borer true armyworm western bean cutworm	4 – 6.4	Scout with enough regularity to monitor egg laying and egg hatch. Apply at first sign of egg hatch or when infestations reach threshold levels as defined by a cooperative extension service or other qualified professional authorities. For control of <b>European corn borer</b> and <b>armyworms</b> , direct application at the whorl for early season (first generation) infestations. Apply as broadcast or multi-nozzle over the row application to mid- and late-season infestations.
corn earworm, ( <i>Helicoverpa zea</i> )	6.4	For control of <b>corn earworm</b> , apply broadcast or direct spray to ear zone. Use sufficient spray volume and nozzle pressure to ensure thorough wetting of the silks. A 2-day re-treatment schedule may be necessary at silking.

**Restrictions:**

- **Preharvest Interval:** Do not apply within 28 days of grain and stover harvest, or 3 days of forage or fodder harvest.
- Do not apply more than 12 fl oz of GF-3028 per acre per application.
- Do not apply more than a total of 51 fl oz of GF-3028 (1 lb ai methoxyfenozide, 0.2 lb ai spinetoram) per

acre per year.

- **Minimum Treatment Interval:** For corn earworm at silking, do not make applications less than 2 days apart. For control of all other pests, do not make applications less than 4 days apart.
- **Maximum Number of Applications:** Do not make more than 6 applications per year.
- Do not apply to popcorn by aerial ULV.

**Root Vegetables (Subgroups 1A, 1B)<sup>1</sup> and Tuberous and Corm Vegetables (Except Potato) (Subgroup 1D)<sup>2</sup> (Not registered in New York)**

<sup>1</sup>Root vegetables (subgroups 1A, 1B) includes black salsify, carrot, celeriac, chicory, edible burdock, garden beet, ginseng, horseradish, parsnip, oriental radish, radish, rutabaga, salsify, skirret, Spanish salsify, sugarbeet, turnip, turnip-rooted chervil, and turnip-rooted parsley

<sup>2</sup>Tuberous and corm vegetables (except potato) (subgroup 1D) including arracacha, arrowroot, bitter cassava, chayote (root), Chinese artichoke, chufa, dasheen, edible canna, ginger, Jerusalem artichoke, leren, sweet cassava, sweet potato, tanier, true yam, turmeric, yam bean

**Application Rate:** The amount of GF-3028 applied per acre will depend upon plant size, volume of foliage present, pest growth stage and pest infestation level. Use a lower rate in the rate range for light infestations, smaller larvae and/or small plants, and a higher rate in the rate range for heavy infestations, larger larvae and/or larger plants.

**Ground Application:** Apply in a minimum of 10 gpa by conventional ground equipment. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

**Aerial Application:** Apply in a minimum of 10 gpa. Use a higher carrier volume for heavy infestations and in situations where thorough coverage is difficult to achieve.

**Resistance Management:** Do not make more than two consecutive applications of Group 5 or Group 18 insecticides. If additional treatments are required after two consecutive applications of Group 5 or Group 18 insecticides, rotate to another class of effective insecticides for at least one application. Consult your Dow AgroSciences representative, extension specialist, certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area. Avoid applying GF-3028 and other Group 5 and Group 18 insecticides to consecutive generations of all target insect pests.

Pests	Application Rate (fl oz/acre)	Application Timing
armyworms cabbageworms cutworm (suppression only) European corn borer light brown apple moth loopers saltmarsh caterpillar webworms	4.5 – 12	Apply at egg hatch or when first signs of feeding occur.

**Restrictions:**

- Do not apply more than 12 fl oz of GF-3028 per acre per application.
- **Minimum Treatment Interval:** Do not make applications less than 14 days apart.

**Garden beet, sugar beet**

- **Preharvest Interval:** Do not apply within 7 days of harvest.
- Do not apply more than a total of 51 fl oz of GF-3028 (1 lb ai methoxyfenozide, 0.2 lb ai spinetoram) per acre per year.

- **Maximum Number of Applications:** Do not make more than 4 applications per crop.

**Black salsify, carrot, chicory, ginseng, horseradish, parsnip, salsify, skirret, Spanish salsify, turnip-rooted chervil, turnip-rooted parsley**

- **Preharvest Interval:** Do not apply within 3 days of harvest.
- Do not apply more than a total of 51 fl oz of GF-3028 (1 lb ai methoxyfenozide, 0.2 lb ai spinetoram) per acre per year.
- **Maximum Number of Applications:** Do not make more than 4 applications per crop.

**Arracacha, arrowroot, bitter cassava, chayote root, Chinese artichoke, chufa, dasheen, edible canna, ginger, Jerusalem artichoke, leren, sweet cassava, sweet potato, tanier, true yam, turmeric, yam bean**

- **Preharvest Interval:** Do not apply within 7 days of harvest.
- Do not apply more than a total of 51 fl oz of GF-3028 (1 lb ai methoxyfenozide, 0.2 lb ai spinetoram) per acre per year.
- **Maximum Number of Applications:** Do not make more than 3 applications per crop.

**Celeriac, edible burdock, Oriental radish, rutabaga, turnip**

- **Preharvest Interval:** Do not apply within 3 days of harvest.
- Do not apply more than a total of 48 fl oz of GF-3028 (0.94 lb ai methoxyfenozide, 0.188 lb ai spinetoram) per acre per year.
- **Maximum Number of Applications:** Do not make more than 3 applications per year.

**Radish**

- **Preharvest Interval:** Do not apply within 3 days of harvest.
- Do not apply more than a total of 25.5 fl oz of GF-3028 (0.5 lb ai methoxyfenozide, 0.1 lb ai spinetoram) per acre per year.
- **Maximum Number of Applications:** Do not make more than 4 applications per year.

**Soybean**

(Not registered in New York)

**Application Rate:** The amount of GF-3028 applied per acre will depend upon plant size, volume of foliage present, pest growth stage and pest infestation level. Use a lower rate in the rate range for light infestations, smaller larvae and/or small plants, and a higher rate in the rate range for heavy infestations, larger larvae and/or larger plants.

**Ground Application:** Apply in a minimum spray volume of 10 gpa using calibrated ground application equipment that provides thorough coverage.

**Aerial Application:** Apply in a minimum spray volume of 5 gpa in equipment that has been properly patterned and calibrated for environmental conditions at the site. Use higher water volumes for heavy infestations and in situations where thorough coverage is difficult to achieve.

**Resistance Management:** Do not make more than two consecutive applications of Group 5 or Group 18 insecticides. If additional treatments are required after two consecutive applications of Group 5 or Group 18 insecticides, rotate to another class of effective insecticides for at least one application. Consult your Dow AgroSciences representative, extension specialist, certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area. Avoid applying GF-3028 and other Group 5 and Group 18 insecticides to consecutive generations of all target insect pests.

Pests	Application Rate (fl oz/acre)	Application Timing
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beet armyworm cabbage looper corn earworm (podworm, <i>Helicoverpa zea</i> ) fall armyworm green clover worm saltmarsh caterpillar southern armyworm soybean loopers tobacco budworm true armyworm velvet bean caterpillar yellowstriped armyworm	4 – 6.4	Begin applications when first signs of feeding damage appear or when threshold levels of feeding damage occur.
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**Restrictions:**

- **Preharvest Interval:** Do not apply within 28 days of seed harvest.
- Do not apply more than 8 fl oz of GF-3028 per acre per application.
- Do not apply more than a total of 27.75 fl oz of GF-3028 (0.545 lb ai methoxyfenozide, 0.109 lb ai spinetoram) per acre per year.
- **Minimum Treatment Interval:** Do not make applications less than 4 days apart.
- **Maximum Number of Applications:** Do not make more than 4 applications per year.
- **Re-Planting Interval:** A 7-day re-planting interval is required for residues of methoxyfenozide.

**Stone Fruits (Crop Group 12)<sup>1</sup>**  
 (Not registered in New York)

<sup>1</sup>Stone fruits (crop group 12) includes apricot, cherries (sweet, sour), chickasaw plum, damson plum, Japanese plum, nectarine, peach, plum, plumcot, prune (fresh)

**Application Rate:** The amount of GF-3028 to apply per acre will depend upon tree size and pest infestation level. Use a lower rate in the rate range for light infestations and/or smaller trees and higher rate in the rate range for heavy infestations and/or larger trees.

**Ground Application:** Apply in a minimum of 50 gpa by conventional ground equipment to trellised trees or trees 10 feet tall or less. For trees greater than 10 feet tall, use a minimum of 100 gpa. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

**Aerial Application:** Apply in a minimum of 20 gpa. This method should not be used if the size of the tree or density of the foliage prohibits thorough, uniform coverage of the entire tree canopy.

**Resistance Management:** Do not make more than three consecutive applications of Group 5 or Group 18 insecticides within a crop season. If additional treatments are required after three consecutive applications of Group 5 or Group 18 insecticides, rotate to another class of effective insecticides for at least one application. Consult your Dow AgroSciences representative, extension specialist, certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area. Avoid applying GF-3028 or other Group 5 and Group 18 insecticides to consecutive generations of all target insect pests, especially consecutive generations of oriental fruit moth and leafrollers.

Pests	Application Rate (fl oz/acre)	Application Timing
codling moth oriental fruit moth	8 – 12	Begin applications at or before egg hatch and before the larvae penetrate the fruit. Follow local spray timing advisories or biofix dates based upon pheromone trap catches to time sprays appropriately.

peach twig borer	6 – 12	Peach twig borer applications can be made as dormant, delayed dormant, or post-bloom sprays. Begin applications at initiation of egg hatch before larvae enter the fruit. Reapply in 10 to 14 days to ensure complete coverage of rapidly expanding fruits or foliage, or under conditions of high infestation or sustained moth flight.
obliquebanded leafroller pandemis leafroller		<b>Spring (overwintering) generation:</b> Make 1 to 2 applications during the pink to petal fall period depending upon infestation level. <b>Summer generation:</b> Make the first application during the period of peak egg lay to early egg hatch (usually 200 to 400 DD following biofix). Reapply 10 to 18 days later (usually 500 to 700 DD).
fruittree leafroller light brown apple moth omnivorous leafroller redbanded leafroller threelined leafroller tufted apple budmoth variegated leafroller		For control of surface or foliar feeding leafroller larvae, apply at the initiation of egg hatch when larvae begin to feed.
cherry fruitworm green fruitworm lesser appleworm	7 – 12	Apply at initiation of egg hatch or at the first sign of larval infestation. Reapply in 10 to 14 days to ensure complete coverage of rapidly expanding fruits or foliage.
European grapevine moth redhumped caterpillar	6 – 12	

**Restrictions:**

- **Preharvest Interval:** Do not apply within 14 days of harvest for apricots, 7 days of harvest for cherries (sweet and sour), nectarines, peaches, plums, prunes, their hybrids, and any other stone fruit.
- Do not apply more than 12 fl oz of GF-3028 per acre per application.
- Do not apply more than a total of 51 fl oz of GF-3028 (1 lb ai methoxyfenozide, 0.2 lb ai spinetoram) per acre per year.
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- **Maximum Number of Applications:** Do not make more than 4 applications per year or apply more than 3 sprays targeted at leafrollers per season.

**Strawberry**

(Not registered in New York)

**Application Rate:** The amount of GF-3028 applied per acre will depend upon plant size, volume of foliage present, pest growth stage and pest infestation level. Use a lower rate in the rate range for light infestations, smaller larvae and/or small plants, and a higher rate in the rate range for heavy infestations, larger larvae and/or larger plants.

**Ground Application:** Apply in a minimum of 10 gpa by conventional ground equipment to young crop or small plants. Apply in a minimum of 20 gpa to densely foliated or difficult to cover crops to ensure thorough coverage. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

**Aerial Application:** Apply in a minimum of 10 gpa.

**Resistance Management:** Do not make more than two consecutive applications of Group 5 or Group 18 insecticides. If additional treatments are required after two consecutive applications of Group 5 or Group 18 insecticides, rotate to another class of effective insecticides for at least one application. Consult your

Dow AgroSciences representative, extension specialist, certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area. Avoid applying GF-3028 and other Group 5 and Group 18 insecticides to consecutive generations of all target insect pests.

Pests	Application Rate (fl oz/acre)	Application Timing
armyworms cutworms (suppression only) light brown apple moth	4.5 – 9	Apply at first sign of feeding damage or when infestations reach threshold levels as defined by a cooperative extension service or other qualified professional authorities.
corn earworm ( <i>Helicoverpa zea</i> )	6 – 9	

**Restrictions:**

- **Preharvest Interval:** Do not apply within 1 day of harvest.
- Do not apply more than 9 fl oz of GF-3028 per acre per application.
- Do not apply more than a total of 51 fl oz of GF-3028 (1 lb ai methoxyfenozide, 0.2 lb ai spinetoram) per acre per year.
- **Minimum Treatment Interval:** Do not make applications less than 4 days apart.
- **Maximum Number of Applications:** Do not make more than 5 applications per year.

**Tree Nuts (Crop Group 14)<sup>1</sup> and Pistachios (Not registered in New York)**

<sup>1</sup>Tree nuts (crop group 14) includes almond, beech nut, Brazil nut, butternut, cashew, chestnut, chinquapin, filbert (hazelnut), hickory nut, macadamia (bush) nut, pecan, pistachio, walnut (black and English)

**Application Rate:** The amount of GF-3028 to apply per acre will depend upon tree size and pest infestation level. Use a lower rate in the rate range for light infestations and/or smaller trees and higher rate in the rate range for heavy infestations and/or larger trees.

**Ground Application:** Apply in a minimum of 50 gpa by conventional ground equipment. For best results, use 100 to 200 gpa. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

**Aerial Application:** Apply in a minimum of 10 gpa. This method may result in reduced efficacy if the size of the tree or density of the foliage prohibits thorough, uniform coverage of the entire tree canopy.

**Resistance Management:** Do not make more than two consecutive applications of Group 5 or Group 18 insecticides within a crop season. If additional treatments are required after two consecutive applications of Group 5 or Group 18 insecticides, rotate to another class of effective insecticides for at least one application. Consult your Dow AgroSciences representative, extension specialist, certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area. Avoid applying GF-3028 and other Group 5 and Group 18 insecticides to consecutive generations of all target insect pests.

**Almonds**

Pests	Application Rate (fl oz/acre)	Application Timing
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peach twig borer	6 – 12	Larvae must be controlled before penetrating the nuts or shoots. Follow regional spray recommendations based upon biofix dates, egg hatch, and/or pheromone trap catches. <b>Spring (overwintering) generation:</b> Make 1 to 2 applications during the bloom to petal fall period depending upon infestation level.
	8 – 16	<b>Summer generation:</b> Begin applications at peak moth flight (400 to 450 DD, base 50°F, following biofix). Reapply 10 to 18 days later if pest pressure remains high or moth flight is sustained.
navel orangeworm	10 – 18	Make first application at the initiation of hull split (1 to 5% hull split). Reapply 10 to 14 days later.
light brown apple moth	6 – 12	Apply at the first sign of larval infestation.

**Restrictions:**

- **Preharvest Interval:** Do not apply within 14 days of harvest.
- Do not apply more than 18 fl oz of GF-3028 per acre per application.
- Do not apply more than a total of 51 fl oz of GF-3028 (1 lb ai methoxyfenozide, 0.2 lb ai spinetoram) per acre per year.
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- **Maximum Number of Applications:** Do not make more than 4 applications per year.

**Hazelnuts**

Pests	Application Rate (fl oz/acre)	Application Timing
filbertworm	6 – 12	Apply at initiation of egg hatch. Reapply 14 to 21 days later if pest pressure remains high or moth flight is sustained.
obliquebanded leafroller		<b>Spring (overwintering) generation:</b> Make 1 to 2 applications depending upon infestation level. <b>Summer generation:</b> Make the first application during the period of peak egg lay to early egg hatch (200 to 400 DD following biofix). Reapply 10 to 18 days later (usually 500 to 700 DD).
filbert leafroller light brown apple moth omnivorous leaftier		For control of surface or foliar feeding leafroller larvae, apply at the initiation of egg hatch when larvae begin to feed.

**Restrictions:**

- **Preharvest Interval:** Do not apply within 14 days of harvest.
- Do not apply more than 12 fl oz of GF-3028 per acre per application.
- Do not apply more than a total of 51 fl oz of GF-3028 (1 lb ai methoxyfenozide, 0.2 lb ai spinetoram) per acre per year.
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- **Maximum Number of Applications:** Do not make more than 4 applications per year. Do not apply more than 3 sprays targeted at leafrollers per season.

**Pecans**

Pests	Application Rate (fl oz/acre)	Application Timing
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pecan nut casebearer	4 – 6.4	Apply at initiation of egg hatch (first generation is approximately 8 to 15 days following biofix). Control of first generation may require second application to ensure complete coverage of rapidly expanding nuts and foliage, or under conditions or extended egg laying.
hickory shuckworm		For early- to mid-season infestations reaching threshold levels as defined by state extension specialists or other qualified authorities, make applications at the initiation of egg hatch. For late-season infestations, initiate applications at half-shell hardening. Reapply 14 days later.
fall webworm walnut caterpillar		Apply at the first sign of larval infestation.

**Restrictions:**

- **Preharvest Interval:** Do not apply within 14 days of harvest.
- Do not apply more than 8 fl oz of GF-3028 per acre per application.
- Do not apply more than a total of 51 fl oz of GF-3028 (1 lb ai methoxyfenozide, 0.2 lb ai spinetoram) per acre per year.
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- **Maximum Number of Applications:** Do not make more than 4 applications per year.

**Walnuts**

Pests	Application Rate (fl oz/acre)	Application Timing
codling moth	10 – 18	Apply at initiation of egg hatch (100 to 200 DD following biofix). Control of first generation may require second application (10 to 18 days later) to ensure complete coverage of rapidly expanding nuts and foliage.
navel orangeworm		Apply at initiation of egg hatch.
fall webworm light brown apple moth redhumped caterpillar walnut caterpillar	6 – 12	Apply at first sign of larval infestation.

**Restrictions:**

- **Preharvest Interval:** Do not apply within 14 days of harvest.
- Do not apply more than 18 fl oz of GF-3028 per acre per application.
- Do not apply more than a total of 51 fl oz of GF-3028 (1 lb ai methoxyfenozide, 0.2 lb ai spinetoram) per acre per season.
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- **Maximum Number of Applications:** Do not make more than 4 applications per year.

**Tree Nut Crops not Specifically Listed Above**

**Restrictions** for control of lepidoptera larvae for which GF-3028 is registered:

- **Preharvest Interval:** Do not apply within 14 days of harvest.
- Do not apply more than 19 fl oz of GF-3028 per acre per application.
- Do not apply more than a total of 51 fl oz of GF-3028 (1 lb ai methoxyfenozide, 0.2 lb ai spinetoram) per acre per season.
- **Minimum Treatment Interval:** Do not make applications less than 7 days apart.
- **Maximum Number of Applications:** Do not make more than 4 applications per year.

Performance of GF-3028 against pests not listed on this label cannot be warranted nor can crop tolerance in all types and varieties of tree nuts be assured. If unsure, the user is advised to treat a few trees to observe for symptoms before treating large blocks of trees. Generally, optimum performance against lepidoptera pests (worms) is achieved when GF-3028 is applied at the initiation of egg hatch. Reapplication intervals of 10 to 20 days may be required if the plant part(s) to be protected from insect damage is rapidly growing or expanding or if pest infestations are heavy or extended.

**Tropical Tree Fruits<sup>1</sup>**  
**(Not registered in New York)**

<sup>1</sup>Acerola, avocado, black sapote, canistel, feijoa, guava, jaboticaba, longan, lychee, mamey sapote, mango, papaya, passionfruit, pulasan, rambutan, sapodilla, Spanish lime, star apple, starfruit, wax jambu

**Application Rate:** The amount of GF-3028 to apply per acre will depend upon tree size and pest infestation level. Use a lower rate in the rate range for light infestations and/or smaller trees and higher rate in the rate range for heavy infestations and/or larger trees.

**Ground Application:** Apply in a minimum of 50 gpa by conventional ground equipment to trees 10 feet tall or less. For trees greater than 10 feet tall, apply in a minimum of 100 gpa by conventional group equipment. Use a higher carrier volume for heavy infestations and in situations where thorough coverage is difficult to achieve. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

**Aerial Application:** Apply in a minimum of 10 gpa. Use a higher carrier volume for heavy infestations and in situations where thorough coverage is difficult to achieve.

**Resistance Management:** Do not make more than two consecutive applications of Group 5 or Group 18 insecticides. If additional treatments are required after two consecutive applications of Group 5 or Group 18 insecticides, rotate to another class of effective insecticides for at least one application. Consult your Dow AgroSciences representative, extension specialist, certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area. Avoid applying GF-3028 and other Group 5 and Group 18 insecticides to consecutive generations of all target insect pests. Do not apply to tropical tree fruits grown in greenhouses and nurseries.

Pests	Application Rate (fl oz/acre)	Application Timing
lepidopterous larvae including: avocado leafroller citrus peelminer cutworms fruit tree leafroller guava moth ( <i>Argyresthia</i> ) leafrollers light brown apple moth loopers navel orangeworm orange tortrix spanworms webbing worms western tussock moth	7 – 12	Apply at egg hatch or when first signs of feeding occur.

**Restrictions:**

- Do not apply more than 12 fl oz of GF-3028 per acre per application.
- Do not apply more than a total of 51 fl oz of GF-3028 (1 lb ai methoxyfenozide, 0.2 lb ai spinetoram) per acre per year.

- **Maximum Number of Applications:** Do not make more than 3 applications per year.

**Acerola, feijoa, guava, jaboticaba, passionfruit, starfruit, wax jambu**

- **Preharvest Interval:** Do not apply within 3 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 6 days apart.

**Avocado**

- **Preharvest Interval:** Do not apply within 2 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 6 days apart.

**Black sapote, canistel, mamey sapote, mango, papaya, sapodilla, star apple**

- **Preharvest Interval:** Do not apply within 3 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 10 days apart.

**Longan, lychee, pulasan, rambutan, Spanish lime**

- **Preharvest Interval:** Do not apply within 14 days of harvest.
- **Minimum Treatment Interval:** Do not make applications less than 10 days apart.

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