RESTRICTED USE PESTICIDE

TOXIC TO FISH, MAMMALS, AND AQUATIC ORGANISMS

FOR RETAIL SALE TO AND USE ONLY BY CERTIFIED APPLICATORS OR PERSONS UNDER THEIR DIRECT SUPERVISION, AND ONLY FOR THOSE USES COVERED BY THE CERTIFIED APPLICATOR'S CERTIFICATION.

PULL HERE ► TO OPEN

EMAMECTIN BENZOATE | GROUP 6 | INSECTICIDE

Proclaim®

Insecticide

syngenta®

For control or suppression of certain lepidopterous larvae (worms/caterpillars), leafminers, and spider mites on Artichoke (globe); *Brassica* Head and Stem Vegetables, Crop Group 5-16; *Brassica* Leafy Greens, Crop Sub-group 4-16B (except Watercress); Celtuce; Cherry, Crop Sub-group 12-12A; Cucurbit Vegetables, Crop Group 9; Fennel, Florence; Fruiting Vegetables, Crop Group 8-10; Herb, Crop Sub-group 19A; Kohlrabi; Leaf Petiole Vegetables, Crop Sub-group 22B; Leafy Greens, Crop Sub-group 4-16A; Pome Fruit, Crop Group 11-10; and Tree Nuts, Crop Group 14-12

Active Ingredients:	
Emamectin benzoate*	5.0%
Other Ingredients:	95.0%
Total:	100.0%

*CAS No. 155569-91-8

Proclaim Insecticide is a soluble granule containing 5% emamectin benzoate.

KEEP OUT OF REACH OF CHILDREN.

CAUTION

See additional Precautionary Statements and Directions for Use inside booklet.

EPA Reg. No. 100-904 EPA Est. 67545-AZ-1

Product of China
Formulated in the USA

SCP 904A-L1T 0520
4120451

1.21 pounds
(19.2 ounces)
Net Contents

®

TABLE OF CONTENTS

1.0 FIRST AID

PRECAUTIONARY STATEMENTS

2.0 PRECAUTIONARY STATEMENTS

2.1 **Hazards to Humans and Domestic Animals**

2.2 **Personal Protective Equipment (PPE)**

2.3 **User Safety Requirements**

2.4 **Engineering Controls**

2.5 **User Safety Recommendations**

2.6 **Environmental Hazards**

2.7 **Physical or Chemical Hazards**

DIRECTIONS FOR USE

3.0 PRODUCT INFORMATION

3.1 **Resistance Management**

3.1.1 Maintaining Susceptibility To These Classes Of Chemistry

3.1.2 Other Sources For Information On Insect Resistance Management

4.0 APPLICATION DIRECTIONS

4.1 **Methods of Application**

4.2 **Application Equipment**

4.2.1 Shielded Sprayers

4.2.2 Air-Assisted (Air-Blast) Field Crop Sprayers

4.3 **Application Volume and Spray Coverage**

4.4 **Mixing Directions**

4.4.1 Proclaim Insecticide Alone

4.4.2 Tank-Mix Precautions

4.4.3 Tank-Mix Compatibility

4.4.4 Proclaim Insecticide In Tank Mixtures

4.4.5 Spray Additives

5.0 ROTATIONAL CROP RESTRICTIONS

continued…

DIRECTIONS FOR USE *(continued)*

6.0 RESTRICTIONS AND PRECAUTIONS

6.1 **Use Restrictions**

6.2 **Spray Drift Management**

6.2.1 Spray Drift Advisories

6.2.2 Vegetative Buffer Strip

6.2.3 Importance of Droplet Size

6.2.4 Temperature and Humidity

6.2.5 Temperature Inversions

6.2.6 Wind

6.3 **Aerial Application Spray Drift Management**

6.3.1 Controlling Droplet Size

6.3.2 Release Height - Aircraft

6.4 **Ground Application Spray Drift Management**

6.4.1 Controlling Droplet Size

6.4.2 Shielded Sprayers

6.4.3 Release Height – Ground Boom

7.0 CROP USE DIRECTIONS

7.1 **Artichoke, globe**

7.2 ***Brassica* Head and Stem Vegetables, Crop Group 5-16**

7.3 **Brassica Leafy Greens, Crop Sub-group 4-16B (except Watercress)**

7.4 **Celtuce**

7.5 **Cherry, Crop Sub-group 12-12A**

7.6 **Cucurbit Vegetables, Crop Group 9**

7.7 **Fennel, Florence**

7.8 **Fruiting Vegetables, Crop Group 8-10**

7.9 **Herb, Crop Sub-group 19A**

7.10 **Kohlrabi**

7.11 **Leaf Petiole Vegetable, Crop-Sub-group 22B**

7.12 **Leafy Greens, Crop Sub-group 4-16A**

7.13 **Pome Fruits, Crop Group 11-10**

7.14 **Tree Nuts, Crop Group 14-12**

8.0 STORAGE AND DISPOSAL

9.0 CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

1.0 FIRST AID

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

continued…

1.0 FIRST AID *(continued)*

NOTE TO PHYSICIAN

Early signs of intoxication include dilation of pupils, muscular incoordination, and muscular tremors. Vomiting within one-half hour of exposure can minimize toxicity following accidental ingestion of the product; rapidly after exposure (< 15 minutes) administer repeatedly medical charcoal in a large quantity of water or ipecac.

If toxicity from exposure has progressed to cause severe vomiting, the extent of resultant fluid and electrolyte imbalance should be gauged. Appropriate supportive parenteral fluid replacement therapy should be given, along with other required supportive measures (such as maintenance of blood pressure levels and proper respiratory functionality) as indicated by clinical signs, symptoms, and measurements.

In severe cases, observations should continue for at least several days until clinical condition is stable and normal. Since emamectin benzoate is believed to enhance GABA activity in animals, it is probably wise to avoid drugs that enhance GABA activity (barbiturates, benzodiazepines, valproic acid) in patients with potentially toxic emamectin benzoate exposure.

2.0 PRECAUTIONARY STATEMENTS

2.1 Hazards to Humans and Domestic Animals

CAUTION

Harmful if swallowed, inhaled or absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Avoid breathing dust or spray mist. Prolonged or frequently repeated exposure may cause allergic skin reactions in some individuals.

2.2 Personal Protective Equipment (PPE)

All applicators, including ground, airblast and aerial, and all mixers, loaders, flaggers and other handlers must wear at a minimum the items listed below. See sections below for additional requirements for airblast and aerial applications.

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of polyvinyl chloride ≥ 14 mils, nitrile rubber ≥ 14 mils, or butyl rubber ≥ 14 mils
- Shoes plus socks

In addition to the above minimum requirements all mixers, loaders and other handlers must wear:

- Coveralls over long-sleeved shirt and long pants.
- Wear a minimum of a NIOSH-approved particulate filtering face piece respirator with any R or P filter; OR NIOSH-approved elastomeric particulate respirator with any R or P filter; OR a NISOH-approved power air purifying respirator with HE filters.

Airblast Application:

In addition to the above minimum requirements:

- Applicators using **OPEN CAB** airblast sprayers must also wear coveralls over long-sleeved shirt and long pants.
- Applicators using **ENCLOSED CAB** airblast sprayers must wear chemical resistant gloves when entering or leaving the cab. Once inside the cab, applicator must remove gloves and store them in a chemical-resistant container such as a plastic bag.

Flaggers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Chemical-resistant gloves made of polyvinyl chloride ≥ 14 mils, nitrile rubber ≥ 14 mils or butyl rubber ≥ 14 mils.

2.3 User Safety Requirements

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

2.4 Engineering Controls

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

2.5 User Safety Recommendations

User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

continued...

2.6 Environmental Hazards

This pesticide is toxic to fish, birds, mammals, and aquatic invertebrates. Drift and runoff may be hazardous to aquatic organisms in neighboring areas. 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 wash water or rinsate.

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

2.7 Physical or Chemical Hazards

Do not use, pour, spill, or store near heat or open flame.

DIRECTIONS FOR USE

RESTRICTED USE PESTICIDE

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

Proclaim Insecticide must be used only in accordance with directions on this label or exemptions under FIFRA (Special Local Need Registration, FIFRA Section 18 exemptions). 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.

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

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval (REI). The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard (WPS).

continued...

AGRICULTURAL USE REQUIREMENTS *(continued)*

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI). The REI and any prohibitions are listed in the directions for use (Section 7.0) associated with each crop on this label.

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 polyvinyl chloride ≥ 14 mils, nitrile rubber ≥ 14 mils, or butyl rubber ≥ 14 mils
- Shoes plus socks
- Protective eyewear

3.0 PRODUCT INFORMATION

Proclaim Insecticide is a selective insecticide for use on Artichoke (globe); *Brassica* Head and Stem Vegetables, Crop Group 5-16; *Brassica* Leafy Greens, Crop Sub-group 4-16B (except Watercress); Celtuce; Cherry, Crop Sub-group 12-12A; Cucurbit Vegetables, Crop Group 9; Fennel, Florence; Fruiting Vegetables, Crop Group 8-10; Herb, Crop Sub-group 19A; Kohlrabi; Leaf Petiole Vegetables, Crop Sub-group 22B; Leafy Greens, Crop Sub-group 4-16A; Pome Fruit, Crop Group 11-10; and Tree Nuts, Crop Group 14-12.

This product controls the larval stages (worms/caterpillars) of certain lepidopteran species. It has contact activity but is most efficacious when ingested by the pest. Shortly after exposure to the product, affected larvae are paralyzed, stop feeding, and subsequently die after 2-4 days. Target applications at small (1/4 inch in length) larvae.

PEST SUPPRESSION

Suppression can mean either inconsistent control (good to poor) or consistent control at a level below that generally considered acceptable for commercial control.

CROP TOLERANCE

This product has been tested for phytotoxicity and has a wide margin of safety on the crops listed on this label. However, not all crops within a crop group, and not all varieties, cultivars, or hybrids of crops, have been individually tested for crop safety. It is not possible to evaluate for crop safety on all crops within a crop group, on all varieties, cultivars, or hybrids of those crops, or under all environmental conditions and growing circumstances. To test for crop safety, apply the product in accordance with the label instructions to a small area of the target crop to ensure that a phytotoxic response will not occur, especially where the application is a new use of the product by the applicator. Refer to **Section 4.4.2** for information regarding crop safety of tank mixtures.

3.1 Resistance Management

EMAMECTIN BENZOATE	GROUP	6	INSECTICIDE

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

For resistance management, please note that Proclaim Insecticide contains a Group 6 insecticide (emamectin benzoate). Insect biotypes with acquired or inherent resistance to Group 6 insecticides may eventually dominate the pest population if Group 6 insecticides are used repeatedly as the predominant method of control for targeted species. This may result in partial or total loss of control of those species by Proclaim Insecticide or other Group 6 insecticides. Appropriate resistance-management strategies should be followed.

To delay insecticide resistance, take the following steps:

- Rotate the use of Proclaim Insecticide or other Group 6 insecticides within a growing season, or among growing seasons, with different groups that control the same pests.
- Use tank mixtures with insecticides from a different group that are equally effective on the target pest when such use is permitted. Do not rely on the same mixture repeatedly for the same pest population. Consider any known cross-resistance issues (for the targeted pests) between the individual components of a mixture. In addition, consider the following recommendations provided by the Insecticide Resistance Action Committee (IRAC):
    - Individual insecticides selected for use in mixtures should be highly effective and be applied at the rates at which they are individually registered for use against the target species.
    - Mixtures with components having the same IRAC mode of action classification are not recommended for insect resistance management.
    - When using mixtures, consider any known cross-resistance issues between the individual components for the targeted pest(s).
    - Mixtures become less effective if resistance is already developing to one or both active ingredients, but they may still provide pest management benefits.
    - The insect resistance management benefits of an insecticide mixture are greatest if the two components have similar periods of residual insecticidal activity. Mixtures of insecticides with unequal periods of residual insecticide activity may offer an insect resistance management benefit only for the period where both insecticides are active.

- Adopt an integrated pest management program for insecticide use that includes scouting, uses historical information related to pesticide use, crop rotation, record keeping, and which considers cultural, biological and other chemical control practices.
- Monitor after application for unexpected target pest survival. If the level of survival suggests the presence of resistance, consult with your local university specialist or certified pest control advisor.
- Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or IPM recommendations for the specific site and pest problems in your area.
- For further information or to report suspected resistance contact your local Syngenta representative.

3.1.1 MAINTAINING SUSCEPTIBILITY TO THESE CLASSES OF CHEMISTRY

- Avoid using Group 6 miticides/insecticides exclusively for season-long control of insect or mite species with more than one generation per crop season.
- For insect or mite species with successive or overlapping generations, apply Proclaim Insecticide or other Group 6 miticides/insecticides using a "treatment window" approach. A treatment window is a period of time as defined by the stage of crop development and/or the biology of the pests of concern. Within the treatment window, depending on the length of residual activity, there may either be single or consecutive applications (seed treatment, soil, foliar, unless otherwise stated) of the Group 6 miticides/insecticides. Do not exceed the maximum Proclaim Insecticide allowed per growing season.
- Following a treatment window of Group 6 miticides/insecticides, rotate to a treatment window of effective products with a different mode of action before making additional applications of Group 6 miticides/insecticides.
- A treatment window rotation, along with other IPM practices for the crop and use area, is considered an effective strategy for preventing or delaying a pest's ability to develop resistance to these classes of chemistry.
- If resistance is suspected, do not reapply Proclaim Insecticide or other Group 6 miticides/insecticides.

3.1.2 OTHER SOURCES FOR INFORMATION ON INSECT RESISTANCE MANAGEMENT

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

4.0 APPLICATION DIRECTIONS

4.1 Methods of Application

Foliar applications with Proclaim Insecticide are permitted by ground and aerial equipment as specified in **Section 7.0**. This product is not effective if applied into or on the soil.

4.2 Application Equipment

- Spray equipment configuration should be arranged to provide accurate, uniform and thorough coverage of the target crop and minimize potential for spray drift.
- For Cherry, Crop Sub-group 12-12A, Pome Fruits, Crop Group 11-10, and Tree Nuts, Crop Group 14-12 use spray nozzles that provide fine to coarser sized droplets.
- For ground and aerial applications to all crops except Cherry, Crop Sub-group 12-12A, Pome Fruits, Crop Group 11-10, and Tree Nuts, Crop Group 14-12, select nozzles and pressure that deliver medium or coarser sized droplets.
- To ensure accuracy, calibrate sprayer before each use.
- For information on spray equipment and calibration, consult spray equipment manufacturers and/or state recommendations
- All ground and aerial application equipment must be properly maintained and calibrated using appropriate carriers.

4.2.1 SHIELDED SPRAYERS

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

4.2.2 AIR-ASSISTED (AIR-BLAST) FIELD CROP SPRAYERS

- Air-assisted field crop sprayers carry droplets to the target via a downward-directed air stream. Some may reduce the potential for drift, but if a sprayer is unsuitable for the application and/or set up improperly, high drift potential can result.
- It is the responsibility of the applicator to determine that a sprayer is suitable for the intended application, that it is configured properly, and that drift potential has been minimized.

4.3 Application Volume and Spray Coverage

See specific **Methods of Application (Section 4.1)** and **Crop Use Directions (Section 7.0)** for application volume information.

- Thorough spray coverage is essential for optimum performance. Apply this product in sufficient water to ensure good coverage of all plant surfaces.
- The use of greater water volumes will generally result in better coverage, especially under adverse conditions (e.g., hot, dry) or when the plant canopy is dense. See **Section 7.0** for specific spray volume recommendations for different crops.

- If the worm infestation is high, increase the amount of water.
- Avoid application when uniform coverage is not possible or if excessive spray drift or inversion is possible.
- The use of an adjuvant is recommended for all applications of this product. Refer to **Section 4.4.5**.

4.4 Mixing Directions

1. Thoroughly clean spray equipment before using this product.
2. Prepare no more spray mixture than is needed for the immediate application.
3. Keep product container tightly closed when not in use.
4. Agitate the spray solution before and during application.
5. Do not let the spray mixture stand overnight in the spray tank.
6. Flush the spray equipment thoroughly following each use and apply rinsate to a previously treated area.

Do not use liquid fertilizer as a carrier for this product

4.4.1 PROCLAIM INSECTICIDE ALONE

1. Add 1/3 of the required amount of water to the spray or mixing tank.
2. With the agitator running, add this product into the spray tank.
3. Continue agitation while adding the remainder of the water.
4. Begin application of the solution after Proclaim Insecticide has completely dispersed into the mix water.
5. Maintain agitation until all of the mixture has been applied.

4.4.2 TANK-MIX PRECAUTIONS

- Do not tank mix Proclaim Insecticide with Bravo® Weather Stik®, Dithane® Rainshield™, or any other pesticide containing a sticker component in its formulation because this may drastically reduce Proclaim Insecticide's control of pests.
- It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions, limitations and directions for use on all product labels involved in tank mixing. User must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.
- Tank mixes of Proclaim Insecticide with other pesticides, fertilizers, or any other additives not specifically labelled for use with Proclaim Insecticide may result in tank mix incompatibility or unsatisfactory performance. In such cases, always check tank mix compatibility by conducting a jar test according to guidance in **Section 4.4.3** before actual tank mixing.

4.4.3 TANK-MIX COMPATIBILITY

- Conduct a jar test using a 1 pt to 1 qt container with lid by adding water or other intended carrier.

continued...

- Next, add the appropriate amount of pesticides(s) or tank-mix partner(s) in their relative proportions based on specified label rates. Add tank-mix components separately in the order described in the tank-mixing section, **Section 4.4.4**. After each addition, shake or stir gently to thoroughly mix.
- After all ingredients have been added, put the lid on the jar, tighten and invert the jar 10 times to mix.
- After mixing, let the mixture stand 15–30 minutes and then examine for signs of incompatibility such as obvious separation, large flakes, precipitates, gels or heavy oily film on the jar.
- If the mixture remains mixed or can be remixed readily, it is physically compatible and can be used.
- If the mixture is incompatible, repeat the test using a compatibility agent at the specified label rate. Or, if applicable, slurry dry formulations in water before adding to the jar. If incompatibility is still observed after following these procedures, do not use the mixture.
- After compatibility testing is complete, dispose of any pesticide wastes in accordance with the storage and disposal section, **Section 8.0**, of this label.

4.4.4 PROCLAIM INSECTICIDE IN TANK MIXTURES

1. Add 1/3 of the required amount of water to the mix tank.
2. Start the agitator running before adding any tank-mix partners.
3. When using this product in a tank mix, add different formulation types in the sequence indicated below:
   a) products packaged in water-soluble packaging
   b) wettable powders
   c) wettable granules (dry flowables)
   d) liquid flowables
   e) liquid and emulsifiable concentrates
4. Always allow each tank mix partner to become fully dispersed before adding the next product.
5. Provide sufficient agitation while adding the remainder of the water.
6. Maintain agitation until all the mixture has been applied.

4.4.5 SPRAY ADDITIVES

- The use of an adjuvant typically improves coverage and penetration and results in optimum insect control, especially in crops with hard-to-wet leaf surfaces.
- Use of a non-phytotoxic, non-ionic, activator type wetting, spreading, and/or penetrating spray adjuvant or horticultural oil, (not a dormant oil) approved by the Council of Producers & Distributors of Agrotechnology (CPDA) at the manufacturer's suggested rate is recommended for all applications.

- However, do not use sticker/binder type adjuvants because they may reduce translaminar movement of the active ingredient into the plant.
- Spray adjuvants must be compatible with Proclaim Insecticide and must be used at concentrations specified on the **spray adjuvant product label** directions for use for the targeted crop unless more specific directions are provided in the **Section 7.0** for individual crops on this label.

5.0 ROTATIONAL CROP RESTRICTIONS

There are no rotational (plant-back) restrictions with Proclaim Insecticide. Treated areas may be replanted with any crop as soon as practical following the last application.

6.0 RESTRICTIONS AND PRECAUTIONS

6.1 Use Restrictions

- **Chemigation: DO NOT** apply this product through any type of irrigation system.
- **DO NOT** apply this product with aircraft in New York State to any crop.
- **DO NOT** use this product in greenhouses, nurseries, plant propagation houses, or on any plants grown for use as transplants.
- **DO NOT** apply this product at rates lower than the rates specified on this label.
- **DO NOT** allow livestock to graze in treated areas.
- **DO NOT** use liquid fertilizer as a carrier for this product.

6.2 Spray Drift Management

SPRAY DRIFT
Aerial Applications

Aerial Applications (except pome fruit and tree nuts):

- Do not release spray at a height greater than 10 ft above the vegetative canopy, unless a greater application height is necessary for pilot safety.
- Applicators are required to use a medium or coarser droplet size (ASABE S572.1).
- Aerial applicators must use 1/2 swath displacement upwind at the downwind edge of the field.
- For aerial applications of medium or coarser droplet size emamectin benzoate, do not apply when wind speeds exceed 15 mph at the application site. If the wind speed is greater than 10 mph, the boom length must be 65% or less of the wingspan for fixed wing aircraft and 75% or less of the rotor diameter for helicopters. Otherwise, the boom length must be 75% or less of the wingspan for fixed-wing aircraft and 75% or less of the rotor diameter for helicopters.
- Do not apply during temperature inversions.

continued...

6.2 Spray Drift Management *(continued)*

Airblast Applications

- Sprays must be directed into the canopy.
- Do not apply when wind speeds exceed 15 mph at the application site.
- User must turn off outward pointing nozzles at row ends and when spraying outer row.
- For fine droplets size, do not apply when wind speeds exceed 10 mph at the application site.
- For medium or coarser droplet size, do not apply when wind speeds exceed 15 mph at the application site.
- Do not apply during temperature inversions.

Ground Boom Applications

Ground Boom Applications (except cherry, pome fruit, and tree nuts):

- User must only apply with the release height recommended by the manufacturer, but no more than 4 ft above the ground or crop canopy.
- Applicators are required to use a medium or coarser droplet size (ASABE S572.1).
- Do not apply when wind speeds exceed 15 mph at the application site.
- Do not apply during temperature inversions.

Ground Boom Applications for cherry, pome fruit, and tree nuts:

- User must only apply with the release height recommended by the manufacturer, but no more than 4 ft above the ground or crop canopy.
- Applicators are required to use a fine or coarser droplet size (ASABE S572.1).
- For fine droplets size, do not apply when wind speeds exceed 10 mph at the application site.
- For medium or coarser droplet size, do not apply when wind speeds exceed 15 mph at the application site.
- Do not apply during temperature inversions.

6.2.1 SPRAY DRIFT ADVISORIES

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment- and weather-related factors determines the potential for spray drift. The applicator is responsible for considering all of these factors when making application decisions.

Apply Proclaim Insecticide only when wind velocity favors on-target product deposition (approximately 3 to 10 mph).

- **Do not** allow this product to drift onto non-target areas. Drift may result in illegal residues or injury to non-target species. Risk of exposure to sensitive areas can be reduced by applying this product when the wind direction is away from the sensitive area.
- **Do not** apply when the weather conditions may cause drift:
    - Avoid application when the temperature is high and/or the humidity is low. These conditions increase the evaporation of spray droplets and the likelihood of drift to aquatic areas.
    - **Do not** apply when wind speed or wind gusts are greater than 10 mph.
    - **Do not** apply when wind speed is below 2 mph because wind direction will vary and there is a high potential for inversion.

Important: When states have more stringent regulations, they must be observed.

6.2.2 VEGETATIVE BUFFER STRIP

- **Do not** apply with ground application equipment within 25 ft. of or with aircraft within 150 ft. of lakes, reservoirs, rivers, permanent streams, marshes, pot holes, natural ponds, estuaries, or commercial fish farm ponds.
- **Do not** cultivate within 25 ft. of the aquatic area to allow growth of a vegetative filter strip.

6.2.3 IMPORTANCE OF DROPLET SIZE

- An effective way to reduce spray drift is to apply large droplets.
- Use the largest droplets that provide target pest control.
- While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.
- For Cherry, Crop Sub-group 12-12A, Pome Fruits, Crop Group 11-10, and Tree Nuts, Crop Group 14-12 use spray nozzles that provide fine to coarser sized droplets.
- For all other crops use spray nozzles that provide medium to coarser sized droplets.

6.2.4 TEMPERATURE AND HUMIDITY

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

6.2.5 TEMPERATURE INVERSIONS

- Drift potential is high during a temperature inversion.
- Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind.
- The presence of inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator.
- Smoke that layers and moves upward and rapidly dissipates indicates good vertical air mixing.
- Avoid applications during temperature inversions.

6.2.6 WIND

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

6.3 Aerial Application Spray Drift Management

- **Outermost Nozzle Distance** – The distance of the outermost nozzles on the boom must not exceed $^{3}/_{4}$ the length of the wingspan or rotor.
- **Nozzle Direction** – Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.
- **Maximum Wind Speed** – Do not apply when wind speed is greater than 10 mph.
- **Boom Length** – For some use patterns, reducing the effective boom length to less than $^{3}/_{4}$ of the wingspan or rotor length may further reduce drift without reducing swath width.
- **Application Height** – Applications should not be made at a height greater than 10 feet above the top of the target plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.
- **Swath Adjustment** – When applications are made with a cross wind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind.

6.3.1 CONTROLLING DROPLET SIZE

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

- Volume – Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- Pressure – Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- Number of Nozzles – Use the minimum number of nozzles that provide uniform coverage.
- Nozzle Orientation – Orienting nozzles so that the spray is released parallel to the air stream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.
- Nozzle Type – Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid-stream nozzles oriented straight back produce the largest droplets and the lowest drift.

6.3.2 RELEASE HEIGHT - AIRCRAFT

- Higher release heights increase the potential for spray drift.

6.4 Ground Application Spray Drift Management

6.4.1 CONTROLLING DROPLET SIZE

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

6.4.2 SHIELDED SPRAYERS

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

6.4.3 RELEASE HEIGHT – GROUND BOOM

- Higher release heights increase the potential for spray drift.
- For ground equipment, the boom should remain level with the crop and have minimal bounce.

7.0 CROP USE DIRECTIONS

7.1 Artichoke, globe

Crops (Including all cultivars, varieties, and/or hybrids of these)			
Artichoke (globe)			
Target Pest	**Rate (oz/A)**	**Application Timing**	**Use Directions**
Artichoke plume moth	4.8	Apply when larvae are first observed. Application may be repeated to maintain control.	Apply this product diluted in a minimum volume of 50 gal/A by ground. If the crop canopy is dense or the worm infestation is high, increase the amount of water. For aerial application, apply this product diluted in a minimum volume of 15 gal/A. Under adverse conditions (high humidity, low relative humidity, or dense canopy), increase the amount of water.

Resistance Management:

- Refer to **Section 3.1**.

USE RESTRICTIONS

1) Refer to **Section 6.1** for additional product **Use Restrictions**.
2) **Maximum Single Application Rate:** 4.8 oz/A (0.015 lb ai/A of emamectin benzoate-containing products).
3) **REI:** 12 hours
4) **Minimum Application Interval:** 7 days
5) **Maximum Annual Rate:** 14.4 oz/A/ calendar year (0.045 lb ai/A/calendar year of emamectin-containing products).
   - **DO NOT** apply more than 2 sequential applications. Rotate to another insect control product with a different mode of action.
6) **DO NOT** apply by air in New York State.
7) **Pre-Harvest Interval (PHI):** 4 days

7.2 *Brassica* Head and Stem Vegetables, Crop Group 5-16

Crops (including all cultivars, varieties, and/or hybrids of these)			
Broccoli Brussels sprouts	Cabbage	Cabbage, Chinese (napa)	Cauliflower

Target Pest	Rate (oz/A)	Application Timing	Use Directions
Beet armyworm Cabbage webworm Corn earworm Cross-striped cabbageworm Diamondback moth Fall armyworm Imported cabbageworm	2.4 – 4.8	Apply when larvae are first observed. Application may be repeated to maintain control.	Apply this product diluted in a minimum volume of 10 gal/A by ground. If the crop canopy is dense or the worm infestation is high, increase the amount of water. For aerial application, apply this product diluted in a minimum volume of 5 gal/A. Under adverse conditions (high humidity, low relative humidity, or dense canopy), increase the amount of water to 10-20 gal/A.
Cabbage looper Soybean looper	3.2 – 4.8		
Suppression Only: *Liriomyza* leafminers (*Liriomyza trifolii* and *Liriomyza sativae*)			

Resistance Management:
- Refer to **Section 3.1**.

USE RESTRICTIONS

1) Refer to **Section 6.1** for additional product use restrictions.
2) **Maximum Single Application Rate:** 4.8 oz/A (0.015 lb ai/A of emamectin benzoate-containing products).
3) **REI:** 12 hours
4) **Minimum Application Interval:** 7 days
5) **Maximum Annual Rate:** 19.2 oz/A/calendar year (0.06 lb ai/A/calendar year of emamectin benzoate-containing products).
   - **DO NOT** apply more than 2 sequential applications. Rotate to another insect control product with a different mode of action.
6) **DO NOT** apply following the failure of another product if the larvae are large (>1/4 inch long).
7) **DO NOT** apply by air in New York State.
8) **Pre-harvest Interval (PHI):** 7 days

7.3 Brassica Leafy Greens, Crop Sub-group 4-16B (except Watercress)

Crops (including all cultivars, varieties, and/or hybrids of these)

Arugula	Cabbage, seakale	Kale	Rape greens
Broccoli, Chinese (gai lon)	Collards	Maca, leaves	Rocket, wild
Broccoli, raab (rapini)	Cress, garden	Mizuna	Shepard's purse
Cabbage, abyssinian	Cress, upland	Mustard greens	Turnip greens
Cabbage, Chinese (bok choy)	Hanover salad	Radish, leaves	

Target Pest	Rate (oz/A)	Application Timing	Use Directions
Beet armyworm Cabbage webworm Corn earworm Cross-striped cabbageworm Diamondback moth Fall armyworm Imported cabbageworm	2.4 – 4.8	Apply when larvae are first observed. Application may be repeated to maintain control.	Apply this product diluted in a minimum volume of 10 gal/A by ground. If the crop canopy is dense or the worm infestation is high, increase the amount of water. For aerial application, apply this product diluted in a minimum volume of 5 gal/A. Under adverse conditions (high humidity, low relative humidity, or dense canopy), increase the amount of water to 10-20 gal/A.
Cabbage looper Soybean looper	3.2 – 4.8		
Suppression Only: *Liriomyza* leafminers (*Liriomyza trifolii* and *Liriomyza sativae*)			

Resistance Management:

- Refer to **Section 3.1**.

USE RESTRICTIONS

1) Refer to **Section 6.1** for additional product use restrictions.
2) **Maximum Single Application Rate:** 4.8 oz/A (0.015 lb ai/A of emamectin benzoate-containing products).
3) **REI:** 12 hours
4) **Minimum Application Interval:** 7 days
5) **Maximum Annual Rate:** 19.2 oz/A/calendar year (0.06 lb ai/A/calendar year of emamectin benzoate-containing products).
   - **DO NOT** apply more than 2 sequential applications. Rotate to another insect control product with a different mode of action.
6) **DO NOT** apply following the failure of another product if the larvae are large (>1/4 inch long).
7) **DO NOT** apply by air in New York State.
8) **Pre-harvest Interval (PHI):** 14 days

7.4 Celtuce

Crops (including all cultivars, varieties, and/or hybrids of these)			
Celtuce			
Target Pest	**Rate (oz/A)**	**Application Timing**	**Use Directions**
Beet armyworm Corn earworm Fall armyworm Tobacco budworm	2.4 – 4.8	Apply when larvae are first observed. Application may be repeated to maintain control.	For ground application, apply this product diluted in a minimum of 10 gal/A. If the crop canopy is dense or the worm infestation is high, increase the amount of water. For aerial application, apply this product in a minimum of 5 gal/A. Under adverse conditions (high humidity, low relative humidity, or dense canopy), increase the amount of water to 10-20 gal/A.
Cabbage looper Soybean looper	3.2 – 4.8		
Suppression Only: *Liriomyza* leafminers (*Liriomyza trifolii* and *Liriomyza sativae*)			

Resistance Management:

- Refer to **Section 3.1**.

USE RESTRICTIONS

1) Refer to **Section 6.1** for additional product use restrictions.
2) **Maximum Single Application Rate:** 4.8 oz/A (0.015 lb ai/A of emamectin benzoate-containing products).
3) **REI:** 12 hours
4) **Minimum Application Interval:** 7 days
5) **Maximum Annual Rate:** 14.4 oz/A/calendar year (0.045 lb ai/A/calendar year of emamectin benzoate-containing products).
   - **DO NOT** apply more than 2 sequential applications. Rotate to another insect control product with a different mode of action.
6) **DO NOT** apply following the failure of another product if the larvae are large (> 1/4 inch long).
7) **DO NOT** apply by air in New York State.
8) **Pre-harvest Interval (PHI):** 7 days

7.5 Cherry, Crop Sub-group 12-12A

Crops (including all cultivars, varieties, and/or hybrids of these)		
Capulin	Cherry, Nanking	Cherry, tart
Cherry, black	Cherry, sweet	

Target Pest	Rate (oz/A)	Application Timing	Use Directions
Obliquebanded leafroller	3.2 - 4.8	Apply as needed using locally recommended scouting and monitoring techniques. Timing and frequency of applications should be based on target insect populations reaching locally determined economic thresholds. Treatments must be made before larvae penetrate fruit or stems or before larvae begin webbing and sheltering. Application may be repeated to maintain control.	Apply by ground only. Select a spray volume appropriate for the size and number of trees and density of foliage to ensure thorough coverage, but do not apply to the point of runoff. Apply this product diluted in a minimum volume of 40 gal/A by ground.

Resistance Management:

- Refer to **Section 3.1**.

USE RESTRICTIONS

1) Refer to **Section 6.1** for additional product **Use Restrictions**.
2) **Maximum Single Application Rate:** 4.8 oz/A (0.015 lb ai/A of emamectin benzoate-containing products).
   a) **REI:** 12 hours
   b) **REI:** 48 hours for workers performing propping, pruning, training, thinning, and tying.
3) **Minimum Application Interval:** 7 days
4) **Maximum Annual Rate:** 14.4 oz/A/calendar year (0.045 lb ai/A/calendar year of emamectin-containing products).
5) **DO NOT** apply by air.
6) **Pre-harvest Interval (PHI):** 7 days

7.6 Cucurbit Vegetables, Crop Group 9

Crops (including all cultivars, varieties, and/or hybrids of these)

Chayote (fruit)
Chinese waxgourd (Chinese preserving melon)
Citron melon
Cucumber
Gherkin
Gourd, edible
Hyotan
Cucuzza
Hechima
Chinese okra
***Momordica* spp.**
Balsam apple
Balsam pear
Bitter melon
Chinese cucumber

Muskmelon (*Cucumis melo*)
Cantaloupe
Casaba
Crenshaw melon
Golden pershaw melon
Honeydew melon
Honey balls
Mango melon
Persian melon
Pineapple melon
Santa Claus melon
Snake melon
True cantaloupe

Pumpkin
Squash, summer
Crookneck squash
Scallop squash
Straightneck squash
Vegetable marrow
Zucchini
Squash, winter
Acorn squash
Butternut squash
Calabaza
Hubbard squash
Spaghetti squash
Watermelon (Citrullus lanatus)

Target Pest	Rate (oz/A)	Application Timing	Use Directions
Armyworms Cabbage looper Corn earworm Melonworm Rindworms (lepidopteran) Tobacco budworm	3.0 – 4.8	Apply when larvae are first observed. Application may be repeated to maintain control.	When pest populations are high use the highest rate allowed for that pest. For ground application, apply this product diluted in a minimum volume of 10 gal/A. If the crop canopy is dense or the worm infestation is high, increase the amount of water. For aerial application, apply this product diluted in minimum of 5 gal/A. Under adverse conditions (high humidity, low relative humidity, or dense canopy), increase the amount of water to 10-20 gal/A.
Pickleworm	3.5 – 4.8		
Supression Only *Liriomyza* leafminers			

Resistance Management:
- Refer to **Section 3.1**.

continued...

7.6 Cucurbit Vegetables, Crop Group 9 *(continued)*

USE RESTRICTIONS

1) Refer to **Section 6.1** for additional product Use Restrictions.
2) **Maximum Single Application Rate:** 4.8 oz/A (0.015 lb ai/A of emamectin benzoate-containing products).
3) **REI:** 12 hours
4) **Minimum Application Interval:** 7 days
5) **Maximum Annual Rate:** 14.4 oz/A/calendar year (0.045 lb ai/A/calendar year of emamectin-containing products).
   - **DO NOT** apply more than 2 sequential applications. Rotate to another insect control product with a different mode of action.
6) **DO NOT** apply by air in New York State.
7) **Pre-harvest Interval (PHI):** 7 days

7.7 Fennel, Florence

Crops (including all cultivars, varieties, and/or hybrids of these)

Fennel, Florence

Target Pest	Rate (oz/A)	Application Timing	Use Directions
Beet armyworm Corn earworm Fall armyworm Tobacco budworm	2.4 – 4.8	Apply when larvae are first observed. Application may be repeated to maintain control.	For ground application, apply this product diluted in a minimum of 10 gal/A. If the crop canopy is dense or the worm infestation is high, increase the amount of water. For aerial application, apply this product in a minimum of 5 gal/A. Under adverse conditions (high humidity, low relative humidity, or dense canopy), increase the amount of water to 10-20 gal/A.
Cabbage looper Soybean looper	3.2 – 4.8		
Suppression Only: *Liriomyza* leafminers (*Liriomyza trifolii* and *Liriomyza sativae*)			

Resistance Management:
- Refer to **Section 3.1**.

continued…

USE RESTRICTIONS

1) Refer to **Section 6.1** for additional product use restrictions.
2) **Maximum Single Application Rate:** 4.8 oz/A (0.015 lb ai/A of emamectin benzoate-containing products).
3) **REI:** 12 hours
4) **Minimum Application Interval:** 7 days
5) **Maximum Annual Rate:** 14.4 oz/A/calendar year (0.045 lb ai/A/calendar year of emamectin benzoate-containing products).
   - **DO NOT** apply more than 2 sequential applications. Rotate to another insect control product with a different mode of action.
6) **DO NOT** apply following the failure of another product if the larvae are large (> 1/4 inch long).
7) **DO NOT** apply by air in New York State.
8) **Pre-harvest Interval (PHI):** 7 days

7.8 Fruiting Vegetables, Crop Group 8-10

Crops (including all cultivars, varieties, and/or hybrids of these)

African eggplant	Goji berry	Non-bell pepper
Bush tomato	Groundcherry	Roselle
Bell pepper	Martynia	Scarlet eggplant
Cocona	Naranjila	Sunberry
Currant tomato	Okra	Tomatillo
Eggplant	Pea eggplant	Tomato
Garden huckleberry	Pepino	Tree tomato

Target Pest	Rate (oz/A)	Application Timing	Use Directions
Beet armyworm Cabbage looper Fall armyworm Southern armyworm Tobacco budworm Tobacco hornworm Tomato hornworm Tomato fruitworm Tomato pinworm Yellowstriped armyworm	2.4 – 4.8	Apply when larvae are first observed. Application may be repeated to maintain control.	For ground application, apply this product diluted in a minimum of 10 gal/A. If the crop canopy is dense or the worm infestation is high, increase the amount of water. For aerial application, apply this product diluted in a minimum of 5 gal/A. Under adverse conditions (high humidity, low relative humidity, or dense canopy), increase the amount of water to 10-20 gal/A.
Alfalfa looper Soybean looper	3.2 – 4.8		
Suppression Only: *Liriomyza* leafminers (*Liriomyza trifolii* and *Liriomyza sativae*)			

continued...

7.8 Fruiting Vegetables, Crop Group 8-10 *(continued)*

Resistance Management:
- Refer to **Section 3.1**.

USE RESTRICTIONS

1) Refer to **Section 6.1** for additional product use restrictions.
2) **Maximum Single Application Rate:** 4.8 oz/A (0.015 lb ai/A of emamectin benzoate-containing products).
3) **REI:** 12 hours
4) **Minimum Application Interval:** 7 days
5) **Maximum Annual Rate:** 14.4 oz/A/calendar year (0.045 lb ai/A/calendar year of emamectin benzoate-containing products).
   - **DO NOT** apply more than 2 sequential applications. Rotate to another insect control product with a different mode of action.
6) **DO NOT** apply following the failure of another product if the larvae are large (>1/4 inch long).
7) **DO NOT** apply by air in New York State.
8) **Pre-harvest Interval (PHI):** 7 days

7.9 Herb, Crop Sub-group 19A

Crops (including all cultivars, varieties, and/or hybrids of these)

Angelica	Coriander leaf (Cilantro or Chinese parsley)	Lovage (leaf)	Rosemary
Balm (lemon balm)	Costmary	Marigold	Rue
Basil	Culantro (leaf)	**Marjoram** sweet or annual wild or oregano pot	Sage
Borage	Curry (leaf)	Nasturtium	Savory, summer
Burnet	Dill weed	Parsley (dried)	Savory, winter
Camomile	Horehound	Pennyroyal	Sweet bay
Catnip	Hyssop,		Tansy
Chervil (dried),	Lavender		Tarragon
Chive			Thyme
Chive (Chinese)			Wintergreen
			Woodruff
			Wormwood

continued...

Target Pest	Rate (oz/A)	Application Timing	Use Directions
Beet armyworm Corn earworm Fall armyworm Tobacco budworm	2.4 – 4.8	Apply when larvae are first observed. Application may be repeated to maintain control.	For ground application, apply this product diluted in a minimum of 10 gal/A. If the crop canopy is dense or the worm infestation is high, increase the amount of water. For aerial application, apply this product diluted in a minimum of 5 gal/A. Under adverse conditions (high humidity, low relative humidity, or dense canopy), increase the amount of water to 10-20 gal/A.
Cabbage looper Soybean looper	3.2 – 4.8		
Suppression Only: *Liriomyza* leafminers (*Liriomyza trifolii* and *Liriomyza sativae*)			

Resistance Management:
- Refer to **Section 3.1**.

USE RESTRICTIONS

1) Refer to **Section 6.1** for additional product use restrictions.
2) **Maximum Single Application Rate:** 4.8 oz/A (0.015 lb ai/A of emamectin benzoate-containing products).
3) **REI:** 12 hours
4) **Minimum Application Interval:** 7 days
5) **Maximum Annual Rate:** 14.4 oz/A/calendar year (0.045 lb ai/A/calendar year of emamectin benzoate-containing products).
   - **DO NOT** apply more than 2 sequential applications. Rotate to another insect control product with a different mode of action.
6) **DO NOT** apply following the failure of another product if the larvae are large (> 1/4 inch long).
7) **DO NOT** apply by air in New York State.
8) **Pre-harvest Interval (PHI):** 7 days

7.10 Kohlrabi

Crops (including all cultivars, varieties, and/or hybrids of these)			
Kohlrabi			
Target Pest	**Rate (oz/A)**	**Application Timing**	**Use Directions**
Beet armyworm Cabbage webworm Corn earworm Cross-striped cabbageworm Diamondback moth Fall armyworm Imported cabbageworm	2.4 – 4.8	Apply when larvae are first observed. Application may be repeated to maintain control.	Apply this product diluted in a minimum volume of 10 gal/A by ground. If the crop canopy is dense or the worm infestation is high, increase the amount of water. For aerial application, apply this product diluted in a minimum volume of 5 gal/A. Under adverse conditions (high humidity, low relative humidity, or dense canopy), increase the amount of water to 10-20 gal/A.
Cabbage looper Soybean looper	3.2 – 4.8		
Suppression Only: *Liriomyza* leafminers (*Liriomyza trifolii* and *Liriomyza sativae*)			

Resistance Management:
- Refer to **Section 3.1**.

USE RESTRICTIONS

1) Refer to **Section 6.1** for additional product use restrictions.
2) **Maximum Single Application Rate:** 4.8 oz/A (0.015 lb ai/A of emamectin benzoate-containing products).
3) **REI:** 12 hours
4) **Minimum Application Interval:** 7 days
5) **Maximum Annual Rate:** 14.4 oz/A/calendar year (0.045 lb ai/A/calendar year of emamectin benzoate-containing products).
   - **DO NOT** apply more than 2 sequential applications. Rotate to another insect control product with a different mode of action.
6) **DO NOT** apply following the failure of another product if the larvae are large (>1/4 inch long).
7) **DO NOT** apply by air in New York State.
8) **Pre-harvest Interval (PHI):** 7 days

7.11 Leaf Petiole Vegetable, Crop-Sub-group 22B

Crops (including all cultivars, varieties, and/or hybrids of these)			
Cardoon Celery	Celery, Chinese Fuki	Rhubarb Udo	Zuiki

Target Pest	Rate (oz/A)	Application Timing	Use Directions
Beet armyworm Corn earworm Fall armyworm Tobacco budworm	2.4 – 4.8	Apply when larvae are first observed. Application may be repeated to maintain control.	For ground application, apply this product diluted in a minimum of 10 gal/A. If the crop canopy is dense or the worm infestation is high, increase the amount of water. For aerial application, apply this product in a minimum of 5 gal/A. Under adverse conditions (high humidity, low relative humidity, or dense canopy), increase the amount of water to 10-20 gal/A.
Cabbage looper Soybean looper	3.2 – 4.8		
Suppression Only: *Liriomyza* leafminers (*Liriomyza trifolii* and *Liriomyza sativae*)			

Resistance Management:
- Refer to **Section 3.1**.

USE RESTRICTIONS

1) Refer to **Section 6.1** for additional product use restrictions.
2) **Maximum Single Application Rate:** 4.8 oz/A (0.015 lb ai/A of emamectin benzoate-containing products).
3) **REI:** 12 hours
4) **Minimum Application Interval:** 7 days
5) **Maximum Annual Rate:** 14.4 oz/A/calendar year (0.045 lb ai/A/calendar year of emamectin benzoate-containing products).
   - **DO NOT** apply more than 2 sequential applications. Rotate to another insect control product with a different mode of action.
6) **DO NOT** apply following the failure of another product if the larvae are large (> 1/4 inch long).
7) **DO NOT** apply by air in New York State.
8) **Pre-harvest Interval (PHI):** 7 days

7.12 Leafy Greens, Crop Sub-group 4-16A

Crops (including all cultivars, varieties, and/or hybrids of these)			
Amaranth, Chinese spinach	Cilantro, fresh leaves	Fameflower	Primrose, English
Amaranth, leafy	Corn salad	Feather cockscomb	Purslane, garden
Aster, Indian	Cosmos	Good king henry	Purslane, winter
Blackjack	Dandelion, leaves	Huauzontle	Radicchio
Cat's whiskers	Dang-gwi, leaves	Jute, leaves	Spinach
Cham-chwi	Dillweed	Lettuce, bitter	Spinach, Malabar
Cham-na-mul	Dock	Lettuce, head	Spinach, New Zealand
Chervil, fresh leaves	Dol-nam-mul	Lettuce, leaf	Spinach, tanier
Chipilin	Ebolo	Orach	Swiss chard
Chrysanthenum, garland	Endive	Parsley, fresh leaves	Violet, Chinese, leaves
	Escarole	Plantain, buckhorn	

Target Pest	Rate (oz/A)	Application Timing	Use Directions
Beet armyworm Corn earworm Fall armyworm Tobacco budworm	2.4 – 4.8	Apply when larvae are first observed. Application may be repeated to maintain control.	For ground application, apply this product diluted in a minimum of 10 gal/A. If the crop canopy is dense or the worm infestation is high, increase the amount of water. For aerial application, apply this product in a minimum of 5 gal/A. Under adverse conditions (high humidity, low relative humidity, or dense canopy), increase the amount of water to 10-20 gal/A.
Cabbage looper Soybean looper	3.2 – 4.8		
Suppression Only: *Liriomyza* leafminers (*Liriomyza trifolii* and *Liriomyza sativae*)			

Resistance Management:
- Refer to **Section 3.1**.

continued...

USE RESTRICTIONS

1) Refer to **Section 6.1** for additional product use restrictions.
2) **Maximum Single Application Rate:** 4.8 oz/A (0.015 lb ai/A of emamectin benzoate-containing products).
3) **REI:** 12 hours
4) **Minimum Application Interval:** 7 days
5) **Maximum Annual Rate:** 14.4 oz/A/calendar year (0.045 lb ai/A/calendar year of emamectin benzoate-containing products).
   - **DO NOT** apply more than 2 sequential applications. Rotate to another insect control product with a different mode of action.
6) **DO NOT** apply following the failure of another product if the larvae are large (> 1/4 inch long).
7) **DO NOT** apply by air in New York State.
8) **Pre-harvest Interval (PHI):** 7 days

7.13 Pome Fruits, Crop Group 11-10

Crops (including all cultivars, varieties, and/or hybrids of these)

Apple	Loquat	Pear	Quince, Chinese
Azarole	Mayhaw	Pear, Asian	Quince, Japanese
Crabapple	Medlar	Quince	Tejocote

Target Pest	Rate (oz/A)	Application Timing	Use Directions
Apple pandemis Bud moths: eyespotted tufted apple Cankerworm species Common winter moth Fruitworms: cherry green species laconobia Leafminers: blister moth species tentiform species Leafrollers: fruittree obliquebanded omnivorous redbanded variegated Orange tortrix	3.2 – 4.8	Apply as needed using locally recommended scouting and monitoring techniques. Timing and frequency of applications should be based on target insect populations reaching locally determined economic thresholds. Apply at or immediately after hatch of the target insect to ensure treatment of small larvae.	Apply in sufficient water for uniform spray coverage but not to the point of runoff. For air-blast sprayers, apply this product diluted in a minimum of 40 gal/A. It is recommended that application be made in combination with a Horticultural spray oil (not a dormant oil) or a nonionic surfactant as directed by the product manufacturer (see **Section 4.4.5**)

continued…

7.13 Pome Fruits, Crop Group 11-10 *(continued)*

Target Pest	Rate (oz/A)	Application Timing	Use Directions
Suppression Only: Pear psylla Spider mites phytophagous mites in the Acari subfamily, Tetranychinae	3.2 – 4.8	Treatments must be made before larvae penetrate fruit or stems or before larvae begin webbing and sheltering. Application may be repeated to maintain control.	Apply in sufficient water for uniform spray coverage but not to the point of runoff. For air-blast sprayers, apply this product diluted in a minimum of 40 gal/A. It is recommended that application be made in combination with a Horticultural spray oil (not a dormant oil) or a nonionic surfactant as directed by the product manufacturer (see **Section 4.4.5**)
For Control East of Rocky Mountains for First Generation Only: Codling moth Lesser appleworm Oriental fruit moth	4.8		

Resistance Management:
- Refer to **Section 3.1**.

USE RESTRICTIONS

1) Refer to **Section 6.1** for additional product use restrictions.
2) **Maximum Single Application Rate:** 4.8 oz/A (0.015 lb ai/A of emamectin benzoate-containing products).
3) **REI:** 12 hours
4) **REI:** 48 hours for workers performing propping, pruning, training, thinning, and tying
5) **Minimum Application Interval:** 7 days
6) **Maximum Annual Rate:** 14.4 oz/A/calendar year (0.045 lb ai/A/calendar year of emamectin benzoate-containing products.
7) **DO NOT** apply by air.
8) **Pre-harvest Interval (PHI):** 14 days.

7.14 Tree Nuts, Crop Group 14-12

Crops (including all cultivars, varieties, and/or hybrids of these)			
African nut-tree	Cashew	Hickory nut	Pecan
Almond	Chestnut	Japanese horse-chestnut	Pequi
Beech nut	Chinquapin	Macadamia nut	Pili nut
Brazil nut	Coconut	Mongongo nut	Pine nut
Brazilian pine	Coquito nut	Monkey-pot	Pistachios
Bunya	Dika nut	Monkey puzzle nut	Sapucaia nut
Bur oakButternut	Ginkgo	Okari nut	Tropical almond
Cajou nut	Guiana chestnut	Pachira nut	Walnut, black
Candlenut	Hazelnut (Filbert)	Peach palm nut	Walnut, English
	Heartnut		Yellowhorn

Target Pest	Rate (oz/A)	Application Timing	Use Directions
Codling moth European winter moth Fall webworm Filbertworm Hickory shuckworm Leafrollers: filbert fruittree obliquebanded Navel orangeworm Peach twig borer Omnivorous leaftier Oriental fruitmoth Pecan bud moth Pecan casebearer species Pecan serpentine leafminer Redhumped caterpillar Walnut caterpillar	3.2 – 4.8	Apply as needed using locally recommended scouting and monitoring techniques. Timing and frequency of applications should be based on target insect populations reaching locally determined economic thresholds. Apply at or immediately after hatch of the target insect to ensure treatment of small larvae. Treatments must be made before larvae penetrate fruit or stems or before larvae begin webbing and sheltering. Application may be repeated to maintain control.	Apply in sufficient water for uniform spray coverage but not to the point of runoff. For air-blast sprayers, apply this product diluted in a minimum of 40 gal/A. It is recommended that application be made in combination with a Horticultural spray oil (not a dormant oil) or a nonionic surfactant as directed by the product manufacturer (see **Section 4.4.5**)
Suppression Only: Spider mites – phytophagous mites in the Acari subfamily, Tetranychinae.			

continued…

7.14 Tree Nuts, Crop Group 14-12 *(continued)*

Resistance Management:

- Refer to **Section 3.1**.

USE RESTRICTIONS

1) Refer to **Section 6.1** for additional product use restrictions.
2) **Maximum Single Application Rate:** 4.8 oz/A (0.015 lb ai/A of emamectin benzoate-containing products).
3) **REI:** 12 hours
4) **REI:** 48 hours for workers performing poling, pruning, and thinning
5) **Minimum Application Interval:** 7 days
6) **Maximum Annual Rate:** 14.4 oz/A/calendar year (0.045 lb ai/A/calendar year of emamectin benzoate-containing products).
7) **DO NOT** apply by air.
8) **Pre-harvest Interval (PHI):** 14 days

8.0 STORAGE AND DISPOSAL

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal. Open dumping is prohibited. Do not reuse empty container.

Pesticide Storage

Store tightly closed in original container in a cool, dry place.

Pesticide Disposal

Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Container Handling

Non-refillable container. Do not reuse or refill this container.

Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 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. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration.

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

9.0 CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

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

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

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

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

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

Proclaim®, the ALLIANCE FRAME
the SYNGENTA Logo and the PURPOSE ICON
are Trademarks of a Syngenta Group Company

Bravo®, Weather Stik® is a trademark of ADAMA USA.

Dithane® Rainshield® is a trademark of Dow Agrosciences LLC

© 2020 Syngenta

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

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

SCP 904A-L1T 0520
4120451

RESTRICTED USE PESTICIDE

TOXIC TO FISH, MAMMALS, AND AQUATIC ORGANISMS

FOR RETAIL SALE TO AND USE ONLY BY CERTIFIED APPLICATORS OR PERSONS UNDER THEIR DIRECT SUPERVISION, AND ONLY FOR THOSE USES COVERED BY THE CERTIFIED APPLICATOR'S CERTIFICATION.

EMAMECTIN BENZOATE
GROUP 6 INSECTICIDE

Proclaim®
Insecticide

For control or suppression of certain lepidopterous larvae (worms/caterpillars), leafminers, and spider mites on Artichoke (globe); *Brassica* Head and Stem Vegetables, Crop Group 5-16; *Brassica* Leafy Greens, Crop Sub-group 4-16B (except Watercress); Celtuce; Cherry, Crop Sub-group 12-12A; Cucurbit Vegetables, Crop Group 9; Fennel, Florence; Fruiting Vegetables, Crop Group 8-10; Herb, Crop Sub-group 19A; Kohlrabi; Leaf Petiole Vegetables, Crop Sub-group 22B; Leafy Greens, Crop Sub-group 4-16A; Pome Fruit, Crop Group 11-10; and Tree Nuts, Crop Group 14-12

Active Ingredients:	
Emamectin benzoate*	5.0%
Other Ingredients:	95.0%
Total:	100.0%

*CAS No. 155569-91-8

Proclaim Insecticide is a soluble granule containing 5% emamectin benzoate.

EPA Reg. No. 100-904 EPA Est. 67545-AZ-1

© 2020 Syngenta

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

SCP 904A-L1T 0520 4120451

1.21 pounds
(19.2 ounces)
Net Contents

KEEP OUT OF REACH OF CHILDREN.

CAUTION

AGRICULTURAL USE REQUIREMENTS

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

See additional Precautionary Statements and Directions for Use inside booklet.

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

CAUTION

Harmful if swallowed, inhaled or absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Avoid breathing dust or spray mist. Prolonged or frequently repeated exposure may cause allergic skin reactions in some individuals.

syngenta®

Environmental Hazards

This pesticide is toxic to fish, birds, mammals, and aquatic invertebrates. Drift and runoff may be hazardous to aquatic organisms in neighboring areas. 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 wash water or rinsate.

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

Physical or Chemical Hazards

Do not use, pour, spill, or store near heat or open flame.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal. Open dumping is prohibited. Do not reuse empty container.

Pesticide Storage

Store tightly closed in original container in a cool, dry place.

Pesticide Disposal

Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Container Handling

Non-refillable container. Do not reuse or refill this container.

Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 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. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration.

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

SCP 904A-L4B 0520
4121345