

# INSECTICIDE



## RESTRICTED USE PESTICIDE

TOXIC TO FISH AND AQUATIC ORGANISMS. FOR RETAIL SALE TO AND USE ONLY BY CERTIFIED APPLICATORS, OR PERSONS UNDER THEIR DIRECT SUPERVISION AND ONLY FOR THOSE USES COVERED BY THE CERTIFIED APPLICATORS CERTIFICATION.



### ACTIVE INGREDIENTS:

	% BY WT.
Bifenthrin: (2-methyl[1,1'-biphenyl]-3-yl) methyl-3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethyl-cyclopropanecarboxylate*	5.70%
Imidacloprid: 1-[(6-Chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinimine	5.70%

OTHER INGREDIENTS*:	88.60%
TOTAL:	100.00%

CIS isomers 97% minimum, trans isomers 3% maximum.

\*Contains petroleum distillates

This product contains 1/2 lb. each of Bifenthrin and Imidacloprid active ingredient per gallon.

**KEEP OUT OF REACH OF CHILDREN**

**DANGER / PELIGRO**

This label must be in the possession of the user at the time of application.  
Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.  
(If you **DO NOT** understand the label, find someone to explain it to you in detail.)  
See other panels for additional precautionary information.

EPA Reg. No.: 89168-21-89391



Distributed By:  
**INNICTIS® CROP CARE, LLC**  
1880 Fall River Drive, Suite 100  
Loveland, CO 80538

111314RD041317A

**FIRST AID**

<b>If Swallowed:</b>	<ul style="list-style-type: none"><li>• Immediately call a poison control center or doctor for treatment advice.</li><li>• <b>DO NOT</b> induce vomiting unless told to do so by the poison control center or doctor.</li><li>• <b>DO NOT</b> give any liquids to the person.</li><li>• <b>DO NOT</b> give anything by mouth to an unconscious person.</li></ul>
<b>If In Eyes:</b>	<ul style="list-style-type: none"><li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li><li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>If On Skin Or Clothing:</b>	<ul style="list-style-type: none"><li>• Take off contaminated clothing.</li><li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>If Inhaled:</b>	<ul style="list-style-type: none"><li>• Move person to fresh air.</li><li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li><li>• Call a poison control center or doctor for further treatment advice.</li></ul>

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For emergency information concerning this product, call the National Pesticides Information Center (NPIC) at 1-800-858-7378 seven days a week, 6:30 am to 4:30 pm Pacific Time or your poison control center at 1-800-222-1222.

**NOTE TO PHYSICIAN**

This product contains a pyrethroid. If large amounts have been ingested, the stomach and intestines should be evacuated. Treatment is symptomatic and supportive. Digestible fats, oils, or alcohol may increase absorption and so should be avoided.

**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS  
DANGER / PELIGRO**

Corrosive. Causes irreversible eye damage. Harmful if swallowed or absorbed through skin. **DO NOT** get in eyes or on clothing. Wear protective eyewear (goggles, face shield or safety glasses). Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instruction for Category E on the EPA Chemical resistance category section chart.

**Applicators and other handlers must wear:**

- Long-sleeved shirt and long pants
- Protective eyewear
- Chemical-resistant gloves, such as Barrier Lamineate or Nitrile Rubber or Neoprene Rubber or Viton
- Shoes plus socks

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

**USER SAFETY RECOMMENDATIONS****Users Should:**

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

**AGRICULTURAL USE REQUIREMENTS**

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

**DO NOT** enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

PPE required for entry into treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls,
- Chemical resistant gloves, such as Barrier Lamineate or Nitrile Rubber or Neoprene Rubber or Viton, and
- Shoes plus socks.

## ENVIRONMENTAL HAZARDS

This pesticide is extremely toxic to fish and aquatic invertebrates. Use with care when applying in areas adjacent to any body of water. **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** make applications when weather conditions favor drift from treated areas. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. **DO NOT** contaminate water when disposing of equipment washwaters.

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops/plants or weeds. **DO NOT** apply this product or allow it to drift to blooming crops/plants or weeds while bees are foraging the treatment area.

The use of bifenthrin is prohibited in areas that may result in exposure of endangered species to bifenthrin. Prior to use in a particular county, contact the local extension service for procedures and precautions to use to protect endangered species.

The chemical imidacloprid demonstrates the properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

## PROTECTION OF POLLINATORS



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



Look for the bee hazard icon

in the Directions for Use for each application site for specific use restrictions and instructions to protect bees and other insect

**This product can kill bees and other insect pollinators.**

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

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

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

When Using This Product Take Steps To:

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

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

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

## DIRECTIONS FOR USE

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

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

### 1. FOR CROPS UNDER CONTRACTED POLLINATION SERVICES



**DO NOT** apply this product while bees are foraging. **DO NOT** apply this product until flowering is complete and all petals have fallen unless the following condition

has been met:

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

## 2. FOR FOOD CROPS AND COMMERCIALY GROWN ORNAMENTALS NOT UNDER CONTRACT FOR POLLINATION SERVICES BUT ARE ATTRACTIVE TO POLLINATORS



conditions is met:

- The application is made to the target site after sunset
- The application is made to the target site when temperatures are below 55 °F
- The application is made in accordance with a government-initiated public health response
- The application is made in accordance with an active state-administered apiairy registry program where beekeepers are notified no less than 48-hours prior to the time of the planned application so that the bees can be removed, covered or otherwise protected prior to spraying
- The application is made due to an imminent threat of significant crop loss, and a documented determination consistent with an IPM plan or predetermined economic threshold is met. Every effort should be made to notify beekeepers no less than 48-hours prior to the time of the planned application so that the bees can be removed, covered or otherwise protected prior to spraying.

**DO NOT** apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

**DO NOT** apply this product, by any application method, to lindens, basswood, or Tilia species trees in Oregon.

### RESISTANCE MANAGEMENT

Some insects are known to develop resistance to products with the same chemical class used repeatedly for control. *AVENGER S<sup>3</sup>* contains Group 3 and Group 4A insecticides. Although pest resistance cannot be predicted, a general rule to reduce the onset of resistance in pest species to *AVENGER S<sup>3</sup>* is not to consecutively and repeatedly apply Group 3 and/or Group 4A insecticides during a growing season for control of a particular pest target. Consult your local or state agricultural authorities or your INNVICTIS CROP CARE, LLC (Innvictis) representative for more specific details on insect resistance management strategies.

The Group 4A active ingredient in *AVENGER S<sup>3</sup>* is a member of the neonicotinoid chemical group. Avoid using a block of more than three consecutive applications of *AVENGER S<sup>3</sup>* and/or other Group 4A products having the same or similar mode of action. Following a neonicotinoid block of treatments, INNVICTIS CROP CARE strongly encourages the rotation to a block of applications with effective products of different mode before using additional applications of neonicotinoid products. Using a block rotation or windowed approach, along with IPM practices, is considered an effective use strategy for preventing or delaying an insect's ability to develop resistance to this class of chemistry.

Foliar applications of *AVENGER S<sup>3</sup>* or other Group 4A products from the neonicotinoid chemical class must not be used on crops previously treated with a long-residual, soil-applied product from the neonicotinoid chemical class.

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

### Application Instructions:

Rate of application is variable according to pest pressure, timing of sprays, and field scouting. Use lower specified rates under light to moderate infestations; higher specified rates under heavy insect pressures. Arid climates generally require higher rates.

Use adequate spray volumes, properly calibrated application equipment and spray adjuvant to obtain thorough coverage. To optimize deposition, penetration, and translocation, use adjuvants at 0.25 - 0.50% v/v.

Cultivation within 10 feet of a water body is prohibited to allow for the growth of a vegetated filter strip.

In New York State, this product may not be applied within 100 feet (using ground equipment) or 300 feet (using aerial equipment) of coastal marshes or streams that drain into coastal marshes.

**California Special Equipment and Restrictions:** *AVENGER S<sup>3</sup>* must be used in a closed system that meets the criteria for closed systems as established by the California Department of Food and Agriculture. The criteria and a list of the closed systems meeting the criteria are available through the California Department of Food and Agriculture.

### ROTATIONAL CROPS

Plant back restrictions are determined by the crop. Crops that have tolerances for both bifenthrin and imidacloprid may be rotated at any time. Crops with tolerances for bifenthrin and not imidacloprid can be rotated 12 months following the final application of *AVENGER S<sup>3</sup>*. Crops that have tolerances for imidacloprid and not bifenthrin may be rotated 30 days following the final application of *AVENGER S<sup>3</sup>*.

### Plant back restrictions:

**Immediate plant back:** Crops on this label, including tobacco, tomatoes, eggplant, peppers (bell and non-bell), okra, caneberries, citrus, artichoke, lettuce (head), grapes, spinach, pears, hops, legume vegetables (edible potted), tuberous root and corn vegetables (except sugar beet), cilantro and coriander, soybeans and strawberries.

**30 Day plant back:** Cereals, cucurbits, safflower

**10 Month plant back:** Onion and bulb vegetables

**12 Month plant back:** All other crops

## MAXIMUM ALLOWABLE USE RATE

Refer to the individual crop sections for maximum allowable *AVENGER S*<sup>3</sup> usage. The maximum allowable use must include all registered use patterns including at-plant, soil applied and/or foliar applications for the 12 months period. The 12-month period is to begin upon the initial application to the acreage.

### Tank Mixture

*AVENGER S*<sup>3</sup> may be applied in tank mixtures with other products approved for use on registered crops. Follow all restrictions and precautions which appear on the labels of these products. Test for compatibility of products before mixing.

### Vegetative Buffer Zones

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

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

For guidance, refer to the following publication for information on constructing and maintaining effective buffers: Conservation Buffers to Reduce Pesticide Losses. Natural Resources Conservation Services. USDA, NRCS. 2000. Fort Worth, Texas. 25 pp. <https://www.nrcs.usda.gov/wps/portal/nrcs/detail/ul/national/technical/ecoscience/invasive/?cid=stelprdb1044505>

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

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

### Buffer Zone for ULV Aerial Application

**DO NOT** apply within 450 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, streams, marshes, natural ponds, estuaries, and commercial fish ponds).

### Buffer Zone for Non-ULV Aerial Application

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

## SPRAY DRIFT REQUIREMENTS

### Wind Direction and Speed

Only apply this product if the wind direction favors on-target deposition. **DO NOT** apply when the wind velocity exceeds 15 mph.

### Temperature Inversion

**DO NOT** make aerial or ground applications into temperature inversions. Inversions are characterized by stable air and increasing temperatures with height above the ground. Mist or fog may indicate the presence of an inversion in humid areas. The applicator may detect the presence of an inversion by producing smoke and observing a smoke layer near the ground surface.

### Droplet Size

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

### Additional Requirements for Ground Applications

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

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

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

### Additional Requirements for Aerial Applications

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

Flight speed and nozzle orientation must be considered in determining droplet size. Spray must be released at the lowest height consistent with pest control and flight safety. **DO NOT** release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety.

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

## CHEMIGATION USE DIRECTIONS

Apply this product only through sprinkler including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move irrigation systems. **DO NOT** apply this product through any other type of irrigation system. **DO NOT** connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system.

For LEPA irrigation, a minimum of 0.75 inch of water per acre is recommended. Where non-emulsified oils are used as the diluent, 1 to 2 pints per acre is recommended.

Results from utilizing chemigation have been variable and depend upon the set up and calibration of equipment. Crop injury, lack of effectiveness, or illegal residues in the crop can result from non-uniform distribution of treated water. Contact your State Agricultural Extension Service specialists, equipment manufacturers or other experts for consultation on the suitability of the equipment set up to obtain effective control of the target insect-pests.

A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise. Failure to cease application during a mechanical stoppage may result in undesirable residues to adjacent areas.

The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

**DO NOT** apply when wind speed favors drift beyond the area intended for treatment. *AVENGER S<sup>2</sup>* should be applied continuously for the duration of the water application. *AVENGER S<sup>2</sup>* should be diluted in sufficient volume to ensure accurate application over the area to be treated. When using chemigation, a minimum of 0.5 inch per acre of irrigation water is recommended. Agitation generally is not required when a suitable diluent is used. A diluent test should be conducted to ensure that phase separation will not occur during dilution and application. Failure to achieve a uniform dilution throughout the time of application may result in undesirable residues or less than desirable control.

**ARTICHOKE (Globe) (PHI 7 DAYS)**

PEST	USE RATES	
	FI Oz/ ACRE	POUNDS ai/ACRE
Aphid spp. Leafhopper spp. Cribrate weevil Artichoke plume moth	12.8 - 25.6	0.1 - 0.2

**Restrictions: Preharvest Interval (PHI):** 7 Days

Minimum interval between applications: 15 Days

Maximum amount of *AVENGER S<sup>2</sup>* allowed per year: 51.2 oz (0.2 lb imidacloprid/A and 0.2 lb bifenthrin/A)

Maximum amount of Bifenthrin allowed per year: 0.5 lb ai/A.

Maximum amount of Imidacloprid allowed per year: 0.5 lb ai/A.

**APPLICATION INSTRUCTIONS:** Apply when pest population reaches damaging threshold and repeat as necessary to maintain control, not to exceed 51.2 oz per year, but not more often than 15-day intervals.

**Application by ground:** Apply a full cover spray in a minimum of 10 gallons of finished spray per acre.

**Application by air:** Apply specified dosage in a minimum of 2 gallons per acre.

**BRASSICA (Head and Stem) (PHI 7 DAYS)**

Broccoli, Broccoli (Cavalo), Broccoli (Chinese), Brussels sprouts, Cabbage, Cabbage (Chinese Mustard), Cabbage (Chinese napa), Cauliflower, Cavalo Broccoli Kohlrabi

PEST	USE RATES	
	FI Oz/ ACRE	POUNDS ai/ACRE
Aphid spp. Armyworm spp. Corn earworm Crickets Cucumber beetle Cutworm spp. Diamondback moth Ground beetles Grasshoppers Imported cabbageworm Leafhopper spp. Loopers Lygus spp. Saltmarsh caterpillar Slink bug spp. Thrips Tobacco budworm Whitefly Wireworm (adults)	8.48 - 12.2	0.066 - 0.095

**Restrictions: Preharvest Interval (PHI):** 7 Days

Minimum interval between applications: 7 Days

Maximum amount of *AVENGER S<sup>2</sup>* allowed per crop season: 61.44 oz (0.24 lb imidacloprid/A and 0.24 lb bifenthrin/A)

Maximum amount of Bifenthrin allowed per crop season: 0.5 lb ai/A.

Maximum amount of Imidacloprid allowed per crop season: 0.24 lb ai/A.

Apply *AVENGER S<sup>2</sup>* up to 5 applications after bloom.

**APPLICATION INSTRUCTIONS:** Apply in a minimum of 2 gallons of finished spray per acre by air or in a minimum of 10 gallons per acre with ground equipment. When applying by air, 1 to 2 quarts of emulsified oil may be substituted for 1 to 2 quarts of water in the finished spray. Thorough coverage is essential to achieve control.

**BRASSICA (Leafy Greens) (PHI 7 DAYS)**

Broccoli Raab, (Chinese bok choy) Collards, Kale, Mizuna, Mustard Greens, Mustard Spinach, Rape Greens

PEST	USE RATES	
	FI Oz/ ACRE	POUNDS ai/ACRE
Aphid spp. Armyworm spp. Budworm Corn earworm Crickets Cucumber beetle Cutworm spp. Diamondback moth Ground beetles Grasshoppers Imported cabbageworm Leafhopper spp. Loopers Lygus spp. Saltmarsh caterpillar Stink bug spp. Thrips Tobacco budworm Whitefly Wireworm ( <i>adults</i> )	8.48 - 12.2	0.066 - 0.095

**Restrictions: Preharvest Interval (PHI):** 7 Days

Minimum interval between applications: 7 Days

Maximum amount of **AVENGER S<sup>2</sup>** allowed per crop season: 61.44 oz (0.24 lb imidacloprid/A and 0.24 lb bifenthrin/A)

Maximum amount of Bifenthrin allowed per crop season: 0.5 lb ai/A.

Maximum amount of Imidacloprid allowed per crop season: 0.24 lb ai/A.

Apply **AVENGER S<sup>2</sup>** up to 5 applications after bloom.

**APPLICATION INSTRUCTIONS:** Apply in a minimum of 2 gallons of finished spray per acre by air or in a minimum of 10 gallons per acre with ground equipment. When applying by air, 1 to 2 quarts of emulsified oil may be substituted for 1 to 2 quarts of water in the finished spray. Thorough coverage is essential to achieve control.

**CITRUS (PHI 1 DAY)\*:**

Calamondin, Citron citron, Citrus hybrids (includes chironja, tangelo and tangor), Grapefruit, Kumquat, Lemon, Lime, Mandarin (tangerine), Pummelo, Orange (sweet and sour), Satsuma mandarin, and other cultivars and/or hybrids of these.

PEST	USE RATES	
	FI Oz/ ACRE	POUNDS ai/ACRE
Aphids Asian citrus psyllid Black fly Blue green citrus root weevil ( <i>Pachnaeus opalus</i> ) Brown leaf notcher ( <i>Epicacrus mexicanus</i> ) Diaprepes root weevil ( <i>Diaprepes abbreviatus</i> ) Leafhoppers/Sharpshooters Leafminers Little leaf notcher ( <i>Artipus floridanus</i> ) Mealy bugs Scales Southern blue green citrus root weevil ( <i>Pachnaeus litus</i> ) Whiteflies	32 - 64	0.25-0.50

**Restrictions:** \*Not for use in California.

**DO NOT** apply by air or through irrigation systems.

**DO NOT** apply during bloom or within 10 days prior to bloom or when bees are foraging.

**DO NOT** apply through irrigation systems.

**DO NOT** allow any application of the product to contact fruit or foliage.

**Preharvest Interval (PHI):** 1 day.

Minimum interval between applications: 10 days.

Maximum amount of **AVENGER S<sup>2</sup>** allowed per year: 64 oz (0.25 lb imidacloprid/A and 0.25 lb bifenthrin/A)

Maximum amount of Bifenthrin allowed per year: 0.25 lb ai/A.

Maximum amount of Imidacloprid allowed per year: 0.25 lb ai/A.

**APPLICATION INSTRUCTIONS:**

- Apply the specified dosage in a minimum of 40 gals. of finished spray per acre.
- Scales- time application to the crawler stage. Treat each generation.
- Where concentrated applications are appropriate, increase the spray solution concentration to apply an equivalent rate per acre to that applied in the diluted application. The 64.0 fluid ounce/acre rate is based on full sized trees. This rate may be reduced proportionally for smaller trees.
- The use of this product protects citrus tree roots from Diaprepes and other citrus root weevil feeding by creating a barrier. As Citrus root weevil eggs hatch, the newly hatched larvae (neonates) fall to the soil surface beneath the tree and come into contact with this product as they attempt to burrow into the root zone. Disturbance of the soil beneath the tree should be minimized.
- Timing of application is very important. Peak emergence of Diaprepes adults varies by citrus growing region, and environmental factors such as soil moisture can affect citrus root emergence.
- Typically, two peaks occur for Diaprepes, first in the spring then late summer or early fall. Southern blue green and Blue green citrus weevils and Fuller rose beetle typically have a single emergence peak in the spring. Brown and Little leaf notchers typically have three emergence peaks, spring, summer and fall. Since emergence varies by region and season, the best way to time application is observe the adults. By trapping adults when they are most active (in the morning or late afternoon) during the spring and summer emergence periods, an estimation of numbers can be obtained. Eggs are laid 8 to 10 weeks following the adult emergence from the soil; larvae invasion into the soil will begin 2 to 3 weeks following adult emergence. This product must be applied prior to the dropping of the neonates. Consult local university extension personnel for current information to protect citrus trees from Citrus root weevils and other pests.
- Apply this product by ground equipment to bare soil beneath citrus trees. This product must be uniformly applied from the trunk to the drip line of the tree, apply in a minimum of 40 gals of dilute spray per acre. Greater spray volume should insure greater uniformity of coverage.
- A pre and post-application irrigation may aid in the uniformity of coverage as well.
- Apply to individual citrus resets, when not in solid planted rows, using hand-gun or shielded sprayer.
- Peak emergence of Diaprepes root weevil generally occurs in the spring. Depending on weather conditions, a minor emergence of Diaprepes root weevil may also occur in the fall.
- If the citrus grove to be treated is in an area where weather conditions are conducive to primary emergence occurring in the spring, 32 fl oz formulated product should be used to obtain the longest residual management of Diaprepes root weevil.
- If the citrus grove to be treated is in an area where weather conditions will promote more than one peak of pest emergence, 16 fl oz formulated product can be applied early season and 16 fl oz formulated product can be applied later in the season.
- If emergence extends beyond the residual protection of this product, grower is advised to use additional management strategies (i.e. foliar adult control or soil larvae control such as nematodes). Contact your state agricultural Extension Specialist as to the recommendation suited for local conditions.

**CILANTRO and CORIANDER (PHI 7 DAYS)**

PEST	USE RATES	
	Fl Oz/ ACRE	POUNDS ai/ACRE
Aphid spp. Beet armyworm Cabbage looper Cutworm spp. Flea beetle Grasshopper Leafhopper spp. Leafminer Saltmarsh caterpillar Spotted cucumber beetle Thrips Whitefly	8.43 - 11.0	0.066 - 0.086

**Restrictions: Preharvest Interval (PHI):** 7 days.

Minimum interval between applications: 7 days.

Maximum amount of **AVENGER<sup>SP</sup>** allowed per crop season: 33.28 oz (0.13 lb imidacloprid/A and 0.13 lb bifenthrin/A)

Maximum amount of Bifenthrin allowed per crop season: 0.5 lb ai/A.

Maximum amount of Imidacloprid allowed per crop season: 0.13 lb ai/A.



**COTTON (PHI 14 DAYS)**

PEST	USE RATES	
	Fl Oz/ ACRE	POUNDS ai/ACRE
Bandedwinged-whitefly Boll weevil Cotton aphid Cotton fleahopper Lygus spp. Plant bugs ( <i>excludes Lygus hesperus</i> ) Southern garden leathopper Stink bugs spp.	7.6 -15.4	0.06 - 0.12
Beet armyworm Bollworm Cabbage looper Cotton leaf perforator Cutworm spp. European corn borer Fall armyworm Pink bollworm Saltmarsh caterpillar Tobacco budworm Thrips spp. Whitefly Yellow striped armyworm	10.2 - 15.4	0.08 - 0.12

**Restrictions: Preharvest Interval (PHI):** 14 days.

Minimum interval between applications: 7 days.

Maximum amount of **AVENGER S<sup>3</sup>** allowed per year: 79.36 oz (0.31 lb imidacloprid/A and 0.81 lb bifenthrin/A)

Maximum amount of Bifenthrin allowed per year: 0.5 lb ai/A.

Maximum amount of Imidacloprid allowed per year: 0.31 lb ai/A.

**DO NOT** graze livestock in treated areas or cut treated crops for feed.

**DO NOT** make more than 10 synthetic pyrethroid applications (of one product or combination of products) to a cotton crop in one growing season.

**APPLICATION INSTRUCTIONS: Application in Water:** Apply in a minimum of 5 gallons per acre with ground equipment or 1 gallon per acre by aircraft. When applying by air, one quart of emulsified oil may be substituted for one quart of water in the finished spray.

**ULV Application:** Apply the listed rate of **AVENGER S<sup>3</sup>** in refined vegetable oil in a minimum of 1 quart of finished spray per acre with aircraft calibrated to give adequate coverage.

**To Control Boll Weevil:** Apply this product at an interval of 3 to 4 days until pest numbers are reduced to acceptable levels.

**To Control Aphids:** Apply when pest first appears. Repeat as necessary to maintain control. Higher specified rates within the rate range will be required once a damaging threshold is established.

**FRUITING VEGETABLES:**

EGGPLANT, PEPPERS (BELL & NON-BELL), GROUNDCHERRY, PEPINO (PHI 7 DAYS)

PEST	USE RATES	
	FI Oz/ ACRE	POUNDS ai/ACRE
Aphid spp. Leafhopper spp. Lygus spp. Thrips	7.6 - 19.7	0.06 - 0.15
Armyworm spp. Artichoke plume moth Cabbage looper Colorado potato beetle Corn earworm Cucumber beetle Cutworms European corn borer Flea beetle Leafminer Loopers Pepper weevil Stink bug Tomato hornworm Tomato pinworm Whitefly	10.2 - 19.7	0.08 - 0.15

**Restrictions: Preharvest Interval (PHI):** 7 days.

Minimum interval between applications: 7 days.

Maximum amount of **AVENGER S<sup>®</sup>** allowed per crop season: 51.2 oz (0.20 lb imidacloprid/A and 0.20 lb bifenthrin/A)

Maximum amount of Bifenthrin allowed per crop season: 0.20 lb ai/A.

Maximum amount of Imidacloprid allowed per crop season: 0.24 lb ai/A.

**APPLICATION INSTRUCTIONS:** Apply in a minimum of 2 gallons of finished spray per acre by air or in a minimum of 10 gallons per acre with ground equipment. When applying by air, 1 to 2 quarts of emulsified oil may be substituted for 1 to 2 quarts of water in the finished spray. Thorough coverage is essential to achieve control.

**GRAPES (PHI 30 DAYS)**

PEST	USE RATES	
	FI Oz/ ACRE	POUNDS ai/ACRE
Glassywinged sharpshooter Variegated leafhopper Western grape leafhopper Eastern grape leafhopper	7.6 - 12.8	0.06 - 0.10
Black vine weevil Cutworm spp. Grape berry moth Grapeleaf skeletonizer Japanese beetles ( <i>adult</i> ) Mealybug	10.2 - 12.8	0.08 - 0.10

**Restrictions: Preharvest Interval (PHI):** 30 days.

Minimum interval between applications: 14 days.

Maximum amount of **AVENGER S<sup>®</sup>** allowed per year: 12.8 oz (0.05 lb imidacloprid/A and 0.05 lb bifenthrin/A)

Maximum amount of Bifenthrin allowed per year: 0.10 lb ai/A.

Maximum amount of Imidacloprid allowed per year: 0.10 lb ai/A.

**PEANUT ' (PHI 14 DAYS)**

PEST	USE RATES	
	Fl Oz/ ACRE	POUNDS ai/ACRE
Aphid Beet armyworm Corn earworm Cutworm spp. Fall armyworm Grasshoppers Green cloverworm Leaf hoppers Lesser cornstalk borer Loopers Rednecked peanut worm Southern armyworm Southern corn rootworm Spider mites Stink bugs Threecornered alfalfa hopper Thrips Velvetbean caterpillar Whiteflies Yellowstriped armyworm	7.6 - 11.2	0.06 - 0.0875

**Restrictions: Preharvest Interval (PHI):** 14 days.

Minimum interval between applications: 14 days.

Maximum amount of **AVENGER S<sup>®</sup>** allowed per year: 33.3 oz (0.13 lb imidacloprid/A and 0.13 lb bifenthrin/A)

Maximum amount of Bifenthrin allowed per year: 0.5 lb ai/A.

Maximum amount of Imidacloprid allowed per year: 0.13 lb ai/A.

**APPLICATION INSTRUCTIONS:** <sup>1</sup> Use not permitted in California. Apply foliar treatments in at least 10 gallons per acre with ground equipment at the rate of 11.2 fl oz (0.08 lb active) per acre at a minimum of 14 day intervals. **DO NOT** feed preem immature plants and peanut hay to livestock.

**LETTUCE (HEAD AND LEAF) (PHI 7 DAYS)**

PEST	USE RATES	
	Fl Oz/ ACRE	POUNDS ai/ACRE
Aphid spp. Leafhopper spp. Lygus spp. Stink bug spp. Thrips	7.6 - 12.2	0.06 - 0.095
Armyworm Cabbageworm Colorado potato beetle Corn earworm Cucumber beetle Cutworm spp. Diamondback moth European corn borer Flea beetle Leafminer Loopers Pepper weevil Tomato hornworm Tomato pinworm Tobacco budworm Saltmarsh caterpillar	10.2 - 12.2	0.08 - 0.095

**Restrictions: Preharvest Interval (PHI):** 7 days.

Minimum interval between applications: 7 days.

Maximum amount of **AVENGER S<sup>®</sup>** allowed per crop season: 61.44 oz (0.24 lb imidacloprid/A and 0.24 lb bifenthrin/A)

Maximum amount of Bifenthrin allowed per crop season: 0.5 lb ai/A.

Maximum amount of Imidacloprid allowed per crop season: 0.24 lb ai/A.

**APPLICATION INSTRUCTIONS:** Apply in water as necessary for insect control using a minimum of 10 gallons of finished spray per acre with ground equipment and 2 gallons per acre by air. When applying by air, 1 to 2 quarts of emulsified oil may be substituted for 1 to 2 quarts of water in the finished spray. Thorough coverage is essential to achieve control.

**HOPS (PHI 28 DAYS)**

PEST	USE RATES	
	Fl Oz/ ACRE	POUNDS ai/ACRE
Aphid spp. Leaf hopper spp.	7.6 - 25.6	0.06 - 0.2
Armyworm spp. Cutworm spp. Leafrollers Looper spp. Root weevil Two spotted spider mite	25.6	0.2

**Restrictions: Preharvest Interval (PHI):** 28 Days

Minimum interval between applications: 21 Days

Maximum amount of **AVENGER S<sup>2</sup>** allowed per year: 76.8 oz (0.3 lb imidacloprid/A and 0.3 lb bifenthrin/A)

Maximum amount of Bifenthrin allowed per year: 0.30 lb ai/A.

Maximum amount of Imidacloprid allowed per year: 0.30 lb ai/A.

**APPLICATION INSTRUCTIONS: For Root weevil control:** Make a direct spray to the base of the plant. Spray up to 3 ft on the vine and 1.5 to 2 ft on sides of the plant. Thorough coverage is essential to achieve control.

\*including all armyworm pests except Beet armyworm

**SPINACH (PHI 40 DAYS)**

PEST	USE RATES	
	Fl Oz/ ACRE	POUNDS ai/ACRE
Aphid spp. Leafhopper spp. Lygus spp. Stink bug spp. Thrips	7.6 - 12.2	0.06 - 0.095
Armyworm Cabbageworm Colorado potato beetle Corn earworm Cucumber beetle Cutworm spp. Diamondback moth European corn borer Flea beetle Leafminer Loopers Pepper weevil Tomato hornworm Tomato pinworm Tobacco budworm Saltmarsh caterpillar	10.2- 12.2	0.08- 0.095

**Restrictions: Preharvest Interval (PHI):** 40 days.

Minimum interval between applications: 7 days.

Maximum amount of **AVENGER S<sup>2</sup>** allowed per crop season: 61.44 oz (0.24 lb imidacloprid/A and 0.24 lb bifenthrin/A)

Maximum amount of Bifenthrin allowed per crop season: 0.40 lb ai/A.

Maximum amount of Imidacloprid allowed per crop season: 0.24 lb ai/A.

**APPLICATION INSTRUCTIONS:** Apply in water as necessary for insect control using a minimum of 10 gallons of finished spray per acre with ground equipment and 2 gallons per acre by air. When applying by air, 1 to 2 quarts of emulsified oil may be substituted for 1 to 2 quarts of water in the finished spray. Thorough coverage is essential to achieve control.

**STRAWBERRY (PHI 7 DAYS)**

PEST	USE RATES	
	FI Oz/ ACRE	POUNDS ai/ACRE
Aphid spp. Lygus spp. Stink bug spp. Thrips	7.6- 19.6	0.06-0.15
Armyworm Corn earworm Cucumber beetle Cutworms European corn borer Flea beetles Leafminer Loopers Japanese beetle ( <i>adult</i> ) Whitefly	10.2- 19.6	0.08-0.15

**Restrictions: Preharvest Interval (PHI):** 7 Days

Minimum interval between applications: 5 Days

**DO NOT** apply during bloom or within 10 days prior to bloom or when bees are foraging.

Maximum amount of **AVENGER S<sup>2</sup>** allowed per crop season: 35.84 oz (0.14 lb imidacloprid/A and 0.14 lb bifenthrin/A)

Maximum amount of Bifenthrin allowed per crop season: 0.14 lb ai/A.

Maximum amount of Imidacloprid allowed per crop season: 0.14 lb ai/A.

**APPLICATION INSTRUCTIONS:** Apply in a minimum of 5 gallons of finished spray per acre by air or in a minimum of 50 gallons per acre with ground equipment. Aerial applications in Florida are prohibited. Thorough coverage is essential to achieve control.

\* Including all armyworm pests except Beet armyworm.

**OKRA (PHI 7 DAYS)**

PEST	USE RATES	
	FI Oz/ ACRE	POUNDS ai/ACRE
Aphid spp. Lygus spp. Stink bug spp. Thrips	7.6 - 19.6	0.06 -0.15
Armyworm Corn Earworm Cucumber beetle Cutworms European corn borer Flea beetles Leafminer Loopers Japanese beetle ( <i>adult</i> ) Whitefly	10.2-19.6	0.08-0.15

**Restrictions: Preharvest Interval (PHI):** 7 days.

Minimum interval between applications: 7 days.

Maximum amount of **AVENGER S<sup>2</sup>** allowed per crop season: 51.2 oz (0.20 lb imidacloprid/A and 0.20 lb bifenthrin/A)

Maximum amount of Bifenthrin allowed per crop season: 0.20 lb ai/A.

Maximum amount of Imidacloprid allowed per crop season: 0.24 lb ai/A.

**APPLICATION INSTRUCTIONS:**

Apply using sufficient water to obtain uniform coverage. Apply as needed. Apply in a minimum of 2 gallons of finished spray per acre by air or in a minimum of 10 gallons per acre with ground equipment.

**PEARS (PHI 14 DAYS)**

PEST	USE RATES	
	Fl Oz/ ACRE	POUNDS ai/ACRE
Aphid spp. Leafhopper spp. Lygus spp. Stink bug spp.	7.6 - 25.6	0.06 -0.2
Codling moth Cutworm spp. Green fruitworm Leafminer Leafroller Plum curculio	10.2-25.6	0.08-0.2

**Restrictions: Preharvest Interval (PHI):** 14 days.

Minimum interval between applications: 30 days.

**DO NOT** graze livestock in treated orchards or cut treated cover crops for feed.

**DO NOT** apply during bloom or within 10 days prior to bloom or when bees are foraging.

Maximum amount of **AVENGER S3** allowed per year: 128 oz (0.50 lb imidacloprid/A and 0.50 lb bifenthrin/A) as a foliar application; 115.0 oz (0.9 lb ai/A) applied after petal fall.

Maximum amount of Bifenthrin allowed per year: 0.5 lb ai/A, as a foliar application; 0.45 lb ai/A applied after petal fall.

Maximum amount of Imidacloprid allowed per year: 0.5 lb ai/A, as a foliar application; 0.45 lb ai/A applied after petal fall.

**APPLICATION INSTRUCTIONS:** Apply using sufficient water to obtain uniform coverage. Apply as needed. Apply in a minimum of 2 gallons of finished spray per acre by air or in a minimum of 10 gallons per acre with ground equipment.

**POTATO (PHI 21 days) (Foliar uses)**

PEST	USE RATES	
	Fl Oz/ ACRE	POUNDS ai/ACRE
	FOLIAR APPLICATION	
Aphid spp. Leafhopper spp.	7.6 - 12.28	0.06 -0.1
Banded cucumber beetle Colorado potato beetle Cucumber beetle European corn borer Grasshopper spp. Looper spp. Flea beetle spp. June beetle Potato psyllid Sugarcane beetle Sweetpotato flea beetle Sweetpotato weevil Tuberworm Whitef ringed beetle Whitefly	9.6 - 12.28	0.075 -0.1

**Restrictions: Preharvest Interval (PHI):** 21 days.

Minimum interval between applications: 7 days.

Maximum amount of **AVENGER S3** allowed per year: 51.2 oz. (0.20 lb imidacloprid/A and 0.20 lb bifenthrin/A)

Maximum amount of Bifenthrin allowed per year: 0.20 lb ai/A.

Maximum amount of Imidacloprid allowed per year: 0.20 lb ai/A.

Two applications are permitted per year. It is permitted to make one at-plant application followed by a foliar application later in the same growing season.

**APPLICATION INSTRUCTIONS: Foliar Application:** Apply in a minimum of 5 gallons per acre with ground equipment or 1 gallon per acre by aircraft. When applying by air, 1 quart of emulsified oil may be substituted for one quart of water in the finished spray. Thorough coverage is essential to achieve control.

**POTATO (At-plant)**

PEST	USE RATES	
	FI Oz/ ACRE	POUNDS ai/ACRE
Aphid spp. Leafhopper spp. Colorado-potato beetle Flea beetle spp. ( <i>adult, larvae</i> ) Japanese beetle ( <i>larvae</i> ) Potato psyllid Rootworm spp. White grub Wireworm	32.0 - 51.2	0.25 - 0.4

**Restrictions: Preharvest Interval (PHI):** 21 Days

Minimum interval between applications: 7 Days

Maximum amount of **AVENGER S<sup>®</sup>** allowed per year: 51.2 oz (0.20 lb imidacloprid/A and 0.20 lb bifenthrin/A)

Maximum amount of Bifenthrin allowed per year: 0.20 lb ai/A.

Maximum amount of Imidacloprid allowed per year: 0.20 lb ai/A.

A maximum of one at-plant application is permitted per season.

**APPLICATION INSTRUCTIONS: At-plant Application: In-furrow applications:** Apply as an in-furrow spray onto the seed pieces or seed potatoes.

**TUBEROUS AND CORM VEGETABLES (PHI 21 DAYS):**

Arracacha; arrowroot; artichoke, Chinese; artichoke, Jerusalem; canna, edible; cassava, bitter and sweet; chayote (root); chufa; dashen (taro); Ginger; Lerer; Tanier; Turmeric; Bean, Yam, True yam.

PEST	USE RATES	
	FI Oz/ ACRE	POUNDS ai/ACRE
Aphid spp. Leafhopper spp.	7.6 - 15.4	0.06 - 0.12
Banded cucumber beetle Black flea beetle Colorado potato beetle Cucumber beetle Flea beetles June beetle Potato psyllid Sugarcane beetle Sweetpotato flea beetle Sweetpotato weevil Whitefringed beetle	10.2 - 15.4	0.08 - 0.12

**Restrictions: Preharvest Interval (PHI):** 21 days.

Minimum interval between applications: 7 days.

Maximum amount of **AVENGER S<sup>®</sup>** allowed per crop season: 33.28 oz (0.13 lb imidacloprid/A and 0.13 lb bifenthrin/A)

Maximum amount of Bifenthrin allowed per crop season: 0.5 lb ai/A.

Maximum amount of Imidacloprid allowed per crop season: 0.13 lb ai/A.

Apply a Maximum of 2 applications per season.

**DO NOT** make more than 10 synthetic pyrethroid applications (of one product or combination of products) to a potato crop in one growing season.

**APPLICATION INSTRUCTIONS: Application in Water:** Apply in a minimum of 10 gallons per acre with ground equipment or 2 gallons per acre by aircraft. When applying by air, 1 quart of emulsified oil may be substituted for one quart of water in the finished spray.

**TREE NUTS, except almonds (PHI 7 DAYS) (Pecan PHI 21 DAYS)**

PEST	USE RATES	
	FI Oz/ ACRE	POUNDS ai/ACRE
Aphids ( <i>Except Black pecan aphid</i> ) Leaf hoppers/Sharpshooters Phylloxera spp. ( <i>leaf infestations</i> ) Spittlebugs Thrips	11.2 – 22.4	0.0875 – 0.175
Black pecan aphid Mealybugs San Jose scale	12.8	0.10

**Restrictions: Preharvest Interval (PHI):** 7 days.

Minimum interval between applications: 15 days.

**DO NOT** apply during bloom or within 10 days prior to bloom or when bees are foraging.

Maximum amount of **AVENGER S<sup>2</sup>** allowed per year: 92.6 oz (0.36 lb imidacloprid/A and 0.36 lb bifenthrin/A)

Maximum amount of Bifenthrin allowed per year: 0.50 lb ai/A.

Maximum amount of Imidacloprid allowed per year: 0.36 lb ai/A.

**APPLICATION INSTRUCTIONS: Minimum application volume (water):** 50 GPA - ground application, 10 GPA - aerial application.

Applications for control of San Jose scale should be timed according to crawler stage, treating each successive generation.

**LEGUME VEGETABLES, except soybean**

**DRIED BEANS AND PEAS (PHI 14 DAYS for dried shelled peas or beans)**

Dried cultivars of bean (*Lupinus* spp.) (includes grain lupin, sweet lupin, white lupin, and white sweet lupin); (*Phaseolus* spp.) (includes field bean, kidney bean, lima bean (dry), navy bean, pinto bean, tepary bean); bean (*Vigna* spp.) (includes adzuki bean, blackeye pea, catjang, cowpea, Crowder pea, moth bean, mung bean, rice bean, southern pea, urd bean); broad bean (dry); chickpea; guar; lablab bean (hyacinth bean); lentil; pea (*Pisum* spp.) (includes field pea); pigeon pea

PEST	USE RATES	
	Fl Oz/ ACRE	POUNDS ai/ACRE
Aphid spp. Grasshopper Leafhopper spp. Lygus spp. Thrips ( <i>adult</i> ) ( <i>foliage feeding</i> )	7.6 - 11.2	0.06 - 0.0875
Alfalfa caterpillar Armyworm spp* Bean leaf beetle Cloverworm Corn earworm Corn rootworm ( <i>adult</i> ) Cucumber beetle Cutworm spp. European corn borer Flea beetle spp. Japanese beetle ( <i>adult</i> ) June beetle ( <i>adult</i> ) Looper spp. Mexican bean beetle Pea leaf weevil Pea weevil Sap beetle ( <i>adult</i> ) Saltmarsh caterpillar Silverspotted skipper Southern armyworm Threecornered alfalfa hopper Webworm Whitefly	11.2	0.0875

**Restrictions: Preharvest Interval (PHI):** 14 Days

Minimum interval between applications: 7 Days

Maximum amount of **AVENGER S<sup>2</sup>** allowed per crop season: 33.6 oz (0.13 lb imidacloprid/A and 0.13 lb bifenthrin/A)

Maximum amount of Bifenthrin allowed per crop season: 0.13 lb ai/A.

Maximum amount of Imidacloprid allowed per crop season: 0.13 lb ai/A.

**APPLICATION INSTRUCTIONS:** Apply in a minimum of 2 gallons of finished spray per acre by air or in a minimum of 10 gallons per acre with-ground equipment. When applying by air, 1 to 2 quarts of emulsified oil may be substituted for 1 to 2 quarts of water in the finished spray. Thorough coverage is essential to achieve control.

\* Including all armyworm rests except Beet armyworm.



**SUCCULENT BEANS AND PEAS (PHI 7 DAYS):**

Crops in the Succulent Pea and Bean group, Pea (*Pisum* spp.): Dwarf pea, Edible-pod pea, English pea, Garden pea, Green pea, Snow pea, Sugar snap pea, Pigeon pea; Bean (*Phaseolus* spp.): Broadbean (succulent), Lima bean (green), Runner bean, Snap bean, Wax bean; Bean (*Vigna* spp.): Asparagus bean, Blackeyed pea, Chinese longbean, Cowpea, Moth bean, Southern pea, Yardlong bean, Jackbean, Soybean (immature seed) Sword bean.

PEST	USE RATES	
	Fl Oz/ ACRE	POUNDS ai/ACRE
Aphid spp. Grasshopper Leafhopper spp. Lygus spp. Thrips	7.6 - 11.0	0.06 - 0.086
Alfalfa caterpillar Bean leaf beetle Beet armyworm Cloverworm Corn earworm Corn rootworm ( <i>adult</i> ) Cucumber beetle Cutworm spp. European corn borer Fall armyworm Flea beetle Japanese beetle ( <i>adult</i> ) Looper spp. Pea leaf weevil Pea weevil Sap beetle ( <i>adult</i> ) Southern armyworm Webworm Whitefly Yellowstriped armyworm	10.2-11.0	0.08- 0.086

**Restrictions: Preharvest Interval (PHI):** 7 days.

Minimum interval between applications: 7 days.

Maximum amount of **AVENGER S** allowed per crop season: 33.2 oz. (0.13 lb imidacloprid/A and 0.13 lb bifenthrin/A)

Maximum amount of Bifenthrin allowed per crop season: 0.20 lb ai/A.

Maximum amount of Imidacloprid allowed per crop season: 0.13 lb ai/A.

**APPLICATION INSTRUCTIONS: Application in Water:** Apply in a minimum of 5 gallons per acre with ground equipment or 1 gallon per acre by aircraft. When applying by air, one Quart of emulsified oil may be substituted for one quart of water in the finished spray.

SOYBEANS (PHI 21 DAYS)

PEST	USE RATES	
	Fl Oz/ ACRE	POUNDS ai/ACRE
Alfalfa caterpillar		
Aphids		
Aster leafhopper		
Bean leaf beetle		
Beet armyworm*		
Cloverworm		
Corn earworm		
Corn rootworm adult		
Cucumber beetles		
Cutworms		
European corn borer		
Fall armyworm		
Flea beetle		
Grasshoppers		
Imported cabbageworm		
Japanese beetle adult		
Leaf hoppers		
Leafminer		
Loopers	7.6 - 12.2	0.06- 0.095
Lygus spp.		
Mexican bean beetle ( <i>Adult</i> )		
Pea leaf weevil		
Pea weevil		
Plant bug		
Saltmarsh caterpillar		
Sap beetle		
Southern armyworm		
Stink bugs		
Tarnished plant bug		
Thrips		
Tobacco budworm*		
Twospotted spider mite		
Webworms		
Western bean cutworm		
Whitefly		
Yellowstriped armyworm		

**Restrictions: Preharvest Interval (PHI):** 21 days.

\*Use not permitted in California.

Apply a maximum of two applications per season.

Minimum interval between applications: 30 days.

Maximum amount of **AVENGER S<sup>®</sup>** allowed per year: 24.4 oz (0.095 lb imidacloprid/A and 0.095 lb bifenthrin/A)

Maximum amount of Bifenthrin allowed per year: 0.14 lb ai/A.

Maximum amount of Imidacloprid allowed per year: 0.30 lb ai/A.

**TOBACCO (PHI 14 DAYS)**

PEST	USE RATES	
	Fl Oz/ ACRE	POUNDS ai/ACRE
Lygus spp. Aphid spp. Stink bug spp. Thrips	7.6 - 12.8	0.06 - 0.10
Armyworm spp. Chinch bugs Cutworm spp. Flea beetle ( <i>Adults</i> ) Grasshoppers Japanese beetles Stalkborers Whiteflies	10.2-12.8	0.08- 0.10

**Restrictions: Preharvest Interval (PHI):** 14 days.

Minimum interval between applications: 7 days.

Maximum amount of **AVENGER S<sup>9</sup>** allowed per year: 51.2 oz (0.20 lb imidacloprid/A and 0.20 lb bifenthrin/A)

Maximum amount of Bifenthrin allowed per year: 0.30 lb ai/A.

Maximum amount of Imidacloprid allowed per year: 0.28 lb ai/A.

Apply a maximum of 2 applications per season.

**DO NOT** apply later than layby.

**APPLICATION INSTRUCTIONS: Application in Water:** Apply in a minimum of 10 gallons per acre with ground equipment or 5 gallon per acre by aircraft. When applying by air, 1 qt of emulsified oil may be substituted for 1 qt of water in the finished spray.

**TOMATO (PHI 1 DAY)**

PEST	USE RATES	
	Fl Oz/ ACRE	POUNDS ai/ACRE
Aphid spp. Flea hopper Leafhopper spp. Lygus spp. Squash bug Stink bug spp. Thrips	7.6- 19.7	0.06-0.15
Armyworm spp. Bean leaf beetle Cabbageworm Cloverworm Colorado potato beetle Corn earworm Corn rootworm Cucumber beetle Cutworms Diamondback moth European corn borer Flea beetle Grasshopper Japanese beetle ( <i>adult</i> ) Loopers. Melonworm Pea leaf weevil Pea weevil Pepper weevil Pickworm Rindworm Saltmarsh caterpillar Sap beetle Seedpod weevil	10.2- 19.7	0.08 - 0.15

**Restrictions: Preharvest Interval (PHI):** 1 day.

Minimum interval between applications: 10 days.

Maximum amount of **AVENGER S<sup>9</sup>** allowed per crop season: 61.44 oz (0.24 lb imidacloprid/A and 0.24 lb bifenthrin/A)

Maximum amount of Bifenthrin allowed per crop season: 0.40 lb ai/A.

Maximum amount of Imidacloprid allowed per crop season: 0.24 lb ai/A.

**APPLICATION INSTRUCTIONS: Application in Water:** Apply in a minimum of 10 gallons per acre with ground equipment or 2 gallons per acre by aircraft. When applying by air, one quart of emulsified oil may be substituted for one quart of water in the finished spray.

#### STORAGE AND DISPOSAL

**DO NOT** contaminate water, food or feed by storage or disposal.

**PESTICIDE STORAGE AND SPILL PROCEDURES:** Keep out of reach of children and animals. Store in original containers only, in a cool, dry place and avoid excess heat. **DO NOT** freeze. **DO NOT** store below 40 °F. Carefully open containers.

If crystals are observed, warm material to above 60 °F by placing container in warm location. Shake or roll container periodically to redissolve solids.

After partial use, replace lids and close tightly. **DO NOT** put concentrate or dilute material into food or drink containers. **DO NOT** contaminate other pesticides, fertilizers, water, food or feed by storage or disposal.

In case of spill, avoid contact, isolate area, and keep out animals and unprotected persons. Confine spills.

**To confine spill:** If liquid, dig surrounding area or absorb with sand, cat litter, or commercial clay. If dry material, cover to prevent dispersal. Place damaged package in a holding container. Identify contents.

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

#### CONTAINER HANDLING:

**Nonrefillable container:** **DO NOT** reuse this container to hold materials other than pesticides or dilute pesticides (rinsate). After emptying and cleaning, it may be allowed to temporarily hold rinsate or other pesticide-related materials in the container. Contact your state regulatory agency to determine allowable practices in your state. Once cleaned, some agricultural plastic pesticide containers can be taken to a container collection site or picked up for recycling. To find the nearest site, contact your chemical dealer or manufacturer, or contact The Agricultural Container Recycling Council (ACRC) at [www.acrc.org](http://www.acrc.org).

Triple rinse or pressure rinse container (or equivalent) promptly after emptying. If recycling is not available puncture and dispose of in a sanitary landfill or by incineration or if allowed by state and local authorities by burning. If burned stay out of smoke.

**For packages up to 5 gallons. 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.

**For packages greater than 5 gallons and less than 56 gallons: 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. 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.

**For packages greater than 56 gallons:** To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

**For refillable containers:** 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 mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

#### CONDITION 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. Ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather, presence of other materials or other influencing factors in the use of the product, which are beyond the control of INNVICTIS CROP CARE, LLC or Seller. To the extent consistent with applicable law, all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold INNVICTIS CROP CARE, LLC and Seller harmless for any claims relating to such factors.

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