



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

December 13, 2017

Jesus Atencio, Agent for Novita Solutions, LLC.
Autana Services, LLC
4100 Eldorado Pkwy-Ste. 100-159
Mckinney, Texas 75070

Subject: Notification per PRN 98-10 – Add a State of California Crop Use Restriction
Product Name: Cavalletta
EPA Registration Number: 92534-1
Application Date: July 20, 2017
Decision Number: 532207

Dear Mr. Atencio:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 for the above referenced product. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action requested falls within the scope of PRN 98-10. The label submitted with the application has been stamped “Notification” and will be placed in our records.

Should you wish to add/retain a reference to the company’s website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product’s label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA’s Office of Enforcement and Compliance.

If you have any questions, you may contact Carmen Rodia at (703) 06-0327 or by email at rodia.carmen@epa.gov.

Sincerely,

A handwritten signature in blue ink, appearing to read "Richard Gebken".

Richard Gebken
Product Manager 10
Invertebrate & Vertebrate Branch 2
Registration Division (7505P)
Office of Pesticide Programs

Restricted Use Pesticide
Due to toxicity to aquatic invertebrate animals.
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.

NOTIFICATION

92534-1

The applicant has certified that no changes, other than those reported to the Agency have been made to the labeling. The Agency acknowledges this notification by letter dated:

12/13/2017

GROUP	15	INSECTICIDE
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CAVALLETTA
Insect Growth Regulator

For use on field and row crops (barley, cotton, oats, peanuts, rice, soybean (except California), triticale, wheat, turf grass (for use on sod farms only)), vegetable crops (carrots (not grown for seed), leafy brassica subgroup 5B, turnip greens, peppers), orchard crops (oranges, citrus crop group 10-10*: grapefruit, pummelo and tangerine, pears, stone fruit (excluding cherries), tree nuts (group 14-12)) and non-crop uses (grassland, livestock/poultry premises and non-crop areas)

***In California – only approved for use on orange, grapefruit, tangerine, pummelo and their hybrids.**

Not for Homeowner/Residential Use

Active Ingredient: (% by weight)

Diflubenzuron

N-[[[4-Chlorophenyl]amino]carbonyl]-2,6-difluorobenzamide* 22%

Other Ingredients:..... 78%

TOTAL.....100%

*Contains 2 lbs. diflubenzuron per gallon.

KEEP OUT OF REACH OF CHILDREN
CAUTION

See label booklet for First Aid, precautionary Statements and Directions for Use including Storage and Disposal

EPA Reg. No. 92534-xx

EPA Est No. _____

Net Contents:

FIRST AID	
IF ON SKIN OR CLOTHING:	<ul style="list-style-type: none"> 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.
<p>Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For additional information on this pesticide product (including health concerns, medical emergencies or pesticide incidents), you may call CHEMTREC at 1-800-424-9300, 24 hours per day, 7 days per week.</p>	

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing. Wash hands 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.

PHYSICAL OR CHEMICAL HAZARDS

DO NOT mix or allow this product to come in contact with oxidizing agents. Hazardous chemical reaction may occur.

PERSONAL PROTECTIVE EQUIPMENT

Some materials that are chemical-resistant to this product are listed below.

Applicators and Other Handlers Must Wear:

- A long-sleeved shirt & long pants;
- Chemical-resistant gloves, such as barrier laminate or butyl rubber \geq 14 mils or nitrile rubber \geq 14 mils or neoprene rubber \geq 14 mils or natural rubber \geq 14 mils or polyethylene or polyvinyl chloride (PVC) \geq 14 mils or Viton \geq 14 mils, when mixing and loading and also when using hand-held equipment;
- Shoes plus socks.

Mixers and Loaders Using Fixed-Wing Aircraft Must Wear:

- A long-sleeved shirt and long pants;
- Chemical-resistant gloves, such as barrier laminate or butyl rubber \geq 14 mils or nitrile rubber \geq 14 mils or neoprene rubber \geq 14 mils or natural rubber \geq 14 mils or polyethylene or polyvinyl chloride (PVC) \geq 14 mils or Viton \geq 14 mils;
- Shoes plus socks;
- Dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C or a NIOSH approved respirator with any R, P or HE filter).

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

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

USER SAFETY RECOMMENDATIONS

Users should:

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

ENVIRONMENTAL HAZARDS

This pesticide is toxic to terrestrial juvenile insects and aquatic invertebrates/mollusks/insects. DO NOT apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. DO NOT contaminate water when disposing of equipment washwaters or rinsate.

This product may contaminate water through drift of spray in wind. This product has a potential for runoff for several months or more after application. Poorly draining soils and soils with shallow water tables are

more prone to produce runoff that contains this product. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential for contamination or water from rainfall-runoff. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours. Sound erosion control practices will reduce this product's contribution to surface water contamination.

Pollinator Advisory: Because of its mode of action as an insect growth regulator, and since it is not systemic, CAVALLETTA has no direct effect on fully developed adult stages, such as bees and other beneficial pollinators. However, in order to minimize the possibility of transient effects on honeybee brood development, DO NOT use CAVALLETTA on blooming crops when bees are actively foraging. Additionally, minimize drift of this product on to beehives or to off-site pollinator attractive habitat.

DIRECTIONS FOR USE RESTRICTED USE PESTICIDE

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

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

AGRICULTURAL USE REQUIREMENTS

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

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

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

- Coveralls
- Chemical-resistant gloves, such as barrier laminate or butyl rubber \geq 14 mils or nitrile rubber \geq 14 mils or neoprene rubber \geq 14 mils or natural rubber \geq 14 mils or polyethylene or polyvinyl chloride (PVC) \geq 14 mils or Viton \geq 14 mils.
- Shoes plus socks.

INSTRUCTIONS AND INFORMATION SPRAY DRIFT MANAGEMENT

RUNOFF: This product may contaminate water through runoff. This product has a potential for runoff for several months or more after application. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product.

The following practices will decrease the likelihood of runoff:

A level, well maintained vegetative buffer strip between areas to which this product is applied and surface water (i.e., ponds, streams, and springs) will reduce the potential for contamination of water from rainfall-runoff. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours. Sound erosion control practices will reduce this product's contribution to surface water contamination.

SPRAY DRIFT: This product may contaminate water through drift of spray in wind. **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 these factors when making decisions.

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements DO NOT apply to ULV applications on grassland and non-crop areas for the control of grasshoppers and Mormon crickets.

- The distance of the outermost nozzles on the boom must not exceed $\frac{3}{4}$ the length of the wingspan or rotor.
- Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.
- Where states have more stringent regulations, they must be observed.
- The applicator must be familiar with and take into account the information covered in the Aerial Drift Reduction Advisory Information.

Information on Droplet Size

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see Wind, Temperature and Humidity, and Temperature Inversion).

Controlling Droplet Size

- Volume - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets. Select nozzles and pressure that deliver medium spray droplets as indicated in nozzle manufacturer's catalogs and in accordance with ASAE Standard S-572.
- 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 airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from the 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.

Boom Length

For some use patterns, reducing the effective boom length to less than $\frac{3}{4}$ of the wing span 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 largest 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 the displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase with increasing drift potential (higher wind, smaller drops, etc.).

Wind

Drift potential is lowest between wind speed of 2-10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below

2 mph due to variable wind direction and high inversion potential. NOTE: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect drift.

Temperature and Humidity

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are hot and dry.

Temperature Inversions

Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover with light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upwards and rapidly dissipates indicates good vertical air mixing.

Sensitive Areas

The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g. when wind is blowing away from the sensitive areas).

PRODUCT INFORMATION

CAVALLETTA is an insect growth regulator (IGR) which is effective on a number of important insect pests from the Lepidoptera and Diptera families. With CAVALLETTA being an IGR, its mode of action results in a disruption of the normal molting process of insect larvae. The action of CAVALLETTA is slow and several days (up to 5 to 7 days) may elapse before the full effect is seen. CAVALLETTA is an aqueous flowable formulation which is easy to mix and spray.

RESISTANCE MANAGEMENT: When used as directed, CAVALLETTA provides control of numerous insect pests as well as providing a margin of safety to beneficial insects and pollinators. CAVALLETTA should be used as part of an IPM program following good management practices that include:

- Scouting regularly and use CAVALLETTA against early immature stages for best results.
- Always follow the label rate and timing directions.
- Use chemical alternatives such as oil and preserve beneficial arthropods as part of an IPM program.
- Maintain good coverage of all leaf surfaces with adequate water volume.
- Alternate treatments to classes of insecticides with different modes of action.

USE RESTRICTIONS

DO NOT apply this product to bodies of water where swimming is likely to occur.

For Field Crops, Row Crops, Orchard Uses, Grassland and Non-Crop Areas: DO NOT apply within 25 feet by ground or 150 feet by air of bodies of water such as lakes, reservoirs, rivers, permanent streams, natural ponds, marshes or estuaries. All applications must include a 25 foot vegetative buffer strip within the buffer zone to decrease runoff.

USE RESTRICTIONS ON ROTATIONAL CROPS: Unless CAVALLETTA is labeled for use on a crop, DO NOT plant food or feed crops in CAVALLETTA treated soils within 1 month following last application.

APPLICATION INSTRUCTIONS

USE AND MIXING DIRECTIONS IF USED WITH WATER:

1. Fill tank with half of the required amount of water.

2. Begin agitation.
3. Add required amount of CAVALLETTA.
4. Continue agitation.
5. Add remainder of water.
6. If labeled for the use site, add proper quantity of oil slowly. To avoid formation of an invert emulsion, use at least 2 parts of water for each part of oil.

USE AND MIXING DIRECTIONS IF USED WITHOUT WATER:

Always evaluate any potential mixture for compatibility and sprayability. Thoroughly mix CAVALLETTA with tank mix partners in a nurse tank prior to being transferred to aerial or ground ULV application equipment. If nurse tank is not available, or unable to simultaneously mix:

1. Fill tank with the required amount of oil and/or oil based insecticide.
2. Begin agitation.
3. Add required amount of CAVALLETTA.
4. After the contents of the tank have been thoroughly agitated, drain a volume of carrier sufficient to fill the booms and piping system and add back to the tank.

Aerial or ground application: Apply spray with aerial or ground equipment designed to insure full uniform coverage of the entire plant. Adjust equipment to provide droplets with a diameter of 150 to 220 microns. Provide continuous agitation prior to, during, and after blending and while applying.

APPLICATION THROUGH IRRIGATION SYSTEMS - CHEMIGATION

CAVALLETTA may be applied through chemigation systems for insect control in grassland and row crops. Apply CAVALLETTA 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.

Non-uniform distribution of treated water may result in crop injury, lack of effectiveness, or illegal pesticide residues in the crop.

In order to calibrate the irrigation system and injector to apply the mixture, determine the following:

- 1) Calculate the number of acres irrigated by the system
- 2) Set the irrigation rate and determine the number of minutes for the system to cover the intended treatment area.
- 3) Calculate the total gallons of the mixture needed to cover the desired acreage.
- 4) Divide the total gallons of mixture needed by the number of minutes to cover the treated area. This value equals the gallons per minute that the injector must deliver. Convert the gallons per minute to ounces per minute.
- 5) Calibrate the injector pump with the system in operation at the desired irrigation rate. Calibrate the injector pump at least twice before operation, and monitor the system during operation.

If you have questions about calibration, contact State Extension Service specialists, equipment manufacturers, or other experts.

DO NOT connect any irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.

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.

CHEMIGATION SYSTEMS CONNECTED TO PUBLIC WATER SYSTEMS

If the chemigation system is connected to a public water supply, the following conditions must also be met:

- Public water systems means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
- Chemigation systems connected to public water systems must contain a functional reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from a point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the flow outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
- The pesticide injection pipeline must 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, or in cases where there is no water pump, 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.
- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection.
- Upon completion of insecticide application, remove scale, pesticide residues, and other foreign matter from the supply tank and entire injector system. Flush thoroughly with clean water.
- DO NOT apply when wind speed favors drift beyond the area intended for treatment

SPRINKLER CHEMIGATION

For continuously moving systems, mixtures containing CAVALLETTA must be injected continuously and uniformly into the irrigation water line as the sprinkler is moving. When using continuously moving irrigation equipment, apply in no more than 0.25 inch of water. For sprinkler systems that DO NOT move during operation, apply in no more than 0.25 inch of irrigation immediately before the end of the irrigation cycle.

Always maintain continuous agitation of the pesticide supply tank for the duration of the application period.

To apply a pesticide using sprinkler chemigation, the chemigation system must meet the following specifications:

- 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.

Field Crops

ALFALFA GROWN FOR SEED PURPOSES ONLY*		
For Use West of the Mississippi River		
*Not for registered for use in California		
PEST	Application Rate Fl. Oz./A (lb. a.i./A)	COMMENTS
Grasshopper Mormon cricket	2 (0.031)	Applications may be made any time after eggs begin to hatch. For optimum results, applications should be made when the majority of nymphs have reached the 2 nd and 4 th instar stage of growth. If seed crops are actively growing, make repeat applications every 10 to 14 days for more complete coverage of new foliage during the period of rapid vegetative growth. CAVALLETTA remains active on the foliage and will continue to control grasshoppers that hatch later in the season. CAVALLETTA does not control adult grasshoppers. If a large number of adults are present in the infestation, tank mix with a knockdown insecticide to control the adults.
Application: Ground – 2 to 15 GPA; Aerial – 2 to 5 GPA Use adequate spray volume to assure adequate coverage.		
Include 1 pt. per acre of emulsified vegetable or paraffinic crop oil to aid in canopy penetration and minimize water evaporation.		
NOTE: Visible effects on immature stages of these insects may not be seen for 3 to 10 days following application.		
ALFALFA RESTRICTIONS:		
<ul style="list-style-type: none"> • DO NOT make more than 3 applications per calendar year. • DO NOT apply more than 6 fl. ozs. (0.09375 lb. a.i.) per acre per calendar year. • DO NOT exceed a total of 2 fl. ozs. per acre per cutting. • Preharvest Interval (PHI): Allow at least 1 day after treatment before cutting forage or hay. Allow at least 1 day after the final treatment before harvest of alfalfa seed. 		

BARLEY, OATS, TRITICALE, WHEAT		
PEST	Application Rate Fl. Oz./A (lb. a.i./A)	COMMENTS
Grasshopper	1 to 2 (0.016 to 0.031)	For optimum results against immature grasshoppers apply when the majority have reached the 2 nd to 3 rd nymphal stage of development. If a large number of adults are present in the infestation or if a heavy migration from nearby fields is anticipated, tank mix with a knockdown insecticide to control the infestation to minimize foliar feeding. CAVALLETTA does not control adult grasshoppers.
Cereal leaf beetle	4 (0.0625)	For optimum results, make application at first sign of egg laying. DO NOT apply CAVALLETTA if late instar larvae make up the majority of the infestation.
Application: Ground - 5 to 15 GPA; Aerial – 2 to 5 GPA Use adequate spray volume to assure adequate coverage.		
NOTE: Visible effects on immature stages of these insects may not be seen for 5 to 7 days following application.		
BARLEY, OATS, TRITICALE & WHEAT RESTRICTIONS:		
<ul style="list-style-type: none"> • Pre-harvest Interval: DO NOT harvest grain and straw within 50 days of application. DO NOT harvest forage within 3 days of application. DO NOT harvest hay within 15 days of application. • DO NOT make more than 1 application per calendar year. • DO NOT exceed 4 fl. ozs. (0.0625 lb. a.i.) per acre per calendar year. • DO NOT apply after boot stage of growth. 		

- For use in the following states only: AK, CO, ID, MT, NV, OR, UT, WA, WY, western ND & SD and western NE (West of Route 281 in ND, SD & NE).

COTTONSEED GROUP 20C		
Cultivar, varieties and/or hybrids of these		
PEST	Application Rate Fl. Oz./A (lb. a.i./A)	COMMENTS
Beet armyworm – Early season before first bloom	2 - 4 (0.031 – 0.0625)	Apply CAVALLETTA at the first sign of beet armyworm activity (2 egg masses or hatch outs/100 feet of row) in multiple applications, as a directed spray or a broadcast spray. Repeat applications at 5 to 7 day interval until 8 fl. ozs. per acre has been applied. Multiple applications of CAVALLETTA will provide acceptable beet armyworm control with little activity on beneficial insects (parasites and predators) and with good persistence. These applications will help prevent populations of beet armyworm from building up later in the growing season. Using CAVALLETTA in this way allows for more complete coverage of new foliage during the period of rapid vegetative growth.
Beet armyworm – Mid season	4 – 8 (0.0625 – 0.125)	Start applications around first bloom and through mid-bloom. Repeat applications until 8 fl. ozs. per acre has been applied at 5 to 7 day interval between applications. Use higher application rate on larger cotton and/or under conditions of high larval pressure. Apply first application when peak beet armyworm moth catches are observed in pheromone traps, indicating another generation of larvae is expected. CAVALLETTA is more effective on early stages of larval development, therefore treat cotton before populations become established.
Beet armyworm – Late season	6 – 8 (0.09375 – 0.125)	Apply starting after mid-bloom but 14 days before harvest. Use higher application rate on larger cotton and/or under conditions of high larval pressure. Apply when beet armyworm moth catches in pheromone traps peak. If larval pressure continues, additional applications may be needed.
Fall armyworm Yellow striped armyworm Southern armyworm Soybean looper * Cabbage looper * Saltmarsh caterpillar * *suppression	4 – 8 (0.0625 – 0.125)	Apply during early stages of larval development. Repeat applications until at least 8 fl. oz. per acre have been applied using a 5 to 7 day interval.
Boll Weevil Early season (before first bloom)	4 – 8 (0.0625 – 0.125)	CAVALLETTA controls boll weevil by suppressing reproduction. Apply CAVALLETTA with 2 to 4 qts. of emulsified cottonseed oil, vegetable oil, or paraffinic crop oil. A compatibility agent may be needed if a non-emulsified cotton-seed oil is used. Consult your supplier for oil specifications. For optimum suppression of boll weevil reproduction, begin applications at pinhead square stage of cotton growth as overwintering boll weevils start entering cotton fields. Repeat

		applications at a minimum of 7 days between applications. CAVALLETTA will not kill adult boll weevil, however, eggs deposited by affected female weevils will not hatch, thus limiting reproduction. The control of egg hatch and larval development within the square decreases shedding and will allow normal boll development. After initial treatment of the female weevil, 7 to 10 days are required before non-hatching eggs are laid. Once affected, non-hatching eggs will be laid for approximately 10 days, and longer if the female encounters more CAVALLETTA. Treat early and use multiple applications.
Boll Weevil Late season (weevils entering diapause)	2 - 4 (0.031 – 0.0625)	CAVALLETTA will reduce the number of weevils that emerge the following spring if applications are made when adult weevils are entering diapause to overwinter. Apply when cotton plants reach full vegetative growth or when it starts blooming out the top. Use LV applications in combination with 2 to 4 qts. of an emulsifiable vegetable or paraffinic oil per acre. A compatibility agent may be needed if a non-emulsified cottonseed oil is used. Apply at least 2, but no more than 3, applications at 7 to 14 day intervals.
Grasshopper	2 (0.031)	For optimum results against immature grasshoppers apply when the majority have reached the 2 nd to 3 rd nymphal stage of development. If a large number of adults are present in the infestation or if a heavy migration from nearby fields is anticipated, tank mix with a knockdown insecticide to control the infestation to minimize foliar feeding. CAVALLETTA does not control adult grasshoppers.
Tankmixes: CAVALLETTA may be mixed with other insecticides being applied for other cotton insects. When emulsifiable concentrate insecticide formulations are used with oil and CAVALLETTA in tank mixes, they may result in phytotoxicity. Care must be taken where such mixture is used.		
Adjuvant usage: Under conditions of rapid water evaporation (i.e., high air temperature and/or low humidity) use oil (1 to 2 qt. per acre) with CAVALLETTA. For ground or aerial LV application, use 1 pt. to 2 qts. per acre of emulsified vegetable or paraffinic crop oil. This will enhance canopy penetration reduce spray droplet evaporation and subsequent drift. A compatibility agent may be needed if non-emulsified cottonseed oil is used. Consult your supplier for oil specifications. Use sufficient application volume to assure adequate coverage.		
Application: Ground - 10 to 20 GPA; Aerial – 3 to 5 GPA; Use adequate spray volume to assure adequate coverage.		
NOTE: Visible effects on immature stages of these insects may not be seen for 5 to 7 days following application.		
COTTONSEED GROUP 20C RESTRICTIONS:		
<ul style="list-style-type: none"> • Pre-harvest Interval: DO NOT harvest within 14 days of application. • DO NOT exceed 24 fl. ozs. (0.375 lb. a.i.) per acre per calendar year. • DO NOT exceed 6 applications per calendar year. • DO NOT exceed 3 applications or 12 fl. ozs. (0.188 lb. a.i.) per acre per year post boll opening. 		

PEANUTS		
PEST	Application Rate Fl. Oz./A (lb. a.i./A)	COMMENTS
Grasshopper	2 (0.031)	

		<p>For optimum results against immature grasshoppers apply when the majority have reached the 2nd to 3rd nymphal stage of development. Reapply at 7 day intervals if re-infestation of the crop continues. Use the higher when infestations are heavy, there is dense foliage, or if greater residual control is desired.</p> <p>If a large number of adults are present in the infestation or if a heavy migration from nearby fields is anticipated, tank mix with a knockdown insecticide to control the infestation to minimize foliar feeding.</p> <p>CAVALLETTA does not control adult grasshoppers.</p>
<p>Velvet bean caterpillar</p> <p>Mexican bean beetle</p> <p>Green cloverworm</p>	<p>2 - 4 (0.031 – 0.0625)</p>	<p>Apply CAVALLETTA when larvae are small (<0.5 inch) to optimize control while minimizing insect damage to leaves. Repeat applications as necessary to maintain control but not before the minimum reapplication interval of 14 days. Use the higher when infestations are heavy, there is dense foliage, or if greater residual control is desired.</p>
<p>Armyworms such as:</p> <p>Beet armyworm</p> <p>Fall armyworm</p> <p>Southern armyworm</p> <p>Yellow-striped armyworm</p> <p>Lesser cornstalk borer</p> <p>Soybean looper (suppression)</p>	<p>4 – 8 (0.0625 – 0.125)</p>	<p>Apply CAVALLETTA when larvae are small (< 0.5 inch) to optimize control while minimizing insect damage to leaves. Repeat applications as necessary to maintain control but not before the minimum reapplication interval of 14 days. Use the higher when infestations are heavy, there is dense foliage, or if greater residual control is desired.</p>
<p>Adjuvant usage: Under conditions of rapid water evaporation (i.e., high air temperature and/or low humidity) use oil (1 to 2 qts. per acre) with CAVALLETTA. For ground or aerial LV application, use 1 pt. to 2 qts. per acre of emulsified vegetable or paraffinic crop oil. This will enhance canopy penetration reduce spray droplet evaporation and subsequent drift. A compatibility agent may be needed if non-emulsified cottonseed oil is used. Consult your supplier for oil specifications. Use sufficient application volume to assure adequate coverage.</p>		
<p>Application: Ground - 9 to 35 GPA; Aerial – 3 to 5 GPA Use adequate spray volume to assure adequate coverage.</p>		
<p>NOTE: Visible effects on immature stages of these insects may not be seen for 5 to 7 days following application. CAVALLETTA is an insect growth regulator - thus larvae/nymphs must ingest treated plant material and then molt before populations are reduced.</p>		
<p>PEANUTS RESTRICTIONS:</p> <ul style="list-style-type: none"> • Pre-harvest interval: DO NOT harvest within 28 days of application. • DO NOT make more than 3 applications per calendar year. • DO NOT exceed 24 fl. ozs. (0.375 lb. a.i.) per acre per calendar year. 		

RICE		
PEST	Application Rate Fl. Oz./A (lb. a.i./A)	COMMENTS
Rice water weevil (Southern U.S. Rice Belt) -for drill seeded; dry seeded; or water seeded, delayed flood rice	12 to 16 (0.188 to 0.25)	Southern U.S. - Single Application Apply a single application of CAVALLETTA per acre per year to control larvae when adult infestations reach economic threshold and/or at initial oviposition, usually within 2 to 5 days after permanent flood establishment. Use the higher listed application rate if adult weevil infestations are high or if migration into rice fields is prolonged.
Rice water weevil (Southern U.S. Rice Belt) water seeded, pinpoint flood, or continuous flood rice	8 + 8* (0.188 + 0.188) *Use 8 fl. ozs. plus another 8 fl. ozs., a total of 2 applications.	Southern U.S. - Split Application Split applications can effectively control larvae. Apply the first application of 8 fl. ozs. per acre of CAVALLETTA after the permanent flood when adult infestations reach economic threshold and/or at initial oviposition. This usually occurs when rice leaves are exposed above the water surface. A 2 nd application of 8 fl. ozs. per acre must be made 5 to 7 days after the 1 st application. Failure to make the second application within this timeframe may result in inadequate control of rice water weevil larvae.
Rice water weevil (California)	8 to 16 (0.188 to 0.25)	California To control larvae, apply CAVALLETTA one time per year at the initiation of adult oviposition – usually 2 to 8 days after rice emerges above the water. Target the application for 2 to 5 days after rice emergence above the water (2 to 4 leaf stage). Use 12 to 16 fl. ozs. of CAVALLETTA if infestations have been historically high.
<p>Application: Aerial – at least 5 GPA Use adequate spray volume to assure adequate coverage.</p> <p>Application precautions: (1) Consult your local extension service for determination of economic threshold and/or determination of oviposition. (2) DO NOT apply CAVALLETTA if flooding is in progress as activity will be reduced. (3) CAVALLETTA is water active so the entire field must be treated. (4) DO NOT disturb a flooded field after a single application for at least 7 days. (4) With split applications in water seeded, pinpoint or continuous flood rice, DO NOT disturb the flood for a minimum of 4 days following the 1st treatment and 7 days following the 2nd application. (5) Hold treated water at least 14 days to allow dissipation of CAVALLETTA.</p> <p>CAVALLETTA can be safely applied in combination with post permanent flood herbicides such as FACET®, GRANDSTAND®, and LONDAX®. Before using such a tank-mix combination, read each product label carefully and follow Precautionary Statements on each label.</p> <p>®Facet is a registered trademark of BASF AG ®Grandstand is a registered trademark of Dow AgroSciences ®Londax is a registered trademark of E.I. DuPont de Nemours and Company.</p>		
<p>Note: CAVALLETTA does not control adult weevils. It controls rice water weevil by preventing larval emergence from the egg. Eggs laid under the surface of treated water are controlled. Additionally, adults feeding on treated plant surfaces DO NOT lay viable eggs.</p>		
<p>RICE RESTRICTIONS:</p> <ul style="list-style-type: none"> • Pre-harvest Interval: DO NOT harvest within 80 days of application. • DO NOT exceed 16 fl. ozs. (0.375 lb. a.i.) per acre per calendar year. • DO NOT use on rice fields in which crayfish (crawfish) farming is included in the cultural practice. • DO NOT drain treated water into fields where crayfish farming is intended. • DO NOT apply to rice immediately adjacent to sites of crayfish aquaculture. • DO NOT use treated rice flood waters for irrigated crops except for crops on this label. • DO NOT impregnate on granular materials. 		

• DO NOT use on wild rice (*Zizania* spp.).

SOYBEANS (EXCEPT CALIFORNIA)		
PEST	Application Rate Fl. Oz./A (lb. a.i./A)	COMMENTS
Grasshopper	2 (0.031)	For optimum results against immature grasshoppers apply when the majority have reached the 2 nd to 3 rd nymphal stage of development. Reapply at 7 day intervals if re-infestation of the crop continues. Use the higher when infestations are heavy, there is dense foliage, or if greater residual control is desired. If a large number of adults are present in the infestation or if a heavy migration from nearby fields is anticipated, tank mix with a knockdown insecticide to control the infestation to minimize foliar feeding. CAVALLETTA does not control adult grasshoppers.
Velvet bean caterpillar Mexican bean beetle Green clover-worm	2 - 4 (0.031 – 0.0625)	Apply CAVALLETTA when larvae are small (<0.5 inch) to provide greater control. Repeat application if damaging numbers reappear but no sooner than the minimum reapplication interval of 30 days. CAVALLETTA may be applied at the lower listed rate to prevent velvet bean caterpillar build-up when the vegetative growth of soybeans is completed and as pod formation begins. Consult local Extension Service regarding infestation levels requiring treatment.
Beet armyworm Fall armyworm Soybean looper (suppression)	4 (0.0625)	Application must be made when worms are small (2 nd instar or earlier) before populations build.
<p>Adjuvant usage: Under conditions of rapid water evaporation (i.e., high air temperature and/or low humidity) use oil (1 to 2 qts. per acre) with CAVALLETTA. For ground or aerial LV application, use 1 pt. to 2 qts. per acre of emulsified vegetable or paraffinic crop oil. This will enhance canopy penetration reduce spray droplet evaporation and subsequent drift. A compatibility agent may be needed if non-emulsified cottonseed oil is used. Consult your supplier for oil specifications. Use sufficient application volume to assure adequate coverage.</p>		
<p>Application: Ground - 9 to 35 GPA; Aerial – 3 to 5 GPA. Use adequate spray volume to assure adequate coverage.</p>		
<p>Note: CAVALLETTA is an insect growth regulator - thus larvae/nymphs must feed on it and then molt before populations are reduced. Thus initial signs of control may not be seen until several days after treatment.</p> <p>Soybean Yield Enhancement: Under certain growing conditions, and in the absence of significant insect pressure, an increase in soybean seed yield has been demonstrated with CAVALLETTA under field conditions on determinate and indeterminate cultivars. Application of 2 to 4 fl. ozs. per acre to high yield potential soybeans plants at the R3 to R3.5 growth stage period has been more consistent in increasing yields than applications at other reproductive stages of the soybean plant. This reproductive timing represents, beginning pod growth (pod 3/16 inch long at one of the uppermost nodes on the main stem with a fully developed leaf) to just prior to full pod elongation (pod 3/4 inch long at one of the 4 uppermost nodes on the main stem with a fully developed leaf).</p>		
<p>SOYBEANS (EXCEPT CALIFORNIA) RESTRICTIONS:</p> <ul style="list-style-type: none"> • Pre-harvest Interval: DO NOT harvest within 21 days of application. • DO NOT exceed 8 fl. ozs. (0.125 lb. a.i./A) per acre per calendar year. • DO NOT make more than 2 applications per calendar year. 		

- Not registered for use in California.

TURFGRASS (FOR USE IN SOD FARMS ONLY)		
PEST	Application Rate Fl. Oz./A (lb. a.i./A)	COMMENTS
Lepidopteran foliage feeding caterpillars such as: Sod webworm Armyworms Including Fall, True, Southern, Beet, Yellow-striped Striped Grass Looper Granulate cutworm	2 (0.031)	Apply CAVALLETTA at first sign of egg hatch and prior to larvae reaching 4 th instars (>1/2 inch). CAVALLETTA must be ingested and larvae must molt before populations are reduced. Repeat applications at 14 day intervals or as needed to protect new foliage growth.
Application: Ground - 20 to 50 GPA Use adequate spray volume to assure adequate coverage.		
NOTE: Visible effects on immature stages of these insects may not be seen for 5 to 7 days following application.		
TURFGRASS (FOR USE IN SOD FARMS ONLY) RESTRICTIONS: <ul style="list-style-type: none"> • Allow at least 1 day after treatment before cutting turf. • DO NOT exceed 8 fl. ozs. (0.125 lb. a.i./A) per acre per calendar year. • DO NOT exceed a total of 4 applications per calendar year. 		

Vegetable Crops

CARROTS* (NOT GROWN FOR SEED) *Not registered for Use in California		
PEST	Application Rate Fl. Oz./A (lb. a.i./A)	COMMENTS
Carrot weevil*	8 (0.125)	Apply at initial sign of larval infestation.
Application: Ground – 20 to 50 GPA Use adequate spray volume to assure adequate coverage.		
NOTE: Visible effects on immature stages of these insects may not be seen for 5 to 7 days following application. CAVALLETTA is an insect growth regulator - thus larvae must ingest treated plant material and then molt before populations are reduced.		
CARROTS (NOT GROWN FOR SEED) RESTRICTIONS: <ul style="list-style-type: none"> • Pre-harvest Interval: DO NOT harvest within 7 days of application • DO NOT apply this product to carrots grown for seed. 		

- DO NOT apply more than 16 fl. ozs. (0.25 lb. a.i.) per acre per calendar year.
- DO NOT make more than 2 applications per calendar year.
- Allow a minimum of 7 days between treatments.

LEAFY BRASSICA – SUBGROUP 5B		
Leafy Brassica group includes Broccoli raab, Cabbage, Chinese (bok choy), Collards, Kale, Mizuna, Mustard greens, Mustard spinach, Rape greens and Turnip greens		
PEST	Application Rate Fl. Oz./A (lb. a.i./A)	COMMENTS
Grasshopper	2 to 4 (0.031 to 0.0625)	For optimum results against immature grasshoppers apply when the majority have reached the 2 nd to 3 rd nymphal stage of development. Reapply at 7 day intervals if reinfestation of the crop continues. Use the higher rate where there is a history of heavy infestations, dense foliage, or greater residual control is desired. Repeat applications at 7 day intervals or as needed to protect new foliage growth. These additional applications allow for more complete coverage of newly expanding foliage. If a large number of adults are present in the infestation or if a heavy migration from nearby fields is anticipated, tank mix with a knockdown insecticide to control the infestation to minimize foliar feeding. CAVALLETTA does not control adult grasshoppers.
Application: Ground – Minimum of 30 GPA Use adequate spray volume to assure adequate coverage.		
NOTE: Visible effects on immature stages of these insects may not be seen for 5 to 7 days following application. CAVALLETTA is an insect growth regulator - thus larvae/nymphs must ingest treated plant material and then molt before populations are reduced.		
LEAFY BRASSICA – SUBGROUP 5B RESTRICTIONS:		
<ul style="list-style-type: none"> • Pre-harvest Interval: DO NOT harvest within 7 days of application. • DO NOT use on turnip cultivars or varieties which produce a harvestable root. • DO NOT make more than 4 applications per calendar year. • DO NOT exceed 16 fl. ozs. (0.25 lb. a.i.) per acre per calendar year. 		

PEPPER/EGGPLANT SUBGROUP 8-10B		
Includes African Eggplant, Bell Pepper, Eggplant, Matynia, Nonbell Pepper, Okra, Pea Eggplant, Pepino, Roselle, Scarlet Eggplant – Cultivars, varieties, and/or hybrids of these		
PEST	Application Rate Fl. Oz./A (lb. a.i./A)	COMMENTS
Pepper weevil	4 to 8 (0.0625 to 0.125)	Apply CAVALLETTA at 4 to 8 fl. ozs. per acre starting at initiation of flowering. If the adult infestation is moderate to heavy use the high listed rate. Make additional applications as needed to maintain control but no sooner than a minimum retreatment interval of 7 days. Additional applications allow for more complete coverage of new foliage and expanding fruit. CAVALLETTA will not control adults, but eggs laid by adults will exhibit reduced hatching in fruits once adults have consumed or contacted residues of CAVALLETTA on pepper tissue.

Beet armyworm Fall armyworm Southern armyworm Other foliage feeding Lepidopteran insects	4 to 8 (0.0625 to 0.125)	Apply CAVALLETTA at 4 to 8 fl. ozs. per acre when larvae are small to avoid damage to leaves and/or fruit. Use a higher listed rate if the infestation is heavy and/or CAVALLETTA is being applied alone. If late instar larvae are present, a knockdown tank-mix partner should be used. Additional applications allow for more complete coverage of new foliage and expanding fruit, however DO NOT make applications any sooner than a minimum retreatment interval of 7 days.
Adjuvant usage: Under conditions of rapid water evaporation (i.e., high air temperature and/or low humidity) use oil (1 to 2 qts. per acre) with CAVALLETTA. For ground or aerial LV application, use 1 pt. to 2 qts. per acre of emulsified vegetable or paraffinic crop oil. This will enhance canopy penetration reduce spray droplet evaporation and subsequent drift. A compatibility agent may be needed if non-emulsified cottonseed oil is used. Consult your supplier for oil specifications. Use sufficient application volume to assure adequate coverage.		
Application: Ground – Minimum of 30 GPA; Aerial – 3 to 10 GPA Use adequate spray volume to assure uniform coverage.		
NOTE: Visible effects on immature stages of these insects may not be seen for 5 to 7 days following application. CAVALLETTA is an insect growth regulator – thus larvae/nymphs must ingest treated plant material and then molt before populations are reduced.		
PEPPER/EGGPLANT SUBGROUP 8-10B RESTRICTIONS <ul style="list-style-type: none"> • Pre-harvest Interval: DO NOT apply within 7 days of harvest. • DO NOT apply more than 24 fl. ozs. (0.375 lb. a.i.) per acre per calendar year. • DO NOT apply more than 5 applications per calendar year. • Allow a minimum of 7 days between applications. 		

Citrus Crops

CITRUS FRUIT GROUP 10-10 Australian desert lime, Australian finger-lime, Australian round lime, Brown River finger lime, calamondin, citron, citrus hybrids, grapefruit, Japanese summer grapefruit, kumquat, lemon, lime, Mediterranean mandarin, mount white lime, New Guinea wild lime, orange, sour orange, sweet pummelo, Russell River lime, satsuma mandarin, sweet lime, tachibana orange, Tahiti lime, tangelo, tangerine (mandarin), tangor, trifoliate orange, unique fruit - cultivars, varieties, and/or hybrids of these.		
CAVALLETTA may be applied to citrus any time of the season. However, the greatest impact on the largest number of citrus pests will occur when new flush is present or emerging.		
PEST	Application Rate Fl. Oz./A (lb. a.i./A)	COMMENTS
Asian Citrus Psyllid (ACP = Diaphorina citri)	Single Application 20 (0.31) Split Application 10 + 10 (0.15 + 0.15)	Apply CAVALLETTA when early-feather leaf flush is present, or oviposition by Asian citrus psyllid (ACP) is seen or expected, or if leaf distortion is evident. To optimize control, apply split applications of CAVALLETTA to maximize spray coverage of the entire citrus leaf flush. Make first application of 10 fluid ounces per acre when early-feather leaf flush is present, or oviposition by ACP is seen or expected, or if leaf distortion is evident. Make second application of CAVALLETTA at 10 fluid ounces per acre as needed to protect new flushes of growth. DO NOT apply subsequent applications of CAVALLETTA for at least 30 days

		<p>The activity of CAVALLETTA on ACP is through contact, ingestion and/or absorption. It has activity on eggs and nymphs of ACP. CAVALLETTA prevents eggs from hatching and nymphs from molting when exposed to treated surfaces. Adult female ACP feeding on or in contact with treated surfaces produce fewer hatchable eggs. CAVALLETTA reduces the reproductive potential of existing ACP population. CAVALLETTA does not control adult ACP.</p> <p>Low Volume Application: Apply in 3.0 to 5.0 gallons of finished spray solution per acre by ground using air-blast or air-assisted spray equipment. Use spray nozzles that produce a droplet size with a volume median diameter of 90 microns or larger.</p> <p>In California, DO NOT apply in a volume of less than 10 GPA.</p> <p>The addition of petroleum spray oil, such as FC435-66, enhances spray coverage and penetration of CAVALLETTA into ACP eggs, nymphs, and adults - improving activity on these life stage.</p>
<p>Citrus rust mite (CRM = Phyllocoptruta oleivora)</p>	<p>20 (0.31)</p>	<p>Apply CAVALLETTA when rust mites first appear. CAVALLETTA has activity only on immature stages of CRM, not adults or eggs. CAVALLETTA prevents immature CRM from molting and the full effect of treatment may not be evident for up to 14 days after application. Rotate with a product with a different mode of action before reapplying CAVALLETTA in a CRM control program.</p> <p>The addition of petroleum spray oil, such as FC435-66, enhances spray coverage and penetration of CAVALLETTA into immature CRM - improving activity. Petroleum spray oil will also aid in knocking down CRM populations present at application.</p>
<p>Lepidopterous miners: Citrus leafminer (CLM = Phyllocnistis citrella)</p>	<p>Single Application 20 (0.31)</p> <p>Split Application 10 + 10 (0.15 + 0.15)</p>	<p>Citrus leafminer Apply CAVALLETTA when leaf flush has started and the oldest leaf is approximately one quarter expanded; when oviposition is observed or expected or when leaf mining is observed.</p> <p>Split Application: Making a split application of CAVALLETTA will maximize spray coverage of the entire citrus leaf flush. Apply first application when leaf flush has started and the oldest leaf is approximately one quarter expanded; when oviposition is observed or expected or when leaf mining is observed. Apply the second application as needed to protect new flushes of growth. DO NOT apply subsequent applications of CAVALLETTA for at least 30 days.</p> <p>CAVALLETTA is active on CLM is through contact, ingestion and/or absorption. It has activity on eggs, larvae and pupae of CLM by preventing eggs from hatching, larvae from molting, and adults from emerging from pupae exposed to treated surfaces. Additionally, it reduces the reproductive potential of an existing CLM population.</p> <p>CAVALLETTA does not control CLM adults.</p> <p>Low Volume Application: Apply in 3.0 to 5.0 gallons of finished spray solution per acre by ground using air-blast or air-assisted spray equipment. Use spray nozzles that produce a droplet size with a volume median diameter of 90 microns or larger.</p> <p>In California, DO NOT apply in a volume of less than 10 GPA.</p> <p>The addition of petroleum spray oil, such as FC435-66, enhances spray coverage and penetration of CAVALLETTA into CLM mines, eggs, larvae, and pupae - improving activity against CLM.</p>

<p>Citrus peelminer (CPM = <i>Marmara</i> spp.)</p>	<p>Single Application 20 (0.31)</p> <p>Split Application 10 + 10 (0.15 + 0.15)</p>	<p>Apply CAVALLETTA when oviposition is expected or begins on citrus peel surface. Peelminer eggs oviposited on protected/treated fruit do not hatch. Fruit protection may last several weeks however since fruit is rapidly expanding, protection from CAVALLETTA will decrease with time.</p> <p>CAVALLETTA does not control Citrus peelminer moths.</p> <p>Split Application: Making a split application of CAVALLETTA will maximize spray coverage of the surface of citrus fruit. Apply first application when oviposition first begins or is expected. Apply the second application as needed to protect expanding fruit growth. DO NOT apply subsequent applications of CAVALLETTA for at least 30 days.</p> <p>CAVALLETTA is active on CPM is through absorption into eggs and it prevents eggs from hatching. Fruit protection may last several weeks however since fruit is rapidly expanding, protection from CAVALLETTA will decrease with time.</p> <p>The addition of petroleum spray oil, such as FC435-66, enhances spray coverage and penetration of CAVALLETTA into CPM mines, eggs - improving activity on CPM.</p>
<p>Citrus root weevil complex (CRW) including:</p> <p>West Indian sugar cane rootstock borer weevil (<i>Diaprepes abbreviatus</i>)</p> <p>Southern blue-green citrus root weevil (<i>Pachnaeus litus</i>)</p> <p>Blue-green citrus weevil (<i>P. opalus</i>)</p> <p>Fuller rose beetle (<i>Asynonychus godmani</i>)</p> <p>Little leaf notcher (<i>Artipus floridanus</i>)</p>	<p>Single Application 20 (0.31)</p>	<p>Apply CAVALLETTA to a newly expanded citrus leaf flush when the oldest leaf is approximately one-half expanded, when adult weevils are present or when recent leaf feeding is observed. Addition of a spray oil enhances coverage and penetration of CAVALLETTA into adult citrus root weevils and eggs – improving activity on each life stage. Oil may also reduce weevil egg masses from attaching to citrus leaf surfaces.</p> <p>but it does result in reduction of reproduction potential of citrus root weevils, and prevents eggs from hatching. The grubs from eggs laid on treated leaves are reduced in number.</p> <p>CAVALLETTA will not control adult citrus root weevils. CAVALLETTA is active through contact, ingestion, and/or absorption. It has activity on eggs laid on treated surfaces by preventing them from hatching. Adult female CRW feeding on or in contact with treated surfaces produce fewer hatchable eggs. CAVALLETTA reduces the reproductive potential of citrus root weevil populations.</p>

<p>Katydids Grasshoppers</p>	<p>Single Application 20 (0.31)</p> <p>Split Application 10 + 10 (0.15 + 0.15)</p>	<p>Apply CAVALLETTA when katydids or grasshoppers are first observed or recent leaf/ fruit feeding is seen.</p> <p>CAVALLETTA will not control adult katydids or grasshoppers</p> <p>Split Application: Making a split application of CAVALLETTA may be useful since it will maximize spray coverage and protection of fruit and leaves from katydid and/or grasshopper damage.</p> <p>Apply first application when katydid and/or grasshoppers are first observed or when recent leaf or fruit feeding is observed. Apply the second application as needed to protect new growth. DO NOT apply subsequent applications of CAVALLETTA for at least 30 days.</p> <p>CAVALLETTA is active on katydid and grasshopper is through contact, ingestion and/or absorption. It has direct activity on eggs and nymphs by preventing eggs from hatching and nymphs from molting. Additionally adult female katydids and grasshoppers that feed on or contact treated surfaces produce fewer hatchable eggs. CAVALLETTA reduces the reproductive potential of an existing katydid and/or grasshopper population.</p> <p>The addition of petroleum spray oil, such as FC435-66, enhances spray coverage and penetration of CAVALLETTA into katydid and grasshopper eggs, nymphs and adults - improving activity on these life stages.</p>
<p>Spray Oil: The addition of a petroleum spray oil, such as FC435-66 enhances coverage and may enhance control of most citrus pest listed on this label.</p>		
<p>Application:</p> <p>Ground Application: CAVALLETTA may be applied by ground using hand gun, hand-held, air blast or air assisted equipment. DO NOT apply within 25 feet of bodies of water such as lakes, reservoirs, rivers, permanent streams, natural ponds, marshes or estuaries.</p> <p>In the State of Florida, DO NOT apply within 100 feet of estuarine/marine bodies of water. Apply to the last three rows windward of surface water using nozzles on one side only, directing spray away from surface water. DO NOT spray over tops of trees by adjusting or turning off top nozzles. When spraying outside rows, shut off nozzles on the side away from the grove. When turning at ends of rows and passing tree gaps in rows shut off nozzles.</p> <p>Aerial Application: CAVALLETTA may be applied by air using fixed-wing or rotary equipment. DO NOT apply within 150 feet of bodies of water such as lakes, reservoirs, rivers, permanent streams, natural ponds, marshes or estuaries.</p> <p>In the State of Florida, DO NOT apply within 1000 feet of estuarine/marine bodies of water.</p> <p>Spray Volumes: Use adequate spray volume for thorough coverage of leaf/fruit surfaces.</p> <p>Ground = 50 to 1,000 GPA.</p> <p>Low Volume Application: Except in California, apply in 3.0 to 5.0 gallons of finished spray solution per acre by ground using air-blast or air-assisted spray equipment. Use spray nozzles that produce a droplet size with a volume median diameter of 90 microns or larger.</p> <p>Aerial = 5 to 20 GPA.</p> <p>Use spray nozzles that product a droplet size with a volume median diameter of 90 microns or larger (see pest specific sections).</p> <p>In California, DO NOT apply in a volume of less than 10 GPA.</p>		

NOTE: Visible effects on immature stages of these insects may not be seen for 5 to 7 days following application.

CITRUS FRUIT GROUP 10-10 RESTRICTIONS:

- **Pre-harvest interval:** DO NOT apply within 7 days of harvest.
- Repeat applications no closer than 30 days apart, except where split applications are used. See pest-specific sections above for split application directions.
- DO NOT apply more than 60 fl. ozs. (0.93 lb. a.i.) of CAVALLETTA per acre per calendar year. May be applied as 3 full rate (20 fl. ozs./A) per year, as 6 split applications (10 fl. ozs./A) per year or as a combination of full and split applications.
- DO NOT apply more than 3 full rate applications or 6 split applications per calendar year.
- DO NOT graze livestock in treated groves.
- DO NOT harvest cover crops for animal feed.
- **In the State of Florida,** DO NOT apply by ground within 100 feet of estuarine/marine bodies of water. Apply to the last three rows windward of surface water using nozzles on one side only, directing spray away from surface water. DO NOT spray over tops of trees by adjusting or turning off top nozzles. When spraying outside rows, shut off nozzles on the side away from the grove. When turning at ends of rows and passing tree gaps in rows shut off nozzles.
- **In the State of Florida,** DO NOT apply by air within 1,000 feet of estuarine/marine bodies of water.

PEARS

PEST	Application Rate Fl. Oz./A (lb. a.i./A)	COMMENTS
Pear psylla (pre-bloom)	40 to 48 (0.625 to 0.75)	Apply CAVALLETTA in 80 to 400 gallons of water per acre during the period between delayed dormant up to the popcorn stage period. Complete uniform coverage of the tree is required to achieve insect control. Use a horticultural mineral oil at a rate of 4 to 6 gallons per acre during the delayed dormant period. After this period and through the popcorn stage, apply oil at a concentration of 0.25%, but use no more than 1 gallon per acre. A surfactant may improve coverage. Follow manufacturer's label specifications. Apply CAVALLETTA during egg deposition so that it will come in contact with pear psylla eggs and/or 1 st and 2 nd instar nymphs.
Pear rust mite (pre-bloom)	40 to 48 (0.625 to 0.75)	Apply CAVALLETTA in 80 to 400 gallons of water per acre during the period between delayed dormant up to the popcorn stage. See Pear psylla pre-bloom section for directions on use with oil.
Pear psylla (post-bloom)	12 to 16 (0.188 to 0.25)	Apply at normal codling moth rates and timings to provide suppression of pear psylla.
Codling moth	12 to 16 (0.188 to 0.25)	Apply CAVALLETTA in a minimum of 80 gallons of water per acre. Use the lower listed rate for light codling moth pressure and/or on small trees. Complete coverage of the fruit and foliage in all areas of the trees is required for insect control. CAVALLETTA prohibits hatch of codling moth eggs so it is important that it be applied prior to egg laying so that eggs are laid on treated plant parts. Apply first application as soon as possible after first moths are caught (biofix) or observed, or approximately 50-75 degree-days after biofix. Application timing can be determined by your local pest control consultant and/or fruit specialist with the aid of pheromone traps. This timing normally occurs at late petal fall or about 10-14 days earlier than the timing used for organophosphate insecticides. Make a second application about 14-18 days after the first. If necessary, a third and fourth application may be made. Time the application prior to egg laying of the 2 nd generation by using the same method as for the 1 st generation. If traps are not being used to monitor moth

		<p>flights, make the 3rd application 21-30 days after the second, followed by the 4th application 21-30 days later. If a degree-day model is used the 3rd spray should be timed at 1,000 degree-days after biofix.</p> <p>Tankmixes with Organophosphates for Codling Moth Control CAVALLETTA can be used in tank mixes with an organophosphate insecticide, to save a trip through the orchard and to make timing of the CAVALLETTA sprays easier. The tankmix is more effective than CAVALLETTA alone when controlling moderate to heavy codling moth infestations and/or treating large trees. A tankmix with an organophosphate insecticide will provide residual control of eggs laid after application. Apply CAVALLETTA and the organophosphates at their labeled rates. Apply at the beginning of egg hatch of 1st generation codling moth. This is the normal timing for the first organophosphate cover spray (250 degree-days following biofix for 1st generation and 1250 degree-days for the 2nd generation). Repeat this program for the 2nd and 3rd generation of codling moth or use CAVALLETTA alone prior to egg laying. DO NOT use oil in tank mix with CAVALLETTA in late season treatments. With light codling moth populations, as indicated by monitoring, this combination may offer control of an entire generation with 1 application. When populations are heavy, this combination will improve control, but it may not control an entire generation with one spray. A second spray of CAVALLETTA alone or in combination may be applied 14-18 days later.</p>
<p>Leafminer</p>	<p>8 to 16 (0.125 to 0.25)</p>	<p>Apply CAVALLETTA in a minimum of 80 gallons of water per acre prior to or during egg oviposition to control eggs and larvae. Consult your local pest control consultant or fruit specialist for information on timing of the 1st and 2nd leafminer generations. If control of later generations is necessary, apply CAVALLETTA using the same method.</p> <p>Best control will be obtained if CAVALLETTA is in place at the time of egg laying. It continues to give control through the early sap feeding stage. To achieve control of the larvae through the early sap feeding stage, complete coverage of the foliage is essential.</p>
<p>Oil usage: CAVALLETTA may be applied with 4 to 6 gallons per acre of horticultural mineral oil during the delayed dormant to popcorn growth stage for control of some pests shown below. Oil may cause injury to certain pear varieties so be sure to check compatibility of oil mixtures with your local tree fruit specialist.</p>		
<p>Application: Use adequate spray volume to assure adequate coverage.</p>		
<p>NOTE: Visible effects on immature stages of these insects may not be seen for 5 to 7 days following application.</p>		
<p>PEARS RESTRICTIONS:</p> <ul style="list-style-type: none"> • Pre-harvest Interval: DO NOT harvest within 14 days of application. • DO NOT apply more than 4 applications per calendar year. • DO NOT apply more than 64 fl. ozs. (1.0 lb. a.i.) per acre per calendar year. • DO NOT use oil in tank mix in late season treatments (3rd and 4th applications). 		

PEACH SUBGROUP 12-12B includes:
nectarine and peach and cultivars, varieties and hybrids of these.

PLUM SUBGROUP 12-12C includes:

Apricot, Japanese apricot, Chinese jujube plum, American plum, Beach plum, Canada plum, cherry plum, Chickasaw plum, Damson plum, Japanese plum, Klamath plum, plum, prune, plumcot, sloe - cultivars, varieties and hybrids of these.		
PEST	Application Rate Fl. Oz./A (lb. a.i./A)	COMMENTS
Peach twig borer	12 to 16 (0.188 to 0.25)	<p>Dormant/delayed dormant: Apply CAVALLETTA in combination with a narrow range oil at 4 to 6 gallons per acre (1.5 to 2.0 gallons per 100 gallons in a dilute spray). Use the higher listed rate if crop has a history of heavy infestations.</p> <p>Bloom to Harvest: For control of peach twig borer during the growing season, apply CAVALLETTA beginning at early bloom. Vegetable oil may be used at the rate of 1 qt. per acre. Always use the higher listed rate if crop has a history of heavy infestations. Make a repeat application if necessary for control, but no sooner than 14 days between applications.</p>
Fall webworm Filbert leafroller Oblique banded leafroller Omniverous leafroller Omniverous leaf tier Oriental fruit moth Redhumped caterpillar Variegated leafroller Walnut caterpillar Winter moth Codling Moth* Katydid* Plum cucurlio*	8 to 16 (0.125 to 0.25)	<p>Apply CAVALLETTA at the first sign of larval infestation. Use the higher listed rate for longer residual control, higher pest infestations, low crop load, larger trees or heavy, dense foliage. Two applications can be made for control but no sooner than 14 days between applications.</p> <p>*Not registered for use in California For adult control of plum cucurlio, tankmix with an adulticide</p>
<p>Application: Ground – Minimum of 50 GPA for small trees (less than 10 feet tall) or minimum of 100 GPA for larger trees (10 feet tall or greater). Use adequate spray volume to assure adequate coverage. Using an uneven spray pattern across the canopy will likely result in less than desired efficacy.</p> <p>Adjuvant: Crop oil at a rate of 0.25% v/v may be included in tank mixes.</p>		
<p>NOTE: Visible effects on immature stages of these insects may not be seen for 5 to 7 days following application.</p>		
<p>PEACH SUBGROUP 12-12B/PLUM SUBGROUP 12-12C RESTRICTIONS:</p> <ul style="list-style-type: none"> • Pre-harvest Interval: DO NOT harvest within 14 days of application. • DO NOT make more than 2 applications per calendar year. • DO NOT exceed 32 fl. ozs. (0.50 lb. a.i.) per acre per calendar year. • Retreatment interval of 14 days between applications. 		

<p>For Use Only in the State of Georgia</p> <p>Grasshoppers</p> <p>Katydids</p>	<p>2 (0.031)</p>	<p>CAVALLETTA should be applied when immature grasshoppers and/or katydids are first observed in orchards or in surrounding non-crop vegetation.</p> <p>Reapply at 14 day intervals or as needed to protect new foliar growth.</p> <p>If a large number of adults are present in the infestation, tank mix with a knockdown insecticide to control the adults.</p> <p>CAVALLETTA does not control adult grasshoppers.</p>
<p>Application: Ground – Minimum of 50 GPA for small trees (less than 10 feet tall) or Minimum of 100 GPA for larger trees (10 feet tall or greater). Use adequate spray volume to assure adequate coverage.</p>		
<p>NOTE: Visible effects on immature stages of these insects may not be seen for 5 to 7 days following application.</p>		
<p>PEACH SUBGROUP 12-12B/PLUM SUBGROUP 12-12C RESTRICTIONS:</p> <ul style="list-style-type: none"> • Pre-harvest Interval: DO NOT harvest within 14 days of application • DO NOT make more than 2 applications per calendar year. • DO NOT exceed 32 fl. ozs. (0.50 lb. a.i.) per acre per calendar year. • Retreatment interval of 14 days between applications. 		

<p>TREE NUTS GROUP 14-12 includes: African tree nut, Almond, Beech nut, Brazil nut, Butternut, Brazilian pine, Bunya, Bur oak, Cajou nut, Candlenut, Cashew, Chestnut, Chinquapin, Coconut, Coquito nut, Dika nut, Filbert (hazelnut), Ginkgo, Guiana chestnut, Heartnut, Hickory nut, Japanese horse chestnut, Macadamia nut (bush nut), Mongongo nut, Pecan, Pistachio, Sapucaia nut, Tropical almond, Walnut (black & English), Yellowhorn - Cultivars, varieties and/or hybrids of these.</p>		
<p>PEST</p>	<p>Application Rate Fl. Oz./A (lb. a.i./A)</p>	<p>COMMENTS</p>
<p>Peach twig borer</p>	<p>12 to 16 (0.188 to 0.25)</p>	<p>Dormant/delayed dormant: Apply CAVALLETTA in combination with a narrow range oil at 4 to 8 gallons per acre (1.5 to 2.0 gallons per 100 gallons in a dilute spray). Use the higher listed rate if the crop has a history of heavy infestation.</p> <p>Bloom: Apply CAVALLETTA at early bloom. Always use the higher listed rate of CAVALLETTA in the rate range if the crop has a history of heavy infestations.</p> <p>Spring flight ("May Spray"): Using pheromone traps to determine flight activity, apply CAVALLETTA at the rate of 16 fl. ozs. per acre at initial flight activity.</p> <p>Summer flight: Using pheromone traps to determine flight activity. Apply CAVALLETTA at the rate of 16 fl. ozs. per acre at initial flight activity.</p>
<p>Filbert worm</p>	<p>12 to 16 (0.188 to 0.25)</p>	<p>Use the lower listed rate when filbert worm pressure is low and/or the trees are small. The higher rate is required when worm pressure is moderate to high and/or the trees are large. Apply CAVALLETTA 2 to 3 days after the 1st moth is caught in pheromone traps. Mating takes place several days of emergence and egg laying begins the next day. CAVALLETTA must be applied prior to egg deposition on the treated foliage. Uniform coverage is essential to achieve optimum control of filbert worm with CAVALLETTA. Normally, CAVALLETTA will give</p>

		season long control. If moth pressure remains high, additional applications should be made.
Codling moth	16 (0.25)	For optimum results CAVALLETTA should be applied prior to egg laying. CAVALLETTA must be present on the surface upon which eggs are laid; thus full coverage spray is necessary. Apply first application when moth flights begin or when moths are found in pheromone traps. Make a 2 nd application, approximately 21 days after the 1st application. To control the 2 nd brood, application should be timed prior to egg laying, similar to 1 st brood. Due to fluctuations in temperature, the emergence and moth flights of the over-wintering population may be extended over a long period of time. When emergence is extended over a long period of time, CAVALLETTA should be tank mixed with an organophosphate insecticide at its lowest label rate. This tank mix should be applied at normal 1 st organophosphate timing. Later in the season, if egg laying has already occurred before application of CAVALLETTA, it is recommended that CAVALLETTA be tank mixed with an organophosphate as previously described.
Hickory shuckworm	8 to 16 (0.125 to 0.25)	<p>Make split applications of CAVALLETTA at 4 to 8 fl. oz. per acre when hickory shuckworm moth emergence begins or larval feeding is observed. Make a 2nd application two weeks later for maximum nut protection and hickory shuckworm control.</p> <p>Start CAVALLETTA applications at half-shell hardening. Make subsequent applications at 21 day intervals to shuck split, as long as nuts are susceptible to hickory shuckworm under heavy infestations. Use the higher listed rate under higher pest infestations, low crop load, larger trees or heavy, dense foliage.</p>
Pecan nut case-bearer	8 to 16 (0.125 to 0.25)	Make split applications of CAVALLETTA at 4-8 fl. oz. per acre starting at bud break. Make a 2 nd application two weeks later. Normal timing in southeastern US would be from bud break (mid-April), and then two weeks later (early May). Apply CAVALLETTA in split applications at the initiation of each adult generation to target egg hatch. The 1st generation is approximately 8 to 15 days following the first prolonged moth catch (biofix which is defined as the date on which the total of 5 moths are captured in 3 pheromone traps within a 7- day period). States often have different recommendations for initiation of spraying. Consult authorities such as county and university extension specialists on current recommendations. Use the higher listed rate for longer residual control, higher pest infestations, low crop load, larger trees or heavy, dense foliage.
Pecan weevil (suppression)	8 to 16 (0.125 to 0.25)	Use the higher listed rate if weevils are attaching nuts and for higher infestations.
Others pests, including: Fall webworm Filbert leafroller Oblique banded leafroller Omniverous leafroller	8 to 16 (0.125 to 0.25)	Make CAVALLETTA application at the first sign of larval infestations. Use the higher listed rate for longer residual control, higher pest infestations, low crop load, larger trees or heavy, dense foliage.

<p>Omnivorous leaftier</p> <p>Oriental fruit moth</p> <p>Redhumped caterpillar</p> <p>Variegated leafroller</p> <p>Walnut caterpillar</p> <p>Winter moth</p>		
<p>Application: Ground – Minimum of 50 GPA for small trees (10 feet or less) or at least 100 to 300 GPA for larger trees (10 feet or more). Less than desired efficacy will likely be obtained if insufficient spray volume is used for thorough coverage and/or using an uneven spray pattern across the canopy.</p>		
<p>NOTE: Visible effects on immature stages of these insects may not be seen for 5 to 7 days following application.</p>		
<p>TREE NUTS GROUP 14-12 RESTRICTIONS:</p> <ul style="list-style-type: none"> • Pre-harvest Interval: DO NOT harvest within 28 days of application. • DO NOT exceed 4 applications per calendar year. • DO NOT exceed 3 applications per season for walnuts. • DO NOT exceed 64 fl. ozs. (1.0 lb. a.i.) per acre per calendar year. • If 4 applications are used, application timing should correspond to dormant to pre-bud swell, bloom to petal fall, and at leaves/immature nut fruit formation and at hull split. 		

COMMERCIAL FISH (Ornamental fish and Baitfish) PRODUCTION PONDS AND TANKS			
PEST	Application Rate	COMMENTS	
Anchor Worms (unattached forms)	Based on water volume	Application Rate: 1 g/1,000 gallons of water	
	Based on Surface Area	Water Depth (feet)	Amount of CAVALLETTA per acre of Surface Water
		1 foot	5.6 – 11.2 fl. ozs.
		2 feet	11.2 – 20.8 fl. ozs.
		3 feet	16.0 – 32.0 fl. ozs.
		4 feet	20.8 – 41.6 fl. ozs.
		5 feet	27.2 – 85.0 fl. ozs.
6 feet	32.0 - 64.0 fl. ozs.		
<p>Application: Mix the required amount of CAVALLETTA in enough water to enable uniform application to the pond or tank. Application should be made at first sign of infestation. Maintain consistent control by using subsequent applications at 14 to 60 day intervals. CAVALLETTA is intended for control of only the unattached form of the anchor worm.</p>			
<p>COMMERCIAL FISH PRODUCTION PONDS AND TANKS RESTRICTIONS:</p> <ul style="list-style-type: none"> • DO NOT apply to areas containing fish intended for human consumption (only for use in ornamental and baitfish production systems). • Application to water is allowable only to the specified areas where all water is contained in a completely "closed system". • Treated waters must be contained for a period of 14 days after treatment before being disposed of or released from ponds or tanks. 			

GRASSLAND		
Includes Rangeland, Pastures, Improved Pastures and Similar Areas Used for Production of Native Domesticated Forage Grasses for Harvest for Livestock Primarily for Grazing or Mechanical Harvest, Grasses or Forage Grasses Grown for Biofuel, Biomass and/or Bioenergy Production.		
PEST	Application Rate Fl. Oz./A (lb. a.i./A)	COMMENTS
Grasshopper	1 to 2 (0.016 to 0.031)	Make a single application when the majority of the population is in the 2 nd through 4 th instar nymphal stage of development. (Use the high listed rate for pastureland.) If a large number of adults are present in the infestation, tank mix with a knockdown insecticide to control the adults. CAVALLETTA does not control adult grasshoppers.
Mormon cricket	0.75 to 1 - 1st application (0.012 to 0.016) 0.5 to 1 - 2nd application (0.008 to 0.016)	On rangeland only, use CAVALLETTA in a RAATs (Reduced Area and Agent Treatment) application on early instars. RAAT applications use an IPM strategy that takes advantage of grasshopper movement while conserving biological control agents. This allows CAVALLETTA to be applied on rangeland on a reduced treated area and at reduced rates, resulting in sustained acceptable control. CAVALLETTA may be applied on as little as 50% of the infested acreage (e.g. skipping a 100 ft. swath for every 100 ft. treated), up to 100% of infested acreage using the RAAT program. The rate per acre and amount of area treated will depend on grasshopper/Mormon cricket, age, plant canopy and topography. When the topography is uniform and the population is comprised of early instar nymphs and sparse vegetation is present skip up to 50% of the infested area and use the lower listed rate. When the majority of the population is late instars, vegetation is dense, terrain is considered rough, and conditions are hot during treatment, increase the coverage and rate of CAVALLETTA up to a blanket (100%) coverage with 1 fl. oz. per acre. If needed, make a second application 2 to 3 weeks after the first application. If a large number of adults are present in the infestation, tank mix with a knockdown insecticide to control the adults. CAVALLETTA does not control adult Mormon cricket.
Lepidopteran foliage feeding caterpillars such as: Fall armyworm Striped grass looper	2 (0.031)	Apply CAVALLETTA at first sign of hatch outs and prior to larvae reaching fourth instars (< 1/2 inch) for maximum control. CAVALLETTA must be ingested and larvae must molt before populations are reduced.
Horn fly Face fly	2 (0.031)	Apply CAVALLETTA to cattle manure patties for two weeks or longer control of horn fly and face fly emergence.
Apply CAVALLETTA at 2 fl. ozs./acre to biofuel, biomass, or bioenergy grown grasses/forages/cellulosic crops (such as switchgrass, miscanthus sp., etc.) for control of Lepidopteran foliage feeding caterpillars (armyworms, grass looper, etc.), grasshoppers, or Mormon crickets.		
Application: Ground – 2 to 30 GPA; Ground ULV – Minimum of 12 fl. ozs. total volume acre for rangeland Aerial – 2 to 10 GPA; Aerial ULV – Minimum of 12 fl. ozs. total volume acre for rangeland		
Thorough coverage of the target crop is very important regardless of application type used. For aerial and ULV spray mixtures always include an evaporation/drift retardant product at label use rates. This is especially important when temperatures are high and humidity is low and evaporation is likely. When using oil type evaporation/drift retardant		

products, maintain a ratio of at least 2 parts water to 1 part oil. For low volume and ULV applications, make sure that the spray mixture in the boom contains the correct concentration of CAVALLETTA before application begins. Additionally, be sure that good agitation is maintained throughout mixing and application. Use higher listed rates and gallonages for areas with dense vegetation, when nymphs are beyond the 3rd instar stage, and when climatic conditions are favorable for grasshopper/Mormon cricket survival and increase. Apply any time after eggs begin to hatch through early instars. CAVALLETTA remains active on the foliage and will continue to control larvae and grasshoppers/Mormon crickets that hatch later in the season. CAVALLETTA is not effective against adult grasshoppers/Mormon crickets. If adults of either species are present, tank-mix CAVALLETTA with a registered adulticide to control later hatching species. Check mixing compatibility and sprayability prior to transferring to spray tank. Besides a fatal incomplete molting, adult grasshoppers/Mormon crickets may exhibit hernias, hemolymph exudation, malformed abdominal segments, missing posterior legs, twisted antennae, and wrinkled wings. Additionally, they may move slower, have limited jumps with unsteady landings, feed less exhibit atrophy of posterior legs or be unable to fly. Nymphs/adults possessing these symptoms are likely to be more susceptible to predatory insects, birds, and mammals.

NOTE: Visible effects on immature stages of these insects may not be seen for 5 to 7 days following application.

GRASSLAND RESTRICTIONS:

- DO NOT exceed a total of 2 fl. ozs. (0.031 lb. a.i.) per acre per calendar year.
- DO NOT exceed a total of 6 fl. ozs. (0.094 lb. a.i.) per acre per calendar year.
- Allow at least 1 day after treatment before cutting grass.
- Apply only when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g. when wind is blowing away from the sensitive areas).

LIVESTOCK/POULTRY PREMISES

Includes Litter, Stale/waste feed, Manure, Manure/straw mixtures, Feed muck spoilage, Spoiled organic refuse, Bedding material, Floors, Walls/wall footings, Posts, Cage frames, Ceilings Livestock / poultry operations include farms, farm buildings, barns, feedlots, dairies, equine facilities, poultry houses, and other production facilities. Application sites within these operations also include fence lines of holding pens, feed troughs, feed bunks, hay bale feeders, water troughs; and marginal areas of waste retention ponds. For insect control around hay feeding sites, treat the entire area where manure and waste hay are mixed at the soil surface by livestock activity.

PEST	Application Rate Fl. Oz./1000SF	COMMENTS
Carrion beetle Darkling beetle Hide beetle	12 fl. ozs./1,000 square feet in 2-20 gals. water per 1,000 square feet (0.188 lb. a.i./ 1,000 square feet)	<p>Broadcast Application: Apply CAVALLETTA as a whole house broadcast spray to the litter following de-caking. Also apply to floors, walls, posts, cage frames, and crack and crevices around insulation. Be sure to treat areas under feed and water lines. Apply in sufficient volume to uniformly and thoroughly wet litter and other surfaces. Spray volume will vary depending on the depth of litter being treated.</p> <p>Band Application: If the whole house is not being treated, application of CAVALLETTA may be made to areas where pests are concentrated, such as under feed and water lines, along perimeter walls and side / end walks. Use in sufficient spray volume to thoroughly wet litter following de-caking in a 2-4 foot wide band under and next to these areas. Spray volume will vary depending on depth of litter. Lower sections of walls, posts and cage frames should also be treated at least 1 foot up from the floor.</p>
House fly Stable fly Face fly Horn fly	Broadcast: 12 fl. ozs./1,000 square feet in 2-20 gals. water per 1,000 square feet (0.188 lb. a.i./ 1,000 square feet)	<p>Broadcast Application: Apply CAVALLETTA as a whole house broadcast spray as described above for beetles.</p> <p>Spot Treatment: Use a directed spray at a volume of 1 quart of spray solution per 10 sq. ft. of surface area. 100 gallons of spray solution will treat 4,000 sq. ft.. Start applications when flies first</p>

	<p>Spot Treatment: 5 fl. ozs. in 10 gals. water (0.08 lb. a.i. in 10 gals. water)</p>	<p>appear. In 2 to 3 weeks after application, if adult fly numbers begin to increase, additional applications may be made at 3 week intervals.</p> <p>In poultry houses, for spot treatment make applications only between production cycles, and not while birds are in the houses.</p>
<p>Application: Use adequate spray volume to assure adequate coverage. For indoor uses, use banded or broadcast applications. Apply only once per production cycle at a rate not to exceed 520 fl. oz. per acre per year. For outdoor spot treatment applications DO NOT apply more than 7.5 fl. ozs. per acre per application and do not exceed 17 applications per calendar year. For indoor use DO NOT apply more than 520 fl. ozs. per acre per calendar year.</p> <p>Applications to manure and process wastewater must not be applied closer than 100 feet to any down gradient surface waters, open tile line intake structures, sinkholes, agricultural or domestic well heads, or other conduits to surface waters, unless a 35-foot wide vegetated buffer or physical barrier is substituted for the 100-foot setback or alternative conservation practices or field-specific conditions will provide pollutant reductions equivalent or better than the reductions achieved by the 100-foot setback.</p>		
<p>NOTE: CAVALLETTA will not control adult or pupal stages, but provides extended control of eggs and developing larvae. The reproductive potential of adults exposed to CAVALLETTA through contact or ingestion will be impacted. This results in reduced egg numbers and viability of oviposited eggs. If a large adult population already exists at the time treatment is to be made, application with a knockdown insecticide either alone or in a tank mix with CAVALLETTA may be desirable to achieve rapid reduction of existing population.</p>		
<p>LIVESTOCK/POULTRY PREMISES RESTRICTIONS:</p> <ul style="list-style-type: none"> • DO NOT apply directly to livestock or poultry. • DO NOT contaminate feed or water through application-cover or remove exposed feed and water from the area to be treated. • DO NOT apply more than 520 fl. ozs. per acre per calendar year for indoor uses. 		

MUSHROOMS		
PEST	Application Rate	COMMENTS
SCIARID FLIES	<p>Composting Treatment 40 - 64 fl. ozs. per 1,000 square feet</p>	<p>Apply between compost filling and spawning time by thorough incorporation such as with a spawning machine. Assuming a wet compost weight of 40 pounds per cubic foot, this is equivalent to 30 to 50 ppm active ingredient.</p>
	<p>Casing Treatment 13.5 fl. ozs./1,000 square feet</p>	<p>Apply at the time of casing. Assuming a casing weight of 6,700 pounds per 1,000 square feet, this is equivalent to a rate of 30 ppm active ingredient.</p>
<p>NOTE: CAVALLETTA in the mushroom growing media will prevent the development of the larval stages of sciarids. This effectively stops reproduction in the growing medium and prevents damage to the mushrooms. Because of its unique type of activity, DO NOT expect immediate reductions in adult fly populations. CAVALLETTA does not directly affect adults but kills the larvae in the growing medium.</p>		
<p>MUSHROOMS RESTRICTIONS:</p> <ul style="list-style-type: none"> • DO NOT use on mushrooms in California, Idaho, Oregon and Washington. 		

ORNAMENTALS (Field or Greenhouse Grown Chrysanthemums)		
PEST	Application Rate Fl. Oz./A (lb. a.i./A)	COMMENTS
Beet armyworm	8 to 16 (0.125 to 0.25)	Begin applications when larvae appear and repeat at weekly intervals as required. Confirm plant safety under location growing conditions by initially treating only a small portion of crop.
Application: Ground – apply in a dilute spray not to exceed 200 gallons of water per acre. Use adequate spray volume to assure adequate coverage.		
NOTE: Visible effects on immature stages of these insects may not be seen for 3 to 5 days following application.		

TREES AND SHRUBS		
<p>CAVALLETTA is effective in controlling a variety of insect pests found on trees and shrubs in areas such as:</p> <ul style="list-style-type: none"> • Christmas tree and conifer nurseries. • Forest plantings and forest nurseries. • Public and private forests. • Residential and municipal shade tree areas and landscape plantings. • Recreational areas such as campgrounds, golf courses, parks, parkways (In campground or other recreational areas applications should be made during periods of minimal use. Notify persons using recreational facilities or living in the area to be sprayed before application of this or any other pesticide. • Rights of way and other easements. • Shelterbelts. <p>NOT FOR USE IN GREENHOUSES, SHADEHOUSES, OR INTERIORSCAPES.</p>		
PEST	Application Rate Fl. Oz./A (lb. a.i./A)	COMMENTS
Armyworms	4 - 8	Apply to early instar larvae. Maximum fl. ozs. per acre per year: 8
Bagworms	2 - 4	Apply in mid to late June to early instar larvae. Maximum fl. ozs. per acre per year: 4
Browntail Moth	2 - 4	Apply when overwintering 2 nd instar larvae become active – usually in late April/early May. Maximum fl. ozs. per acre per year: 4
Budworms	4 - 8	Apply to 4 th instar larvae. Maximum fl. ozs. per acre per year: 8
Cankerworms	4 - 8	Apply to early instar larvae. Maximum fl. ozs. per acre per year: 8
Gypsy Moths	1 - 4	Apply to early instar larvae when leaf expansion is between 5 and 20 percent. QUARANTINE PROGRAMS (Gypsy Moth) For use in Quarantine programs conducted by State Cooperators as well as USDA personnel of both Plant Protection and Quarantine, APHIS and the U.S. Forest Service. For use in eradication of isolated infestations make two applications of 1 to 2 fl. ozs. of CAVALLETTA per acre 7-14 days apart. For use in quarantine programs

		involving the movement of nursery stock from infested to non-infested areas, make two applications of 1 to 2 fl. ozs. of CAVALLETTA per acre 7-14 days apart on nursery stock. Maximum fl. ozs. per acre per year: 4
Hemlock Looper	4 - 8	Apply to early instar larvae. Maximum fl. ozs. per acre per year: 8
Lepidopterous Leafminers	-	Apply at 8 – 16 fl. oz. per 100 gallons of water when oviposition begins on new growth flushes. Maximum fl. ozs. per acre per year: 16
Oakworms	4 - 8	Apply in August to early instar larvae. Maximum fl. ozs. per acre per year: 8
Pandora Moth	4 - 8	Apply after egg hatch in the fall or to early instars in the spring. Maximum fl. ozs. per acre per year: 8
Pine Shoot Moth	4 - 8	Apply to early instar larvae. Maximum fl. ozs. per acre per year: 8
Pine Tip Moths	2 - 4	Apply to early second generation instars or when 75% of first generation pupal cases are empty. Peak emergence can be determined by twig sampling, pheromone traps, degree days, etc. Maximum fl. ozs. per acre per year: 4
Sawflies	4 - 8	Apply to early instar larvae. Maximum fl. ozs. per acre per year: 8
Spanworms	4 - 8	Apply to early instar larvae. Maximum fl. ozs. per acre per year: 8
Tent Caterpillars	2 - 8	Apply to early instar larvae prior to full leaf expansion. Maximum fl. ozs. per acre per year: 4
Tussock Moths	4 - 8	Apply to early instar larvae. Maximum fl. ozs. per acre per year: 8
Webworms	2 - 4	Apply to early instar larvae. Maximum fl. ozs. per acre per year: 8
Weevils (<i>Diaprepes</i> spp.)	-	Apply at a rate of 8 - 16 oz. per 100 gallons of water when adult weevils are present and/or to newly expanded growth. Will not control adult weevils but will reduce reproductive potential of adult weevils, resulting in decreased egg hatch. Maximum fl. ozs. per acre per year: 16
Weevils (Terminal) of pine and pruce (<i>Pissodes</i> spp.)	4 - 8	Treat adults in early spring after snow melt and prior to egg of pine and spruce deposition. Aerial applications not recommended. Thoroughly (<i>Pissodes</i> spp.) wet the leader and upper whorls of branches. Add an emulsifiable paraffinic crop oil at the rate of 1 to 2 gallons per acre. Maximum fl. ozs. per acre per year: 8
Zimmerman Moth	4 - 8	Apply to early instars in late summer prior to construction of hibernaculum. Maximum fl. ozs. per acre per year: 8
Application: Determining the correct volume of water to apply is highly dependent on the tree height, canopy size and application type. Uniform coverage of the foliage is essential for optimum performance.		

<p>Ground: Use an adequate amount of water to obtain thorough coverage to the foliage without excessive runoff. Use the recommended per acre dosage of CAVALLETTA in the following amounts of water. High volume hydraulic sprayer -100 - 400 gallons per acre. Mist blower, air blast sprayer - 5 - 30 gallons per acre.</p> <p>Aerial: spray volumes of 1/2 to 5 gallons per acre are recommended. The higher water volumes are recommended when application conditions are less than ideal, for very large or dense tree stands, for high population pressures or when insects have reached older instar stages.</p> <p>NOTE: Visible effects on immature stages of these insects may not be seen for 5 to 7 days following application.</p> <p>CAVALLETTA is an insect growth regulator - thus larvae/nymphs must ingest treated plant material and then molt before populations are reduced.</p>
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<p>NON-CROP AREAS Includes Field borders, Fence rows, Roadsides, Farmsteads, Ditchbanks, Wasteland, Conservation Reserve, Program CRP Land.</p>		
PEST	Application Rate Fl. Oz./A (lb. a.i./A)	COMMENTS
<p>Grasshopper</p> <p>Mormon cricket</p>	2 (0.31)	<p>Apply CAVALLETTA to manage grasshopper and Mormon crickets in their breeding areas before they move into cropland.</p> <p>Application should target pest when majority are in the 2nd through 4th instar nymphal stages for effective control.</p> <p>See Grassland section above for additional application timing information.</p>
<p>Lepidopteran foliage feeding caterpillars such as:</p> <p>Fall armyworms</p> <p>Striped grass looper</p>	2 (0.31)	<p>For optimum control use CAVALLETTA at first sign of hatch and prior to larvae reaching fourth instars (<1/2 inch). CAVALLETTA must be ingested and larvae must molt before populations are reduced.</p>
<p>Application: May be applied by ground and aerial application equipment to the listed non-crop areas.</p> <p>Use adequate spray volume to assure adequate coverage.</p> <p>See the Application section of Grassland above for further information.</p>		
<p>NOTE: Visible effects on immature stages of these insects may not be seen for 5 to 7 days following application. CAVALLETTA is an insect growth regulator - thus larvae/nymphs must ingest treated plant material and then molt before populations are reduced.</p>		
<p>NON-CROP AREAS RESTRICTIONS:</p> <ul style="list-style-type: none"> • DO NOT exceed a total of 2 fl. ozs. (0.031 lb. a.i.) per acre per calendar year. • DO NOT exceed a total of 6 fl. ozs. (0.094 lb. a.i.) per acre per calendar year. • Allow at least 1 day after treatment before cutting grass. • Apply only when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g. when wind is blowing away from the sensitive areas). 		

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE - Store this product in its original container in a cool, dry, well-ventilated area that is inaccessible (preferably locked) to children and pets.

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

Plastic containers: Nonrefillable container. DO NOT reuse or refill this container. Triple rinse or pressure rinse (or equivalent) promptly after emptying.

Triplerinse as follows: For containers small enough to shake: Empty the remaining contents into a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and then recap. Shake for 10 seconds. Pour rinsate into 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. For containers too large to shake: Empty remaining contents into a mix tank. Fill the container 1/4 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 a mix tank or store for later use or disposal. Repeat this procedure two more times.

Pressure rinse as follows: Empty the remaining contents into a mix tank and continue to drain for 10 seconds after the flow continues to drip. Hold container upside down over mix tank to collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container and rinse about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer container for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, by or by other procedures allowed by State and local authorities.

Recycling: 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 Ag Container Recycling Council (ACRC) at 1-877-952-2272 (toll free) or www.acrecycle.org.

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.

Follow Directions for Use of this product 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 the Seller. To the extent of applicable law, all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold the Seller harmless for any claims relating to such factors.

The Seller 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. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of the Seller, and Buyer and User assume the risk of any such use. **THE SELLER MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.**

To the extent consistent with applicable law, in no event shall the Seller be liable for any incidental, consequential or special damages resulting from the use or handling of this product. **TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND**

THE EXCLUSIVE LIABILITY OF THE 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 THE SELLER, THE REPLACEMENT OF THE PRODUCT.

The Seller offers this product, and Buyer and User accept it, subject to the foregoing conditions of sale and limitations of warranty and of liability, which may not be modified except by written agreement signed by a duly authorized representative of the Seller.

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