EPA REGISTRATION NUMBER 89799-1 - Vol. 3

DATA EXTRACTION REQUEST

Reg # 89799-1 Decision # 497218

Description:

Material Sent:

- ☐ Electronic Label/Letter Dated _____
  (See PPLS for electronic file)
- ☐ Stamped Label Dated _____ (See jacket)
- ☒ Notification Dated 11-18-14 (See jacket)
- ☐ New CSF(s) Dated _____ (See jacket)
- ☐ Other: _____

File this coversheet and attached materials in the jacket. It must be well organized and clipped together, NOT STAPLED. Then give the jacket with the coversheet and materials to staff in the Information Services Center (ISC) (Room S-4900). If a jacket is full or only available as an image, please file materials in a new jacket and bring it down to the (ISC). For further information please call 703-605-0716.

Reviewer: Carmen Rodia

Phone: (703) 306-0327 Division: RD/IB

Date: 11-18-14

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

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

November 18, 2014

Mr. Michael Kellogg
Regulatory Agent for
Raymat Crop Science, Inc
c/o Pyxis Regulatory Consulting, Inc.
4110 136th Street NW
Gig Harbor, WA 98332-9122

Subject: Label Notification per PRN 98-10 – Minor Label Revisions to Facilitate Continued Registration in the State of California
Product Name: CAVALIER 2L
EPA Registration Number: 89799-1
Application Date: November 3, 2014
Decision Number: 497218

Dear Mr. Kellogg:

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.

If you have any questions, please contact Mr. Carmen J. Rodia, Jr. by phone at (703) 306-0327 or via e-mail at *Rodia.Carmen@epa.gov*.

Sincerely,

Richard Gebken
Product Manager 10
Invertebrate & Vertebrate Branch 2
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.

CAVALIER 2L

Insect Growth Regulator
Aqueous Flowable

For use on **field and row crops** (artichoke, barley, oats, triticale and wheat; cotton; leafy brassica and turnip greens; peanut; pepper; rice; soybean; turfgrass), **orchard crops** (citrus crop group 10-10*; pear; stonefruit (excluding cherries); tree nuts) and **non-crop uses** (livestock and poultry premises; grassland; non-crop areas)

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

ACTIVE INGREDIENT:
Diflubenzuron: [((4-Chlorophenyl)amino)carbonyl]-2,6-difluorobenzamide*.....22.0%
OTHER INGREDIENTS:.....78.0%
TOTAL:.....100.0%
*Contains 2 lbs. diflubenzuron per gallon

KEEP OUT OF REACH OF CHILDREN
CAUTION

FIRST AID	
IF SWALLOWED:	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. • Do not give anything by mouth to an unconscious person.
IF ON SKIN OR CLOTHING:	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
IF INHALED:	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. • Call a poison control center or doctor for further treatment advice.
IF IN EYES:	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
HOT LINE NUMBER	
Have the Cavalier 2L container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact **Chemtrec** at **1-800-424-9300** for emergency medical information.	

EPA Reg. No. 89799-1

EPA Est. No. XXXXX-XX-X

Manufactured for:
Raymat Crop Science, Inc.
440 Boulder Court, Suite 300
Pleasanton, CA 94566

Net Contents:_____Gallon(s)

NOTIFICATION
89799-1
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:
11-18-2014

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for Category A on an EPA chemical-resistant selection chart.

Applicators and Other Handlers Must Wear: A long-sleeved shirt & long pants; chemical-resistant gloves, such as barrier laminate, nitrile rubber, neoprene rubber, natural rubber, polyethylene, PVC, or viton, 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, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, PVC or viton; 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 glove 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 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.

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

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

When Using This Product, Take Steps To:

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

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 made of any waterproof material such as polyethylene or polyvinyl chloride
- shoes plus socks

INSTRUCTIONS AND INFORMATION

RUNOFF

Cavalier 2L has a potential for runoff, which can occur up to several months after use. Runoff containing this product is more likely to occur in soils that have shallow water tables or are poorly draining.

The following will decrease the likelihood of contaminating water from runoff:

- a well maintained, level vegetative buffer strip situated between application areas and surface water features (i.e., ponds, springs, streams)
- application of product avoided if forecasts predict rainfall within 48 hours
- practices that foster sound erosion control

SPRAY DRIFT MANAGEMENT

This product may contaminate water through drift or 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 determine 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.

1. The distance of the outermost nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
2. Observe the regulations of the State where applications are made.
3. Applicators must observe and abide by the requirements of the Aerial Drift Reduction Advisory.

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 Inversions).

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 Standards 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 high flow rate nozzles instead of increasing the 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 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.

Application Height - Applications should not be made at a height greater than 10 feet above the largest plants unless a greater height is required for aircraft safety. Making applications at the lower 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 speeds 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 and 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).

INFORMATION

Cavalier 2L is an insect growth regulator, whose mode of action disrupts the regular molting process of insect larvae. It is effective against Lepidoptera and Diptera species and a wide variety of other insect pests, and performs well when used in IPM programs.

RESTRICTIONS

- Cavalier 2L cannot be applied to water bodies where swimming is expected
- For Field Crops, Row Crops, Orchard Uses, Grassland, 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.
- ROTATIONAL CROPS: Unless diflubenzuron is registered for use on a particular crop, wait one month after last application to plant food or feed crops in soils treated with Cavalier 2L.
- Due to mode of action, insects could take several days following application to show visible effects of Cavalier 2L.
- Do not apply via chemigation in the State of California.

APPLICATION INSTRUCTIONS

Mixing Directions – with water

- Fill a clean spray tank with half of the water required for treatment
- Begin agitation and add appropriate amount of Cavalier 2L to spray tank
- Add second half of water while maintaining agitation
- If adding oil, pour the appropriate amount slowly into the mixing tank. Making sure to use at least 2 parts of water to one part of oil will help avoid development of an invert emulsion

Mixing Directions – without water

Premix Cavalier 2L and other ingredients in a nurse tank before transferring into appropriate application equipment

-or-

- Fill a clean tank with appropriate amount of oil or oil-based insecticide
- Begin agitation and add appropriate amount of Cavalier 2L to spray tank
- Thoroughly mix contents of spray tank
- Drain a volume of carrier adequate to fill booms and piping system from the contents of the tank and then add back to tank

Compatibility – when combining Cavalier 2L with other pesticides, additives or adjuvants, test for compatibility and sprayability. In a lidded glass jar (~1 quart size), add all mix partners, in their relative proportions. Invert, shake or mix the jar thoroughly. Observe mixture for approximately 30 minutes (though signs of incompatibility will often be seen within 5 minutes). Read and follow the label of each tank mix Cavalier 2L used for precautionary statements, directions for use, rates and timings, and other restrictions.

Application – aerial or ground

Spray should be applied with equipment that gives uniform and complete coverage of the whole plant / crop surface. Equipment should be calibrated to deliver droplets of 150 to 220 microns in diameter. Continue constant agitation while mixing and applying Cavalier 2L.

Application – Chemigation*

***DO NOT APPLY VIA CHEMIGATION IN THE STATE OF CALIFORNIA**

Cavalier 2L can be applied by chemigation in grassland and row crops. System should be properly equipped for insect control. Cavalier 2L can be applied only through sprinkler irrigation systems (center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move). Cavalier 2L cannot be applied through any other type of irrigation system. If treated water is not uniformly distributed, crop injury, illegal pesticide residues or lack of efficacy could occur.

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

- Determine how many acres are irrigated by the chemigation system
- Once the irrigation rate has been set, determine how long (minutes) the system takes to cover the intended treatment area
- Determine the amount of mixture (total gallons) necessary to cover the desired acreage.
- Determine injector's gallon per minute rate by dividing amount of mixture (gallons) needed by time (minutes) to cover intended treatment area.
- Determine the correct ounces per minute rate (converting from gallons per minute)
- Operate system at desired irrigation rate and calibrate injector

It is suggested that the injector pump be calibrated at least twice before operation and the system be monitored during operation.

Your local extension service, university experts or equipment manufacturers or representatives can answer questions regarding calibration.

Do not connect an 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 system' means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
- 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, the mixture containing Cavalier 2L must be injected continuously and uniformly into the irrigation water line as the sprinkler is moving. If continuously moving irrigation equipment is used, apply in no more than 0.25 inch of water. For 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.

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.

RESISTANCE MANAGEMENT

Cavalier 2L controls several economically important insect pests, and also provides a margin of safety to pollinators and beneficial insects when used as directed. Cavalier 2L is an effective addition to IPM programs which follow good management practices including:

- Scout regularly to determine new insect pressure and apply Cavalier 2L against larval and immature insect stages for optimum results
- Carefully follow all label directions, including application timing and rate
- Use chemical alternatives (such as oil)
- As part of an IPM program, protect beneficial arthropods
- Use sufficient water volume to obtain good coverage of foliage
- Alternate different insecticides with varying modes of action

SPECIFIC USE DIRECTIONS
FIELD AND ROW CROPS

ARTICHOKE (California only)

Application Instructions

Cavalier 2L can be applied aerially in 10 to 20 gallons (total volume) per acre, or by ground application in 50 to 250 gallons (total volume) per acre. Make sure that application volume is sufficient for adequate coverage.

Application Rates

Artichoke Plume Moth: apply 8-16 fl. oz. per acre

Optimum results are obtained when Cavalier 2L is applied when first moths are caught in pheromone traps, or when moth flights start.

IMPORTANT

- Cavalier 2L can be a part of an IPM program to manage target pest populations (in combination with cultural practices, target insect population early detection, threshold treatment levels, etc.). University or local extension representatives can give recommendations regarding IPM practices

RESTRICTIONS

- For use only in California
- Maximum number of applications is 3 in any 30 day period
- Application interval is a minimum of 15 days

- Pre-harvest interval is 1 day before harvest

BARLEY, OATS, TRITICALE, & WHEAT

Application Instructions

Cavalier 2L can be applied aerially in 2 to 5 gallons (total volume) per acre, or by ground application in 5 to 15 gallons (total volume) per acre. Make sure that application volume is sufficient for adequate coverage.

Application Rates

Grasshoppers: apply 1 – 2 fl. oz. per acre
Optimum results are obtained when application is made to infesting grasshoppers that have reached the 2nd and 3rd nymphal stage of development. Adult grasshoppers will not be effectively controlled by Cavalier 2L.

Cereal Leaf Beetle: apply 4 fl. oz. per acre
Make application when egg laying begins to occur, for optimum results. If infestation advances into later instar larvae, do not apply Cavalier 2L.

IMPORTANT

- If a large influx of grasshoppers occurs, tank mixing with a knockdown insecticide is recommended. Use of Cavalier 2L alone may not reduce grasshopper population soon enough to minimize extensive foliage feeding. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.
- Larvae and nymphs could take up to 5 to 7 days following application to show visible effects, due to the mode of action of Cavalier 2L.

RESTRICTIONS

- Pre-harvest interval for forage is 3 days; Pre-harvest interval for hay is 15 days; Pre-harvest interval for grain and straw is 50 days.
- For use only in: Alaska; Colorado; Idaho; Montana; Nebraska, Western (West of Route 281); North Dakota, Western (West of Route 281); Oregon; South Dakota, Western (West of Route 281); Utah, Washington, Wyoming
- Make application only up until the boot stage of growth
- Maximum number of application is 1 per season
- Maximum amount of Cavalier 2L per acre is 4 fl. oz. (1 oz. a.i.) per season

COTTON

Application Instructions

Cavalier 2L may be applied aerially in 3 to 5 gallons (total volume) per acre, or by ground application in 10 to 20 gallons (total volume) per acre. Cavalier 2L can also be applied via ULV application in 20 to 48 fl. oz. total volume per acre aerially, or by ground application in 20 to 64 fl. oz. total volume per acre. Make sure the application volume is sufficient for adequate coverage.

Adjuvants

- If Cavalier 2L is being applied under conditions of high air temperature and/or low humidity, or other conditions that encourage water evaporation, 1 to 2 qts. oil is to be used with Cavalier 2L for control of larvae / nymphs
- For a low volume application (ground or aerial), the use of 1 pt. to 2 qts. of an emulsified vegetable or paraffinic crop oil can reduce evaporation of spray droplets (and subsequent drift), and can enhance canopy penetration
- When Cavalier 2L is being applied via ULV, 20 fl. oz. (minimum) of an emulsified cottonseed, vegetable or petroleum based oil carrier is to be used (if cottonseed oil used is non-emulsified, a compatibility agent may be necessary for thorough blending)

For oil specifications, check with your Raymat representative or supplier.

Application Rates

Beet Armyworm (early season before first bloom): Apply 2-4 fl. oz. per acre
For acceptable beet armyworm control in young cotton, apply Cavalier 2L when observing 2 beet armyworm egg masses or hatchouts per 100 feet of row, or other sign of beet armyworm activity. Make multiple directed or broadcast applications until 8 fl. oz. Cavalier 2L have been applied per acre, at application intervals of 5 to 7 days. Multiple applications more completely cover rapidly growing cotton plants, and Cavalier 2L's persistence can help prevent later buildup of beet armyworm populations.

Beet Armyworm (mid-season): apply 4-8 fl. oz. per acre
Make multiple applications at 5 to 7 day intervals, until 8 fl. oz. Cavalier 2L per acre have been applied. Start application around first bloom, up through mid-bloom. For more extreme larval pressure, or for larger cotton, use higher listed application rate. Make first application when a new generation of larvae is about to hatch (determined by peak beet armyworm moth catches in pheromone traps). For optimum control, treat cotton leaves during early stages of larval development, before populations become established.

Beet Armyworm (late season): apply 6-8 fl. oz. Cavalier 2L per acre
Apply when peak beet armyworm moth catches are observed in pheromone traps, after mid-bloom, but at least 14 days prior to harvest. For more extreme larval pressure, or for larger cotton, use higher listed application rate.

For control of **Fall Armyworm, Yellowstriped Armyworm, Southern Armyworm** and suppression of **Soybean Looper, Cabbage Looper, Saltmarsh Caterpillar**: apply 4 -8 fl. oz. per acre.
Make applications during a 5 to 7 day interval, in early larval development stages, until at least 8 fl. oz. Cavalier 2L per acre have been applied.

Boll Weevil (early season, before first bloom): apply 4-8 fl. oz. per acre
For optimum boll weevil control, apply initially at pinhead square stage of cotton growth. Wait 7 days before repeat application. For ULV application use the lower (4 fl. oz. per acre) rate.
Adjuvants: Use 2 to 4 quarts paraffinic crop oil, emulsified cottonseed oil or vegetable oil. Or if making a ULV application, use a minimum of 8 fl. oz. of vegetable or petroleum based oil carrier, oil-based insecticide or emulsified cottonseed oil (if cottonseed oil used is non-emulsified, a compatibility agent may be necessary for thorough blending). For oil specifications, check with your Raymat representative or supplier.

Cavalier 2L does not kill adult boll weevil, but controls populations by suppressing reproduction – eggs deposited by affected female weevils will not hatch. Seven to 10 days after initial treatment of female, non-hatching eggs are laid, and will continue to be laid for approximately 10 days, or longer if female boll weevil is exposed to additional applications of Cavalier 2L. Control of egg hatch and larval development within the pinhead square keeps it from shedding, and results in normal boll development. Multiple treatments and early application will result in best control.

Boll Weevil: apply 2-4 fl. oz. per acre
Apply when adult weevils are going into diapause, when cotton plant has begun blooming out at the top or has reached full vegetative growth. The number of weevils that appear in the spring is reduced when applications are made to adult weevils going into diapause to overwinter.
Make 2 to 3 (maximum) applications, at 7 to 14 day intervals.
Adjuvants: Use 2 to 4 quarts paraffinic crop oil, emulsified cottonseed oil or vegetable oil with a low volume application spray. Or if making a ULV application, use a minimum of 8 fl. oz. of vegetable or petroleum based oil carrier, oil-based insecticide or emulsified cottonseed oil (if cottonseed oil used is non-emulsified, a compatibility agent may be necessary for thorough blending).

Grasshopper: apply 2 fl. oz. per acre
When most infesting grasshoppers have reached the 2nd and 3rd nymphal stage of development, Cavalier 2L should be applied. For effective control, apply before grasshoppers reach the adult stage. If a large influx of grasshoppers occurs, tank mixing with a knockdown insecticide is recommended. Use of Cavalier 2L alone may not reduce grasshopper population soon enough to minimize extensive foliage feeding. Read and follow the

label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.

IMPORTANT:

- Cavalier 2L can be tank mixed with other cotton insecticides. Be careful when tank mixing Cavalier 2L with emulsifiable concentrate insecticides and oil, as phytotoxicity may result. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.
- Larvae and nymphs could take up to 5 to 7 days following application to show visible effects, due to the mode of action of Cavalier 2L.

RESTRICTIONS

- Maximum number of applications per season is 6
- Maximum amount of Cavalier 2L per acre is 24 fl. oz. (6 oz. a.i.) per year
- For uses after boll opening, the maximum number of applications per year is 3, and the maximum amount of product per acre is 12 fl. oz. (3 oz. a.i.)
- Pre-harvest interval is 14 days

LEAFY BRASSICA GREENS SUBGROUP (includes: Broccoli raab, Cabbage, Chinese (bok choy), Collards, Kale, Mizuna, Mustard greens, Mustard spinach, Rape greens) and TURNIP GREENS

Application Instructions

Cavalier 2L can be applied via ground application in a minimum of 30 gallons of water per acre. Multiple applications can more effectively cover newly growing foliage. Make sure that application volume is sufficient for adequate coverage.

Application Rate

Grasshopper: apply 2-4 fl. oz. per acre

When most infesting grasshoppers have reached the 2nd and 3rd nymphal stage of development, Cavalier 2L should be applied. Reapply after 7 days if crop reinfestation (nymphal hatch out) continues. For effective control, apply before grasshoppers reach the adult stage. Use higher listed application rate for greater residual control, around dense foliage, or for areas with historically heavy grasshopper infestations.

IMPORTANT

- Larvae and nymphs could take up to 5 to 7 days following application to show visible effects, due to the mode of action of Cavalier 2L.
- If a large influx of grasshoppers occurs, tank mixing with a knockdown insecticide is recommended. Use of Cavalier 2L alone may not reduce grasshopper population soon enough to minimize extensive foliage feeding. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.
- Populations will not be decreased until larvae and nymphs ingest plant material treated with Cavalier 2L, and then undergo molting

RESTRICTIONS

- Do not apply to turnip varieties or cultivars with harvestable root
- Maximum number of applications per year is 4
- Maximum amount of product per acre is 16 fl. oz. (4 oz. a.i.) per year
- Pre-harvest interval is 7 days

PEANUT

Application Instructions

Cavalier 2L can be applied aerially, in 3 to 5 gallons water per acre, or by ground application, in 9 to 35 gallons water per acre. Make sure that application volume is sufficient for uniform coverage.
Adjuvants: See COTTON section.

Application Rate

Velvet Bean Caterpillar, Mexican Bean Beetle, Green Cloverworm: apply 2-4 fl. oz. per acre
Armyworm (such as Beet, Fall, Southern, Yellow-striped), Lesser Cornstalk Borer: apply 4-8 fl. oz. per acre
Soybean Looper suppression: apply 4-8 fl. oz. per acre
For optimum control and minimization of insect damage, apply when larvae are small (less than 1/2 inch). Use higher listed application rate for greater residual control, around dense foliage, or for areas with historically heavy infestations. Cavalier 2L can be reapplied if necessary, to control reappearance of pests, after an application interval of 14 days.

Grasshopper: apply 2 fl. oz. per acre
When most infesting grasshoppers have reached the 2nd and 3rd nymphal stage of development, Cavalier 2L should be applied. For effective control, apply before grasshoppers reach the adult stage.

IMPORTANT

- Due to the mode of action of Cavalier 2L, it could take up to 5 to 7 days following application to show first signs of control (populations will not be decreased until larvae and nymphs ingest plant material treated with Cavalier 2L, and then undergo molting)
- If a large influx of grasshoppers occurs, tank mixing with a knockdown insecticide is recommended. Use of Cavalier 2L alone may not reduce grasshopper population soon enough to minimize extensive foliage feeding. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.

RESTRICTIONS

- Maximum number of applications per season is 3
- Maximum amount of product per acre is 24 fl. oz. (6 oz. a.i.) per season
- Pre-harvest interval is 28 days

PEPPER – Bell and Non-Bell

Application Instructions

Cavalier 2L can be applied aerially, in 3 to 10 gallons (total volume) per acre, or by ground application, in a minimum of 30 gallons (total volume) per acre. Make sure that application volume is sufficient for adequate coverage.
Adjuvants: see COTTON section.

Application Rate

Apply 4 to 8 fl. oz. per acre

Pepper Weevil - Make application when pepper plants begin to flower. For more thorough coverage of expanding fruit and new foliage, Cavalier 2L can be reapplied every 7 days (note – do not exceed seasonal application rate of 24 fl. oz. product per acre). For moderate to heavy infestations, use higher listed rate. Cavalier 2L does not control adult pepper weevils, but adult contact or consumption of Cavalier 2L will bring about reduced hatching of eggs from these adults.

Armyworm (Beet, Fall Southern) and other Lepidopteran insects that feed on pepper foliage:

For control of armyworms and to lessen damage to fruit and leaves, make application when armyworm larvae are small. For more thorough coverage of expanding fruit and new foliage, Cavalier 2L can be reapplied every 7 days (note – do not exceed seasonal application rate of 24 fl. oz. Cavalier 2L per acre). For heavy infestations, or if product is applied alone, use higher listed rate.
Tank Mixes: If presence of late instar larvae are detected, tank mix Cavalier 2L with an insecticide that provides insect knockdown. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.

IMPORTANT

- Due to the mode of action of Cavalier 2L, it could take up to 5 to 7 days following application to show first signs of control (populations will not be decreased until larvae and nymphs ingest plant material treated with Cavalier 2L, and then undergo molting)

RESTRICTIONS

- Maximum amount of product per season is 24 fl. oz. (6 oz. a.i.) per acre
- Maximum number of applications per season is 5, with a 7 day interval between applications
- Pre harvest interval is 7 days

RICE

Application Rate and Instructions

Apply Cavalier 2L aerially, in at least 5 gallons total volume per acre.

Rice Water Weevil:

When adults have reached an economic threshold or begin laying eggs, application of Cavalier 2L will control rice weevil larvae. Local extension service or university experts can advise regarding egg laying and economic threshold. Use the rates indicated below:

- California – Make one 8 to 16 fl. oz. per acre application (for historically high infestations, use 12-16 fl. oz. rate). Apply to rice in CA when rice is at 2 to 4 leaf stage, typically 2-5 days after rice emerges above water.
- Southern U. S. Rice Belt – water seeded, pinpoint flood or continuous flood rice – Apply 8 fl. oz. per acre application (typically when rice leaves have emerged above water). Make second 8 fl. oz. application 5 to 7 days later. [NOTE – not making second application in indicated time frame could lead to unsatisfactory control, particularly for higher infestations or prolonged migration]
- Southern U. S. Rice Belt – drill seeded, dry seeded or water seeded delayed flood rice – Make one 12 to 16 fl. oz. per acre application (for historically high infestations, or prolonged migration of weevils into rice field, use higher listed application rate). Apply to rice 2 to 5 days after permanent flood establishment.

For optimum results, wait 7 days to disturb flood after single application, and for split application, wait 4 days to disturb flood after first treatment and 7 days to disturb flood after second treatment.

Tank Mixes: Cavalier 2L can be tank mixed with rice post permanent flood herbicides, such as those containing the active ingredient quinclorac, triclopyr or bensulfuron methyl, as it does not exhibit any phytotoxicity to rice. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.

IMPORTANT

- To avoid decreased activity, apply Cavalier 2L when field flooding is not in progress
- Cavalier 2L does not control adult weevils directly, adults feeding on treated plants will not lay viable eggs

- Cavalier 2L prevents larvae from hatching, and controls eggs laid under water treated with Cavalier 2L

RESTRICTIONS

- Maximum amount of product per year is 16 fl. oz. (4 oz. a.i.) per acre
- Preharvest interval is 80 days
- Not for use on wild rice (*Zizania* spp.)
- Granular material treated with Cavalier 2L cannot be used in rice
- Treat entire field with Cavalier 2L (do not try to treat specific sections of rice field)
- Floodwaters from treated rice are only to be used to irrigate crops listed on Cavalier 2L's label.
- Retain treated floodwaters at least 14 days, to give Cavalier 2L time to dissipate
- Cavalier 2L should not be used around crayfish (crawfish):
    - Do not use on rice fields that are also used for crayfish farming
    - Do not use on rice fields that are directly next to sites of crayfish farming
    - Do not drain treated water onto fields where crayfish are farmed

SOYBEANS (Except California)

Application Instructions

Cavalier 2L can be applied aerially, in 3 to 5 gallons water per acre, or by ground application, in 9 to 35 gallons water per acre. Make sure that application volume is sufficient for uniform coverage.
Adjuvants: See COTTON section.

Application Rate

Velvet Bean Caterpillar, Mexican Bean Beetle, Green Cloverworm: apply 2-4 fl. oz. per acre
For lower insect damage and optimum control, apply when larvae are small (less than 1/2 inch). Cavalier 2L can be reapplied if necessary, to control reappearance of damaging numbers of pests, after an application interval of 30 days. When soybean pod formation has begun, after vegetative growth is complete, Cavalier 2L applied at the lower rate (2 fl. oz.) can prevent velvetbean caterpillar buildup.

Beet Armyworm, Fall Armyworm, Soybean Looper (suppression): apply 4 fl. oz. per acre
For optimum control, apply before populations build, and when worms are small in size.

Grasshopper: apply 2 fl. oz. per acre
When most infesting grasshoppers have reached the 2nd and 3rd nymphal stage of development, Cavalier 2L should be applied. For effective control, apply before grasshoppers reach the adult stage.

Tank Mix: Apply Cavalier 2L tank mixed with a knockdown insecticide if soybean fields experience a large grasshopper population incursion from adjacent and nearby fields, to reduce extensive foliage feeding. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.

Soybean yield enhancement: Cavalier 2L can increase soybean seed yield in both determinate and indeterminate cultivars, under certain growing conditions, and LOW insect pressure. Making application of Cavalier 2L at 2 to 4 fl. oz., at the R3 (beginning of pod growth – fully developed leaf with pod of 3/16 inches in length on main stem uppermost node) or R3.5 (pod almost fully elongated – fully developed leaf with pod ¾ inches in length on main stem uppermost nodes) growth stages will result in most consistent yield increase.

IMPORTANT

- Due to the mode of action of Cavalier 2L, it could take up to 5 to 7 days following application to show first signs of control (populations will not be decreased until larvae and nymphs ingest plant material treated with Cavalier 2L, and then undergo molting)

RESTRICTIONS

- Do not use on soybeans in the State of California
- Maximum number of applications per season is 2

- Maximum amount of product per year is 8 fl. oz. (2 oz. a.i.) per acre
- Pre-harvest interval is 21 days

TURFGRASS (for use on sod farms only)

Application Instructions

Cavalier 2L can be applied in 20 to 50 gallons of water per acre. Use higher volume of water for greater insect pressure or dense foliage.

Application Rate

Armyworms (Fall, True, Southern Beet, Yellow-striped), Sod Webworm, Striped Grass Looper, Granulate Cutworm and other Lepidopteran foliage-feeding caterpillars:

Apply 2 fl. oz. per acre

Make application while caterpillar larvae are small (less than ½ inch long, prior to reaching fourth instar growth stage), and at first sign of hatch out. Populations will be decreased once larvae consume Cavalier 2L and undergo molting.

RESTRICTIONS

- Maximum amount of product per year is 8 fl. oz. (2 oz. a.i.) per acre
- Maximum number of applications per year is 4

ORCHARD 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; uniq fruit; cultivars, varieties, and/or hybrids of these

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

Application Instructions

Cavalier 2L can be applied as a high volume spray aerially, using fixed wing or rotary equipment, in 5 to 20 gallons (total volume) per acre, or by ground application, using hand-held, hand gun, air blast or air assisted equipment, in 50 to 1000 gallons (total volume) per acre. Make sure that application volume is sufficient for uniform coverage of leaf surfaces. If making a low volume application (see pest specific sections below), spray equipment nozzle must produce a droplet size of 90 microns median diameter or larger **(low volume applications to citrus fruit are not approved in California)**. Optimum results on the largest range of pests will be gained from applying Cavalier 2L when new flush is emerging and/or present, however product can be applied to citrus at any time of the year.

Application Rate

For all citrus pests, apply Cavalier 2L at a rate of 20 fl. oz. per acre.

Asian Citrus Psyllid (*Diaphonia citri*)

Make application when Asian Citrus Psyllid (ACP) oviposition is seen or expected, when early feather leaf flush is present.

To maximize coverage of the entire leaf flush, make split application by spraying half of volume of product (10 fl. oz. per acre) as indicated above (ovipostion seen or expected, early-feather leaf flush is present, leaf distortion is evident), and the other half (10 fl. oz. per acre) to protect new growth flush, as needed. Wait at least 30 days **(90 days in CA)** for subsequent applications of Cavalier 2L.
Low Volume Application – apply by ground (air-assisted or air blast spray equipment - nozzle must produce droplet size of 90 microns or larger) in 3 to 5 gallons (total volume) per acre.

Citrus Rust Mite (*Phyllocoptruta oleivora*)
Make application when Citrus rust mites (CRM) are first observed on fruit or leaves.
For CRM control programs, rotate to an insecticide with a different mode of action before applying Cavalier 2L. Activity of Cavalier 2L on CRM is on immature stages, with most activity on late-instar CRM and may not reach full effect for up to 14 days after application.

Lepidopterous Miners: Citrus Leafminer (*Phyllocnistis citrella*)
Make application when Citrus Leafminer (CLM) oviposition is seen or expected, when leaf flush is present and oldest leaf is expanded by one-quarter, or when leaf mining is evident.
To maximize coverage of the entire leaf flush, make split application by spraying half of volume of product (10 fl. oz. per acre) as indicated above (ovipostion seen or expected, leaf flush is present, leaf distortion is evident), and the other half (10 fl. oz. per acre) to protect new growth flush, as needed. Wait at least 30 days **(90 days in CA)** for subsequent applications of Cavalier 2L.
Low Volume Application – apply by ground (air-assisted or air blast spray equipment - nozzle must produce droplet size of 90 microns or larger) in 3 to 5 gallons (total volume) per acre.

Lepidopterous Miners: Citrus Peel Miner (*Marmara* spp.)
Make application when citrus peel surfaces show Citrus peel miner (CPM) oviposition, or when expected.
To maximize coverage of the fruit surface, make split application by spraying half volume of product (10 fl. oz. per acre) when CPM oviposition begins, and the other half (10 fl. oz. per acre) to protect expanded fruit growth, as needed. Wait at least 30 days **(90 days in CA)** for subsequent applications of Cavalier 2L. Protection from CPM larvae will lessen over time as fruit expands and new, unprotected tissue develops, but may last up to several weeks.

Citrus Root Weevil Complex: West Indian Sugarcane Rootstalk Borer Weevil (*Diaprepes abbreviatus*), Southern Blue-Green Citrus Root Weevil (*Pachnaeus litus*), Blue-Green Citrus Weevil (*Pachnaeus opalus*) Fuller Rose Beetle (*Asynonychus godmani*), Little Leaf Notcher (*Artipus flondanus*)
Make application to citrus leaf flush when Citrus root weevils (CRW) are seen, when oldest leaf is expanded by one-half, or when recent leaf feeding is evident.

Katydids, Grasshoppers:
Make application when katydids or grasshoppers are seen, or recent feeding on leaves or fruit is noticed.
To maximize coverage and protection of leaves and fruit, make split application by spraying half of volume of product (10 fl. oz. per acre) as indicated above (katydids or grasshoppers are seen, recent feeding on leaves or fruit), and the other half (10 fl. oz. per acre) to protect new growth, as needed. Wait at least 30 days **(90 days in CA)** for subsequent applications of Cavalier 2L.

Adjuvants - To enhance spray coverage, add a CDA approved or other quality surfactant such as Dine-Amic® or Kinetic® or addition of a spray oil, such as FC435-66. Addition of a spray oil also aids knockdown of existing populations (CRM), penetration or absorption of Cavalier 2L into immature stages of insects[2], mites[3], eggs[1,3,4,5,6,7], larvae[3], pupae[3], nymphs[1,6,7] and adults[1,6,7]. A spray oil improves Cavalier 2L's activity, which is to prevent eggs from hatching, larvae or nymphs from molting, moths from emerging from pupae, and limiting eggs laid or able to hatch by adult females when exposed to Cavalier 2L through contact, ingestion and/or absorption. Spray oil also limits egg mass attachment to citrus leaf surface[3].

1 – Asian Citrus Psyllid
2 – Citrus Rust Mite
3 – Citrus Leafminer
4 – Citrus Peel Miner
5 – Citrus Root Weevil Complex
6 – Katydid
7 - Grasshopper

IMPORTANT:

- Application of Cavalier 2L when new citrus flush has emerged will give best control of the most pests, however it can be applied anytime during the year
- Cavalier 2L affects existing ACP, CLM and citrus root weevil populations by diminishing their reproductive ability.
- Cavalier 2L does not control the following insect growth stages:
    - Adult Asian citrus psyllid, citrus root weevils, katydids or grasshoppers
    - Adult Citrus Rust mite or Citrus rust mite eggs
    - Citrus Leafminer or Citrus peel miner moths

RESTRICTIONS

- **Ground Application:** Do not apply within 25 feet of bodies of water such as lakes, reservoirs, rivers, permanent streams, natural ponds, marshes or estuaries. **In the State of Florida,** do not apply within 100 feet of estuarine/marine bodies of water. Spray last three rows windward of surface water using nozzles on one side only, with spray directed away from surface water. Avoid spray going over tops of trees by adjusting or turning off top nozzles. Shut off nozzles on one side away from the grove when spraying the outside row. Shut off nozzles when turning at ends of rows and passing tree gaps in rows.
- **Aerial Application:** Do not apply within 150 feet of bodies of water such as lakes, reservoirs, rivers, permanent streams, natural ponds, marshes or estuaries. **In the State of Florida,** do not apply within 1000 feet of estuarine/marine bodies of water.
- Maximum amount of product per acre is 60 fl. oz. (15 oz. a.i.) per year
- Maximum number of applications per year is three full rate applications of 20 fl. oz. per acre per year or six split applications of 10 fl. oz. per acre per year, or a combination of full and split applications, not exceeding the maximum yearly amount of 60 fl. oz. (15 oz. a.i.) per acre per year.
- Pre-harvest interval is 7 days **(21 days in CA)**.
- Wait a minimum of 30 days **(90 days in CA)** for repeat application (except when making split applications, as per instructions, above)
- Do not graze livestock in treated areas or harvest cover crops in treated areas for livestock feed

PEAR

Application Instructions

Apply Cavalier 2L in a minimum of 80 to 400 gallons of water per acre. Make sure that application volume is sufficient for uniform coverage.

Application Rate

Pear Psylla, Pear Rust Mite (pre-bloom) – apply 40 – 48 fl. oz. per acre
Make application any time from delayed dormant period to white bud, or 'popcorn,' stage of growth, and during the deposition of pear psylla eggs so that Cavalier 2L contacts eggs and/or 1st and 2nd instar nymphs. Make sure tree is completely and uniformly covered with spray for optimum insect control.

Additives: During delayed dormant period, apply Cavalier 2L with 4 to 6 gallons per acre of a horticultural mineral oil. When applying during other growth periods, through the white bud, or 'popcorn,' stage, apply Cavalier 2L with 0.25% horticultural oil (maximum of 1 gallon horticultural oil per acre). Additionally, coverage can be enhanced with the use of a surfactant (follow surfactant label instructions).

Codling Moth, suppression of **Pear Psylla** (post bloom) – apply 12 to 16 fl. oz. per acre
Make application as soon as possible after first codling moths are observed or caught (biofix), or about 50-75 degree days after biofix. Cavalier 2L prohibits hatching of codling moth eggs, and must be applied to trees before eggs are laid, so that laid eggs are deposited on treated surfaces. Make sure that entire tree surface, including fruit and foliage is treated with Cavalier 2L. If codling moth pressure is light, or if pear trees are small, use lower rate. Timing of application is extremely important. Timing can be determined by local fruit

specialist or pest control consultant, by employing the use of pheromone traps. Typically the optimum time for application will occur around 10 – 14 days prior to application of an organophosphate insecticide, or around late petal fall.
A second application of Cavalier 2L should be applied 14 – 18 days after initial application.
If necessary (prior to egg laying of 2nd generation, as determined by timing indicated above, for 1st generation), a third and fourth application can be made. If the use of pheromone traps are not employed, the third application should be made 21-30 days after the 2nd, or 1000 degree days after biofix. The fourth application should be made 21-30 days after the third.

Tank Mixes: For more effective control of moderate to heavy codling moth infestations, when treating large trees, or for optimum timing of Cavalier 2L spray (to save a trip through the orchard), Cavalier 2L can be combined with organophosphate insecticides. Apply at the normal time for the first organophosphate cover spray, which occurs at the beginning of egg hatch (250 degree days following biofix for 1st generation, or 1250 degree days following biofix for 2nd generation). Application of this tank mixture can be repeated for 2nd and 3rd generations of codling moth, or Cavalier 2L alone can be used prior to egg laying. For late season control, oil should not be used in the tank mix. When codling moth populations are low, an organophosphate / Cavalier 2L mixture could control an entire generation with 1 application. For heavy populations, this combination of Cavalier 2L/organophosphate may not control the entire generation with one spray. In that case apply a second spray 14 – 18 days later of Cavalier 2L alone or in combination with an organophosphate, so that eggs laid after insecticide application will be residually controlled. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.

Leafminer – apply 8 to 16 fl. oz. per acre
For control of leafminer larvae and eggs, make application during or just before eggs are laid. Fruit specialist or local pest control consultant can advise about timing for control of 1st or 2nd generations of leafminer. Cavalier 2L can also be applied for control of later generations. For control through early sap feeding stage, Cavalier 2L should be applied prior to egg laying. For control of leafminer larvae throughout the sap feeding stage, make sure that foliage is completely covered.

IMPORTANT

- Using oil with Cavalier 2L could cause certain pear varieties to display injury. Local fruit tree specialists can advise on compatibility of oil mixtures.

RESTRICTIONS

- Maximum number of applications per year is 4
- Maximum amount of product per year is 64 fl. oz. (16 oz. a.i.) per acre
- Pre harvest interval is 14 days.
- Do not use oil with Cavalier 2L for late season (3rd and 4th) applications.

STONEFRUIT (excluding cherries)
Includes: Apricot, Nectarine, Peach, Plum, Prune

Application Instructions
Apply Cavalier 2L by ground in a minimum of 50 gallons of water for trees up to 10 feet tall and a minimum of 100 gallons of water for larger trees. For optimal results, use enough water for sufficient coverage and make sure that canopy is evenly and thoroughly covered.

Application Rate
Peach Twig Borer: apply 12 – 16 fl. oz. per acre (use higher listed rate for orchard with a history of heavy infestations)
Dormant / delayed dormant application: apply with a narrow range oil (4 to 6 gallons per acre or 1.5 to 2.0 gallons per 100 gallons spray volume in a dilute spray).

Bloom application: Application can be made with a vegetable oil (1 qt. per acre), with application starting at early bloom.

Leafroller (Filbert, Oblique Banded, Omniverous, Variegated), Moth (Oriental Fruit, Winter), Fall Webworm, Walnut Caterpillar: apply 8 – 16 fl. oz. per acre.
Make application when insect larvae are first observed. The higher listed use rate will give longer residual control. It should also be used if foliage is heavy or dense, if pest infestations are high, or if trees are larger or crop load is low.

Grasshoppers, Katydids (for use in **Peach Orchards in GA ONLY**): Apply 2 fl. oz. per acre
Make application to peach orchards or surrounding vegetation when immature insects are first observed. Larvae and nymphs could take up to 5 to 7 days following application to show visible effects, due to the mode of action of Cavalier 2L.

Cavalier 2L will not control adult grasshoppers. If a large influx of grasshoppers occurs, tank mixing with a knockdown insecticide is recommended. Use of Cavalier 2L alone may not reduce grasshopper populations soon enough to minimize extensive foliage feeding. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.

RESTRICTIONS:

- Maximum amount of product per season is 32 fl. oz. (8 oz. a.i.) per acre (16 fl. oz. (4 oz. a.i.) when applied to grasshoppers and katydids in peach orchards in GA only)
- Maximum number of applications per season is 2 (or when applied to grasshoppers or katydids in peach orchards in GA only, as needed, up to application of 16 fl. oz.)
- Wait a minimum of 21 days between Cavalier 2L applications
- Cavalier 2L is not to be applied to stonefruit after petal fall (with the exception of applications to grasshoppers or katydids in peach orchards in GA only)
- Preharvest interval for use on grasshoppers or katydids in peach orchards in GA is 14 days.

TREE NUTS GROUP

(includes Almond, Beech nut, Brazil nut, Butternut, Chestnut, Chinquapin, Filbert (hazelnut), Hickory nut, Macadamia nut (bush nut), Pecan, Pistachio, Walnut (Black and English))

Application Instructions

Apply Cavalier 2L by ground in a minimum of 50 gallons of water for trees up to 10 feet tall and a minimum of 100 – 300 gallons of water for larger trees. For optimal results, use enough water for sufficient coverage and make sure that canopy is evenly and thoroughly covered.

Application Rate

Filbert Worm: apply 12 – 16 fl. oz. per acre
Apply Cavalier 2L before eggs are laid on treated foliage, or when moths first emerge from cocoon – if using pheromone detection traps, 2 to 3 days after first moth catch [mating takes place soon after emergence and egg laying begins the following day]. Make sure that tree and foliage coverage is uniform for best control. Use lower rate if trees are small or worm pressure is low. Use higher listed rate if trees are larger, or worm pressure is moderate to high. If necessary (continuing high moth pressure), a subsequent application of Cavalier 2L should be made.

Hickory Shuckworm: apply 8 – 16 fl. oz. per acre
Split Application – for optimum control, apply 4 to 8 fl. oz. Cavalier 2L when larvae begin to feed or when hickory shuckworm moth emerges; make second 4 to 8 fl. oz. application two weeks later.
Cavalier 2L can also be applied at half-shell hardening, with additional applications 21 days later, up to shuck split, or while heavy insect infestations are present. Use the higher listed rate on heavy, dense foliage, on larger trees or low crop load, or under higher pest infestations.

Codling Moth– apply 16 fl. oz. per acre
For optimum control, apply prior to egg laying. Apply a full coverage spray to orchard so that eggs are laid on a surface that is treated with Cavalier 2L.
Apply when first moths hatch (determine by moth flight or pheromone traps). Following application should be made 21 days later. This timing is appropriate for first or second generation (brood).
Tank Mixing – Cavalier 2L can be tank mixed with an organophosphate insecticide at its lowest label rate to control extended populations of codling moth because of variations in emergence time due to temperature fluctuations or overwintering. Application should occur at normal timeframe for an organophosphate insecticide. Additionally, if Cavalier 2L is not initially applied prior to egg laying, then tank mixing with an organophosphate insecticide as indicated above will enhance control. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.

Peach Twig Borer – apply 12 – 16 fl. oz. per acre (use higher listed rate for orchards with a history of heavy infestations)
Dormant / delayed dormant application: apply with a narrow range oil (4 to 6 gallons per acre or 1.5 to 2.0 gallons per 100 gallons spray volume in a dilute spray).
Bloom application: Application can be made with a vegetable oil (1 qt. per acre), with application starting at early bloom.
Spring Flight ('May Spray') or Summer Flight – Apply Cavalier 2L at initial flight activity (as determined by pheromone traps).

Pecan Nut Case-Bearer: apply 8 – 16 fl. oz. per acre
Apply Cavalier 2L as a split application as indicated:

- For optimum control and best nut set, apply first application of 4 – 8 fl. oz. at bud break and second application 14 days later [in southeastern U. S., bud break would typically occur in mid-April]
- For control of adult generations and to target egg hatch, make first application of 4 – 8 fl. oz. 8 to 15 days following biofix (threshold is reached when 5 moths are captured in 3 pheromone traps in a 7 day period)

Local extension service or university experts may have different or additional recommendations regarding Cavalier 2L application. Consult them prior to use. Use the higher rate on heavy, dense foliage, on larger trees or low crop load, or under higher pest infestations.

Pecan Weevil (suppression): apply 8 – 16 fl. oz. per acre
Use the higher listed rate for moderate to heavy infestations, or if weevils are attacking crop.

Leafroller (Filbert, Oblique Banded, Omniverous, Variegated), Moth (Oriental Fruit, Winter), Fall Webworm, Omniverous Leaftier, Caterpillar (Redhumped, Walnut): apply 8 – 16 fl. oz. per acre
Make application as soon as larval infestations are detected. Use the higher listed rate on heavy, dense foliage, on larger trees or low crop load, or under higher pest infestations.

Tent Caterpillar (for use in almonds, pecans, pistachios and walnuts (black and English)).
Apply 8 – 16 fl. oz. per acre
Make application as soon as larval infestations are detected. Use the higher listed rate on heavy, dense foliage, on larger trees or low crop load, or under higher pest infestations.

IMPORTANT

- If four applications are made to tree nuts, the timing should correspond to:
  - Dormant to pre-bud swell
  - Bloom to petal fall
  - Flowers/leaves/immature nut fruit formation
  - Hull split

RESTRICTIONS

- Pre-harvest interval is 28 days

- Maximum amount of product per growing season is 64 fl. oz. (16 oz. a.i.) per acre
- Maximum number of applications per year is 4 (3 for walnuts)

NON-CROP USES

LIVESTOCK AND POULTRY PREMISES

Including barns, dairies, equine facilities, farms, farm buildings, feedlots, poultry houses and other production facilities. Cavalier 2L application can be made to feed troughs, feed bunks, fence lines of holding pens, hay bale feeders, water troughs and waste retention ponds (marginal areas of), and Cavalier 2L can control insects on/around bedding material, cage frames, ceilings, feed muck/spoilage, floors, litter, manure, manure/straw mixtures, posts, spoiled organic refuse, stale/waste feed and walls / wall footings.

Application Instructions and Rate

Carrion Beetle, Darkling Beetle, Hide Beetle (Except California):
Apply 12 fl. oz. Cavalier 2L in 2 to 20 gallons of water per 1000 ft^2

Broadcast – Cavalier 2L can be applied as a broadcast spray to the whole facility, including the following areas: walls, posts and cage frames (at least 1 foot up from floor); cracks and crevices around insulation; litter following de-caking (making sure to thoroughly treat areas under water and feed lines). Make sure spray volume (which will be dependent on litter depth) is sufficient to completely and uniformly wet litter and other surfaces.
Banded Application – Cavalier 2L can be applied only where pests congregate, including along perimeter walls and side and end walks, and under water and feed lines. Make sure spray volume (which will be dependent on litter depth) is sufficient to completely and uniformly wet litter and other surfaces, in a 2-4 foot wide band under, around and next to target areas. If lower sections of walls, posts and cage frames are treated, make sure to apply product at least 1 foot up from floor.

Flies (including House, Stable, Face, Horn):
Broadcast - Apply 12 fl. oz. Cavalier 2L in 2 to 20 gallons of water per 1000 ft^2
Cavalier 2L can be applied as a broadcast spray to the whole facility, including the following areas: walls, posts and cage frames (at least 1 foot up from floor); cracks and crevices around insulation; litter following de-caking (making sure to thoroughly treat moist areas and areas under water and feed lines). Make sure spray volume (which will be dependent on litter depth) is sufficient to completely and uniformly wet litter and other surfaces.
Spot Treatment – Apply 5 fl. oz. Cavalier 2L in 10 gallons of water
Make a directed spray application when flies first appear. 1 quart of spray solution should be applied to 10 ft^2 of surface (10 gallons spray solution treat 400 ft^2). Repeat applications can be made when fly numbers begin to increase – usually within 14 to 21 days.

IMPORTANT

- Cavalier 2L provides extended control of eggs and developing larvae, but not pupal or adult stages of insects; contact or ingestion of Cavalier 2L by adults will adversely affect number of and viability of eggs.
- If a large population of adult insects is present, applying a knockdown insecticide (either alone or tank mixed with Cavalier 2L) is recommended for quick decrease of population. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.
- If controlling insects around hay feeding sites, make product application around entire soil surface where livestock activity mixes the waste hay and manure

RESTRICTIONS

- Do not apply this product for control of Carrion Beetle, Darkling Beetle or Hide Beetle in the State of California.
- Application is not to be made directly to livestock or poultry
- For spot treatment, do not make application while birds are in the houses – make application only between production cycles. Make band or broadcast applications once per production cycle;
- Band or broadcast applications can be used for indoor use only. Maximum application rate (band or broadcast application) is 12 fl. oz. (3 oz. a.i.) per 1000 ft^2 per production cycle.
- Spot treatment applications can be used for indoor or outdoor use. Maximum application for spot treatment – outdoor is 5 fl. oz. per 400 ft^2 per application, not to exceed 17 applications per year. Maximum application for spot treatment – indoor is 12 fl. oz. per 1000ft^2 (524 fl. oz. per acre) per year.
- Either a 100 foot setback or other measure that provides equivalent or better pollution reduction (35-foot wide vegetative buffer strip or physical barrier, field specific conditions or alternate conservation practices) must be observed for application of manure and process wastewater around any down gradient surface waters, agricultural or domestic well heads, open tile line intake structures, sinkholes or other conduits to surface waters.
- Feed or water is not to be contaminated by application of Cavalier 2L; exposed feed or water is to be covered or removed from treatment area.

GRASSLAND

For control in grassland, including 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/forages/cellulosic crops grown for biofuel, biomass or bioenergy production, including switch grass, miscanthus sp., etc.

Application Instructions

Cavalier 2L may be applied aerially (high or low volume application) in 2 to 5 gallons water per acre, or by ground application (low or high volume) in 2 to 30 gallons of water per acre. For rangeland ULV (aerial or ground), apply in a minimum of 12 fl. oz. total volume per acre.
Make sure that target crop is completely covered.

Adjuvants and Additives: For aerial and ULV application, especially when high air temperature or low humidity favor evaporation, add a product that retards evaporation and drift to the spray mixture. If this product is oil-based, mix 1 part oil to at least 2 parts water.

Application Rate

2 fl. oz. per acre

Horn Fly, Face Fly

Make application to cow manure patties. Cavalier 2L will provide at least 14 days of control of flies emerging from cow manure.

Fall Armyworm, Striped Grass Looper, other Lepidopteran foliage feeding caterpillars

Make application while caterpillar larvae are small (less than ½ inch long, prior to reaching fourth instar growth stage), and at first sign of hatch out. Populations will be decreased once larvae consume Cavalier 2L and undergo molting.

Grasshopper, Mormon Cricket

- Make one application at 1 to 2 fl. oz. per acre on grasshoppers or Mormon crickets at early instar growth stages (i.e., 2nd through 4th instar nymphal stages). A second application, at 0.5 to 1 fl. oz. per acre can be made 14 to 21 days after first application. For application on pastureland, use higher listed use rate.
- For RAAT (Reduced Area and Agent Treatment*) application on early instars in rangeland only, apply 0.75 to 1 fl. oz. per acre. Use lower rate, and skip up to 50% of the infested area (i.e., for every 100 feet treated, skip the next 100 ft. swath) if most of infestation is at early instar growth stage, vegetation is

sparse, and topography is uniform. Use higher listed rate and 100% coverage if most of the infestation is at a late instar growth stage, vegetation is dense, terrain is rough and/or application is being made when temperature is high. A second application, at 0.5 to 1 fl. oz. per acre can be made 14 to 21 days after first application.

* A RAAT application is a grasshopper IPM program that takes advantage of the grasshopper's natural tendency to move as they feed. As grasshoppers move from untreated to treated areas and eat foliage treated with Cavalier 2L, they are killed once molting occurs. The rate of Cavalier 2L is lowered and applied in alternating treated and untreated strips. A RAAT treatment reduces application cost, giving ranchers a cost effective way to control grasshoppers or Mormon crickets on their rangeland, depending on severity of infestation, insect growth stage and density of vegetation.

If treated areas have a dense canopy, if nymphs have passed the third instar growth stage, and/or if temperature and climate encourage insect survival and proliferation, use higher listed rates of Cavalier 2L. Cavalier 2L should be applied after egg hatch, through early instar growth stages, as it will not control the adult stages of these insects. Cavalier 2L's residual activity will continue to control larvae later in the season.

Tank Mix: Apply Cavalier 2L tank mixed with a knockdown insecticide or grasshopper adulticide if adults are present (due to overwintering or early hatching) to reduce extensive foliage feeding. Make sure tank mix partners are compatible prior to mixing and adding to main spray tank. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.

IMPORTANT

- Apply when possibility of drift to sensitive areas (residential, non-target crops, water bodies, threatened or endangered species habitat) is small.
- For low volume and ULV applications, continue constant agitation while mixing and applying Cavalier 2L, and make sure the appropriate concentration of Cavalier 2L is mixed in the boom before application begins.
- Due to the mode of action of Cavalier 2L, it could take up to 5 to 7 days following application to show first signs of control (populations will not be decreased until larvae and nymphs ingest plant material treated with Cavalier 2L, and then undergo molting)
- In response to treatment with Cavalier 2L, Mormon crickets could exhibit structural deformities (such as malformed abdominal segments, twisted antennae, wrinkled wings, missing posterior legs, hernias, hemolymph exudation). This could result in behaviors (such as inability to fly, limited jumps and unsteady landings, slower movement, reduction in feeding) which cause the nymphs or adults to be more vulnerable to predators (birds, mammals or other insects)

RESTRICTIONS

- Maximum amount of product per cutting is 2 fl. oz. (0.5 oz. a.i.) per acre
- Maximum amount of product per year is 6 fl. oz. (1.5 oz. a.i.) per acre
- Wait at least 1 day following Cavalier 2L application prior to cutting grass.

NON-CROP AREAS

Including field border, fence rows, roadsides, farmsteads, ditchbanks, wasteland, Conservation Reserve Program (CRP) land

Application Instructions

Cavalier 2L may be applied aerially (high or low volume application) in 2 to 5 gallons water per acre, or by ground application (low or high volume) in 2 to 30 gallons of water per acre.
For additional Application Instructions, see Grassland Directions for Use.

Application Rate

2 fl. oz. per acre

Grasshopper, Mormon Cricket
Insects can be managed in their breeding areas prior to migration into cropland or other undesirable areas with application of Cavalier 2L.
See Grassland Directions for Use for additional instructions and application information.

Fall Armyworm, Striped Grass Looper and other Lepidopteran foliage-feeding caterpillars
Make application while caterpillar larvae are small (less than ½ inch long, prior to reaching fourth instar growth stage), and at first sign of hatch out. Populations will be decreased once larvae consume Cavalier 2L and undergo molting.

RESTRICTIONS

- Maximum amount of product per application is 2 fl. oz. (0.5 oz. a.i.) per acre
- Maximum amount of product applied per year is 6 fl. oz. (1. 5 oz. a.i.) per acre

See Grassland Directions for Use for other restrictions and comments

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.
PESTICIDE STORAGE: Store product in its original labeled container only.
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.
Triple rinse as follows: For containers small enough to shake: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into 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 and store for later use or disposal. Repeat the 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 or by incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.
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 Ag Container Recycling Council (ACRC) at 1-877-952-2272 (toll free) or www.acrecycle.org.

LIMITED WARRANTY

Raymat Crop Science, Inc. warrants only that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the label, under average use conditions, when used strictly in accordance with the label and subject to the Risks of Using This product as described above. To the extent consistent with applicable law AND AS SET FORTH ABOVE, RAYMAT CROP SCIENCES, INC. MAKES NO OTHER WARRANTIES, EITHER EXPRESSED OR IMPLIED. No agent or representative of Raymat Crop Sciences or Seller is authorized to make or create any other express or implied warranty.

LIMITATION OF LIABILITY

To the fullest extent allowed by law, Raymat Crop Sciences, Inc., or Seller is not liable for any incidental, consequential, indirect or special damages resulting from the use or handling of this product. The limitation includes, but is not limited to, loss of yield on all or any portion of the treated acreage, increased care, treatment or other expenses required to take the crop to harvest, increased finance charges or altered finance ratings, emotional or mental distress and/or exemplary damages. TO THE FULLEST EXTENT ALLOWED BY LAW, THE EXCLUSIVE REMEDY OF THE BUYER, AND THE EXCLUSIVE MAXIMUM LIABILITY OF RAYMAT CROP SCIENCES, INC. OR 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 THIS PRODUCT OR, AT THE ELECTION OF RAYMAT CROP SCIENCES, INC OR SELLER, THE REPLACEMENT OF THE PRODUCT.

PROMPT NOTICE OF CLAIM

To the extent consistent with applicable law allowing such requirements Raymat Crop Science, Inc. must be provided notice as soon as Buyer has reason to believe it may have a claim, but in no event later than twenty-one days from the date of application, whichever is later, so that an immediate inspection of the affected property and growing crops can be made.

To the extent consistent with applicable law if Buyer does not notify Raymat Crop Sciences, LLC of any claims in such period, it shall be barred from obtaining any remedy.

NO AMENDMENTS

Raymat Crop Sciences, Inc. and Seller offer this product, and Buyer accepts it, subject to the foregoing Disclaimer, Risks of Using This product, Limited Warranty and Limitation of Liability, which may not be modified by any oral or written agreement.

EPA 20141103

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.

SUPPMENTAL LABELING

READ THE ENTIRE LABEL FOR CAVALIER 2L BEFORE PROCEEDING WITH THE USE DIRECTIONS CONTAINED IN THIS SUPPLEMENTAL LABELING

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

"Label" as used in this supplemental labeling refers to the label booklet for Cavalier 2L and this supplement.

This supplemental labeling expires on March 31, 2016 and must not be used or distributed after this date.

CAVALIER 2L

Insect Growth Regulator
Aqueous Flowable

EPA Reg. No. 89799-1

For Use on Citrus Crop Group 10-10*

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

ACTIVE INGREDIENT:
Diflubenzuron: [((4-Chlorophenyl)amino)carbonyl]-2,6-difluorobenzamide*..... 22.0%
OTHER INGREDIENTS:..... 78.0%
TOTAL:..... 100.0%
*Contains 2 lbs. diflubenzuron per gallon

KEEP OUT OF REACH OF CHILDREN
CAUTION

FIRST AID	
IF SWALLOWED:	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. • Do not give anything by mouth to an unconscious person.
IF ON SKIN OR CLOTHING:	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
IF INHALED:	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. • Call a poison control center or doctor for further treatment advice.
IF IN EYES:	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
HOT LINE NUMBER	
Have the Cavalier 2L container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact **Chemtrec** at **1-800-424-9300** for emergency medical information.	

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for Category A on an EPA chemical-resistant selection chart.

Applicators and Other Handlers Must Wear: A long-sleeved shirt & long pants; chemical-resistant gloves, such as barrier laminate, nitrile rubber, neoprene rubber, natural rubber, polyethylene, PVC, or viton, 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, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, PVC or viton; 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 glove 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 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.

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

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

When Using This Product, Take Steps To:

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

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 made of any waterproof material such as polyethylene or polyvinyl chloride
- shoes plus socks

INSTRUCTIONS AND INFORMATION

RUNOFF

Cavalier 2L has a potential for runoff, which can occur up to several months after use. Runoff containing this product is more likely to occur in soils that have shallow water tables or are poorly draining.

The following will decrease the likelihood of contaminating water from runoff:

- a well maintained, level vegetative buffer strip situated between application areas and surface water features (i.e., ponds, springs, streams
- application of product avoided if forecasts predict rainfall within 48 hours
- practices that foster sound erosion control

SPRAY DRIFT MANAGEMENT

This product may contaminate water through drift or 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 determine 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.

1. The distance of the outermost nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.
3. Observe the regulations of the State where applications are made.
4. Applicators must observe and abide by the requirements of the Aerial Drift Reduction Advisory.

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 Inversions).

Controlling Droplet Size

Volume – Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.

Pressure – Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types lower pressure produces larger droplets. When higher flow rates are needed, use high flow rate nozzles instead of increasing the 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 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.

Application Height - Applications should not be made at a height greater than 10 feet above the largest plants unless a greater height is required for aircraft safety. Making applications at the lower 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 speeds 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 and 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).

INFORMATION

Cavalier 2L is an insect growth regulator, whose mode of action disrupts the regular molting process of insect larvae. It is effective against Lepidoptera and Diptera species and a wide variety of other insect pests, and performs well when used in IPM programs.

RESTRICTIONS

- Cavalier 2L cannot be applied to water bodies where swimming is expected
- For Field Crops, Row Crops, Orchard Uses, Grassland, 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.
- ROTATIONAL CROPS: Unless diflubenzuron is registered for use on a particular crop, wait one month after last application to plant food or feed crops in soils treated with Cavalier 2L.
- Due to mode of action, insects could take several days following application to show visible effects of Cavalier 2L.
- Do not apply via chemigation in the State of California.

APPLICATION INSTRUCTIONS

Mixing Directions – with water

- Fill a clean spray tank with half of the water required for treatment
- Begin agitation and add appropriate amount of Cavalier 2L to spray tank
- Add second half of water while maintaining agitation
- If adding oil, pour the appropriate amount slowly into the mixing tank. Making sure to use at least 2 parts of water to one part of oil will help avoid development of an invert emulsion

Mixing Directions – without water

Premix Cavalier 2L and other ingredients in a nurse tank before transferring into appropriate application equipment

-or-

- Fill a clean tank with appropriate amount of oil or oil-based insecticide
- Begin agitation and add appropriate amount of Cavalier 2L to spray tank
- Thoroughly mix contents of spray tank
- Drain a volume of carrier adequate to fill booms and piping system from the contents of the tank and then add back to tank

Compatibility – when combining Cavalier 2L with other pesticides, additives or adjuvants, test for compatibility and sprayability. In a lidded glass jar (~1 quart size), add all mix partners, in their relative proportions. Invert, shake or mix the jar thoroughly. Observe mixture for approximately 30 minutes (though signs of incompatibility will often be seen within 5 minutes). Read and follow the label of each tank mix Cavalier 2L used for precautionary statements, directions for use, rates and timings, and other restrictions.

Application – aerial or ground

Spray should be applied with equipment that gives uniform and complete coverage of the whole plant / crop surface. Equipment should be calibrated to deliver droplets of 150 to 220 microns in diameter. Continue constant agitation while mixing and applying Cavalier 2L.

Application – Chemigation*

***DO NOT APPLY VIA CHEMIGATION IN THE STATE OF CALIFORNIA**

Cavalier 2L can be applied by chemigation in grassland and row crops. System should be properly equipped for insect control. Cavalier 2L can be applied only through sprinkler irrigation systems (center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move). Cavalier 2L cannot be applied through any other type of irrigation system. If treated water is not uniformly distributed, crop injury, illegal pesticide residues or lack of efficacy could occur.

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

- Determine how many acres are irrigated by the chemigation system
- Once the irrigation rate has been set, determine how long (minutes) the system takes to cover the intended treatment area
- Determine the amount of mixture (total gallons) necessary to cover the desired acreage.
- Determine injector's gallon per minute rate by dividing amount of mixture (gallons) needed by time (minutes) to cover intended treatment area.
- Determine the correct ounces per minute rate (converting from gallons per minute)
- Operate system at desired irrigation rate and calibrate injector

It is suggested that the injector pump be calibrated at least twice before operation and the system be monitored during operation.

Your local extension service, university experts or equipment manufacturers or representatives can answer questions regarding calibration.

Do not connect an 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 system' means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
- 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, the mixture containing Cavalier 2L must be injected continuously and uniformly into the irrigation water line as the sprinkler is moving. If continuously moving irrigation equipment is

used, apply in no more than 0.25 inch of water. For 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.

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.

RESISTANCE MANAGEMENT

Cavalier 2L controls several economically important insect pests, and also provides a margin of safety to pollinators and beneficial insects when used as directed. Cavalier 2L is an effective addition to IPM programs which follow good management practices including:

- Scout regularly to determine new insect pressure and apply Cavalier 2L against larval and immature insect stages for optimum results
- Carefully follow all label directions, including application timing and rate
- Use chemical alternatives (such as oil)
- As part of an IPM program, protect beneficial arthropods
- Use sufficient water volume to obtain good coverage of foliage
- Alternate different insecticides with varying modes of action

SPECIFIC USE DIRECTIONS

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; uniq fruit; cultivars, varieties, and/or hybrids of these

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

Application Instructions

Cavalier 2L can be applied as a high volume spray aerially, using fixed wing or rotary equipment, in 5 to 20 gallons (total volume) per acre, or by ground application, using hand-held, hand gun, air blast or air assisted equipment, in 50 to 1000 gallons (total volume) per acre. Make sure that application volume is sufficient for uniform coverage of leaf surfaces. If making a low volume application (see pest specific sections below), spray equipment nozzle must produce a droplet size of 90 microns median diameter or larger **(low volume applications to citrus fruit are not approved in California)**. Optimum results on the largest range of pests will be gained from applying Cavalier 2L when new flush is emerging and/or present, however product can be applied to citrus at any time of the year.

Application Rate

For all citrus pests, apply Cavalier 2L at a rate of 20 fl. oz. per acre.

Asian Citrus Psyllid (*Diaphonia citri*)

Make application when Asian Citrus Psyllid (ACP) oviposition is seen or expected, when early feather leaf flush is present.

To maximize coverage of the entire leaf flush, make split application by spraying half of volume of product (10 fl. oz. per acre) as indicated above (ovipostion seen or expected, early-feather leaf flush is present, leaf distortion is evident), and the other half (10 fl. oz. per acre) to protect new growth flush, as needed. Wait at least 30 days **(90 days in CA)** for subsequent applications of Cavalier 2L.

Low Volume Application – apply by ground (air-assisted or air blast spray equipment - nozzle must produce droplet size of 90 microns or larger) in 3 to 5 gallons (total volume) per acre.

Citrus Rust Mite (*Phyllocoptruta oleivora*)

Make application when Citrus rust mites (CRM) are first observed on fruit or leaves.

For CRM control programs, rotate to an insecticide with a different mode of action before applying Cavalier 2L. Activity of Cavalier 2L on CRM is on immature stages, with most activity on late-instar CRM and may not reach full effect for up to 14 days after application.

Lepidopterous Miners: Citrus Leafminer (*Phyllocnistis citrella*)

Make application when Citrus Leafminer (CLM) oviposition is seen or expected, when leaf flush is present and oldest leaf is expanded by one-quarter, or when leaf mining is evident.

To maximize coverage of the entire leaf flush, make split application by spraying half of volume of product (10 fl. oz. per acre) as indicated above (ovipostion seen or expected, leaf flush is present, leaf distortion is evident), and the other half (10 fl. oz. per acre) to protect new growth flush, as needed. Wait at least 30 days **(90 days in CA)** for subsequent applications of Cavalier 2L.

Low Volume Application – apply by ground (air-assisted or air blast spray equipment - nozzle must produce droplet size of 90 microns or larger) in 3 to 5 gallons (total volume) per acre.

Lepidopterous Miners: Citrus Peel Miner (*Marmara* spp.)

Make application when citrus peel surfaces show Citrus peel miner (CPM) oviposition, or when expected.

To maximize coverage of the fruit surface, make split application by spraying half volume of product (10 fl. oz. per acre) when CPM oviposition begins, and the other half (10 fl. oz. per acre) to protect expanded fruit growth, as needed. Wait at least 30 days **(90 days in CA)** for subsequent applications of Cavalier 2L. Protection from CPM larvae will lessen over time as fruit expands and new, unprotected tissue develops, but may last up to several weeks.

Citrus Root Weevil Complex: West Indian Sugarcane Rootstalk Borer Weevil (*Diaprepes abbreviatus*), Southern Blue-Green Citrus Root Weevil (*Pachnaeus litus*), Blue-Green Citrus Weevil (*Pachnaeus opalus*) Fuller Rose Beetle (*Asynonychus godmani*), Little Leaf Notcher (*Artipus flondanus*)

Make application to citrus leaf flush when Citrus root weevils (CRW) are seen, when oldest leaf is expanded by one-half, or when recent leaf feeding is evident.

Katydids, Grasshoppers:

Make application when katydids or grasshoppers are seen, or recent feeding on leaves or fruit is noticed.

To maximize coverage and protection of leaves and fruit, make split application by spraying half of volume of product (10 fl. oz. per acre) as indicated above (katydids or grasshoppers are seen, recent feeding on leaves

or fruit), and the other half (10 fl. oz. per acre) to protect new growth, as needed. Wait at least 30 days **(90 days in CA)** for subsequent applications of Cavalier 2L.

Adjuvants - To enhance spray coverage, add a CDA approved or other quality surfactant such as Dine-Amic® or Kinetic® or addition of a spray oil, such as FC435-66. Addition of a spray oil also aids knockdown of existing populations (CRM), penetration or absorption of Cavalier 2L into immature stages of insects[2], mines[3], eggs[1,3,4,5,6,7], larvae[3], pupae[3], nymphs[1,6,7] and adults[1,6,7]. A spray oil improves Cavalier 2L's activity, which is to prevent eggs from hatching, larvae or nymphs from molting, moths from emerging from pupae, and limiting eggs laid or able to hatch by adult females when exposed to Cavalier 2L through contact, ingestion and/or absorption. Spray oil also limits egg mass attachment to citrus leaf surface[3].

1 – Asian Citrus Psyllid
2 – Citrus Rust Mite
3 – Citrus Leafminer
4 – Citrus Peel Miner
5 – Citrus Root Weevil Complex
6 – Katydid
7 - Grasshopper

IMPORTANT:

- Application of Cavalier 2L when new citrus flush has emerged will give best control of the most pests, however it can be applied anytime during the year
- Cavalier 2L affects existing ACP, CLM and citrus root weevil populations by diminishing their reproductive ability.
- Cavalier 2L does not control the following insect growth stages:
  - Adult Asian citrus psyllid, citrus root weevils, katydids or grasshoppers
  - Adult Citrus Rust mite or Citrus rust mite eggs
  - Citrus Leafminer or Citrus peel miner moths

RESTRICTIONS

- **Ground Application:** Do not apply within 25 feet of bodies of water such as lakes, reservoirs, rivers, permanent streams, natural ponds, marshes or estuaries. **In the State of Florida,** do not apply within 100 feet of estuarine/marine bodies of water. Spray last three rows windward of surface water using nozzles on one side only, with spray directed away from surface water. Avoid spray going over tops of trees by adjusting or turning off top nozzles. Shut off nozzles on one side away from the grove when spraying the outside row. Shut off nozzles when turning at ends of rows and passing tree gaps in rows.
- **Aerial Application:** Do not apply within 150 feet of bodies of water such as lakes, reservoirs, rivers, permanent streams, natural ponds, marshes or estuaries. **In the State of Florida,** do not apply within 1000 feet of estuarine/marine bodies of water.
- Maximum amount of product per acre is 60 fl. oz. (15 oz. a.i.) per year
- Maximum number of applications per year is three full rate applications of 20 fl. oz. per acre per year or six split applications of 10 fl. oz. per acre per year, or a combination of full and split applications, not exceeding the maximum yearly amount of 60 fl. oz. (15 oz. a.i.) per acre per year.
- Pre-harvest interval is 7 days **(21 days in CA)**.
- Wait a minimum of 30 days **(90 days in CA)** for repeat application (except when making split applications, as per instructions, above)
- Do not graze livestock in treated areas or harvest cover crops in treated areas for livestock feed

Read the "LIMITED WARRANTY" in the label booklet for this product before using.

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