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 (barley, oats, triticale and wheat; cotton; leafy brassica and turnip greens; peanut; pepper; rice; soybean; turfgrass),
orchard crops (oranges, grapefruit, tangerine and pummelo; pear; stonefruit (excluding cherries), tree nuts) and non-crop uses (livestock and poultry premises; grassland; non-crop areas)

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
See inside label booklet for First Aid, Precautionary Statements and Directions for Use including Storage and Disposal Instructions.

EMERGENCY ASSISTANCE: EMERGENCY PHONE 800-424-9000.
SAFETY DATA AND INFORMATION 203-573-3303.
TRANSPORTATION EMERGENCY (CHEMTREC) 800-295-5490.
Have the product container or label with you when calling a doctor or going for treatment.

EPA Reg. No. 88769-1
EPA F1b. No. 5905-6 A-51

Net Contents: 1 Gallon

Manufactured for:
RAYMAT CROP SCIENCE, INC.
440 Boulder Court, Suite 300, Pleasanton, CA 94566
info@raymat.com • Phone: 925-249-9984
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 Canvass 2L container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact Chemfree at 1-800-424-9380 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 laminates, 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 laminates, nitrile rubber, neoprene rubber, natural rubber, polyethylene, PVC or viton; shoes plus socks; dust/mist filtering respirator (NIOSH/NIK approved number prefix TV-230C or a M5000W approved respirator with any R, P or N series).

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 are closed systems (including water resistant bags), enclosed cabins, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240(a)(4-6)), the handler PPE requirements may be reduced or modified as specified in the WPS.
USER SAFETY RECOMMENDATIONS

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

ENVIRONMENTAL HAZARDS

This pesticide is toxic to invertebrates/juvenile insects and aquatic invertebrates/rods/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 rinsewater.

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 cause workers or other persons, either directly or through drift, to be exposed to the pesticide. 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, certification, education, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

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

PPE required for entry into treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:
• coveralls
• chemical-resistant gloves made of any waterproof material, such as polyethylene or polyvinyl chloride
• shoes plus socks

INSTRUCTIONS AND INFORMATION

RUNOFF

Cavatine 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, sloughs)
• application of product avoided if forecasts predict rainfall within 48 hours
• practices that foster sound erosion control
SPRAY DRIFT LABELING

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 UAV 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 flow rates produce larger droplets.

Pressure — Do not exceed the nozzle manufacturer’s recommended pressures. For every nozzle type, lower pressure produces larger droplets. When higher pressures 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 stream produces larger droplets than other orientations and is the recommended practice. Significant reduction 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 distances should increase with increasing drift potential (higher wind, smaller crop, 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 drift 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 mixing 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 may 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 lingers and moves laterally to 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 where 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

Cavailer 2L is an insect growth regulator, whose unique 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

- Cavailer 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 of bodies of water such as lakes, reservoirs, rivers, permanent streams, natural ponds, marshes or estuaries. All applications must include a 30 foot vegetative buffer strip within the buffer zones to decrease runoff.
- FLOODPLAIN CROPS: Unless diversion levee is registered for use on a particular crop, wait one month after last application to plant food or feed crops in soils treated with Cavailer 2L.
- Due to distinctive mode of action, insects could take several days following application to show visible effects of Cavailer 2L.
- Do not apply via fumigation in the State of California.

APPLICATION INSTRUCTIONS

Mixing Directions – with water

- Fill a clean spray tank with one-half of the water required for treatment
- Begin agitation and add appropriate amount of Cavailer 2L to spray tank
- Add second half of water while maintaining agitation
- If adding oil, pour the appropriate amount slowly into the mixing tank. Make 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 Cavailer 2L and other ingredients in a nursery tank before transferring into appropriate application equipment.

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

Compatibility – when combining Cavailer 2L with other pesticides, additives or adjuvants, test for compatibility and sprayability in a folded glass jar (~1 quart label, 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 Cavailer 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 Cavalor 2L.

Applications – Chemigation

*DO NOT APPLY VIA CHEMIGATION IN THE STATE OF CALIFORNIA

Cavalor 2L can be applied by chemigation in grassland and row crops. System should be properly equipped for insect control. Cavalor 2L can be applied only through sprinkler irrigation systems (center pivot, lateral move, and row, side hill etc.), trailer, big gun, solid set, or hand move. Cavalor 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 (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 gallons per minute rate (converting from gallons per minute)
- Operate system at desired injection 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 gas-liquid physical break (air gap) between the lower 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 filled 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 pumps) effectively designed and constructed or 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 row insect pressures and apply Cavalier 2L against current and immediate 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

BARLEY, OATS, TRITICALE, & WHEAT

Application Instructions
Cavalier 2L can be applied aerially in 3 to 5 gallons (total volume) per acre, or by ground application in 8 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 Beetles: 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 distinctive mode of action of Cavalier 2L.

• For use only in: Alaska, Colorado, Idaho, Montana, Nebraska, Western (West of Route 201); North Dakota, Western (West of Route 201); Oregon; South Dakota, Western (West of Route 201); Utah, Washington, Wyoming

• Maximum number of application is 1 per season

• Maximum amount of Cavalier 2L per acre is 4 fl oz, per season

• Make application only up until the boot stage of growth

• Pre-harvest interval for forage is 3 days; Pre-harvest interval for hay is 16 days; Pre-harvest interval for grain and straw is 50 days.

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 UGV application in 8 to 15 fl oz, total volume per acre. Make sure that application volume is sufficient for adequate coverage.
Adjustments:
- 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/symptoms.
- 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 enhance canopy penetration.
- When Cavalier 2L is being applied via a UHV (20 ft. or) miniminum of an emulsified coconut-based, vegetable or petroleum based oil carrier is to be used. (If coconut oil is used, a compatibility agent may be necessary for thorough blending)

For all specifications, check with your Flayma 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 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 6 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, Yellow-striped Armyworm, Southern Armyworm and suppression of Cabbage Looper, Saltmarsh Caterpillar: apply 4-8 fl. oz. per acre.

Make applications during 2 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 blooming): apply 4-8 fl. oz. per acre

For optimum boll weevil control, apply initially at phloem square stage of cotton growth. Wait 7 days before repeat application. For UV application use the lowest (4 fl. oz. per acre) rate.

Dilutions: Use 2 to 4 qts per centifruc crop oil, emulsified coconut oil or vegetable oil. Or if using a UHV application, use a minimum of 6 oz. of vegetable or petroleum based oil carrier, oil-based insecticide or emulsified coconut oil (oil carricred oil used is non-emulsified), a compatibility agent may be necessary for thorough blending). For oil specifications, check with your Flayma representative or supplier.

Cavalier 2L does not kill adult boll weevil, but controls populations by suppressing reproduction - eggs deposited by infested female weevils will not hatch. Seven to 10 days after initial treatment of female, non-fertilized 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 phloem square helps 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 reach full vegetative growth. The number of weevils 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.

Advantages: Use 2 to 4 quarts paraflin-crop oil emulsified, colza oil or vegetable oil with a low volume application spray. Or if making a UV application, use a minimum of 8 fl oz of vegetable or petroleum based oil carrier, oil-based insecticide or emulsified colza oil and 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 concentrates, 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 distinctive mode of action of Cavalier 2L.
- Maximum number of applications per season is 6
- Maximum amount of Cavalier 2L per acre is 24 fl. oz. per season
- For cases of heavy infestation, the maximum number of applications is 3, and the maximum amount of product per acre is 12 fl oz.
- Pre-harvest interval is 14 days

LEAFY BRASSICA GROUP (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 control 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. Resupply after 7 days if crop resumption (aphidal batching) continues. For effective control, apply before grasshoppers reach the adult stage. Use higher 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 distinctive 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 ingested plant material treated with Cavalier 2L, and then undergo molting
- Do not apply to horticultural varieties or collards with harvestable root
- Maximum number of applications per season is 4
- Maximum amount of product per acre is 16 fl oz. per season
- Pre-harvest interval is 7 days
PEANUT
Application Instructions
Cavalier 2L can be applied as a spray, by 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 in uniform coverage.
Advantages: See COTTON section.
Application Rate
Velvet Bean Caterpillar, Mexican Bean Beetle, Green Cloverworm: apply 2.4 fl. oz. per acre
Armyworm (such as Boll, Fall, Southern, Yellow-stripe): Lesser Cornstalk Borer: apply 4.8 fl. oz. per acre
Soybean Leper: suppression: apply 4-8 fl. oz. per acre
For optimum control and minimum of insect damage, apply when larvae are small (less than 1/2 inch). Use higher application rate for greater residual control, around dense foliage, or for areas with high insect pressure. Cavalier 2L can be rescheduled 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 distinctive 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 late larvae and nymphs treated with Cavalier 2L, and then average melting).
- If a large infestation 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 restrictions, and other restrictions.
- Maximum number of applications per season is 3
- Maximum amount of product per acre is 24 fl. oz. per season
- Pre-harvest interval is 58 days

PEPPER – Bell and Non-Bell
Application Instructions
Cavalier 2L can be applied as a spray, 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.
Advantages: 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 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 (Boll, Fall Southern) and other Lepidoptera 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 rate.
Tank Mixes: If presence of late instar larvae are detected, tank mix Cavalier 2L with an insecticide that provides immediate knockdown. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and restrictions, and other restrictions.
IMPORTANT

- Maximum amount of product per season is 24 fl. oz. per acre
- Maximum amount of applications per season is 5
- Preharvest interval is 7 days
- Due to the distinctive mode of action of Cavalier 2L, it could take up to 6 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)

RICE

Application Rate and Instructions

Apply Cavalier 2L initially to 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:

- **Capital** - Make one 8 oz to 16 fl. oz. per acre application for historically high infestations, use 1:1-1.5 fl. oz. ratio. Apply to rice in CA when rice is at 2 to 4 leaf stage, typically 2-6 days after rice emerges above water.
- **Southern B. S. Rice Belt - water seeded, paddy field, 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 6 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 B. S. Rice Belt - drip 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 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 Mix: Cavalier 2L can be tank mixed with rice post permanent flood herbicides, such as those containing the active ingredient quinclorac, tifluazifuran or bensulfuron methyl, as it does not exhibit any phytotoxicity to rice. Read and follow the label of each tank mix product used for prophylactic applications, directions for use, rates and timings, and other restrictions.

IMPORTANT

- Preharvest interval is 80 days
- To avoid decreased activity, apply Cavalier 2L when flood flooding is not in progress.
- Treatment must be made with Cavalier 2L (do not try to treat specific sections of rice fields)
- Do not use on wild rice (Obturat spp.)
- Granular material treated with Cavalier 2L cannot be used in rice
- Cavalier 2L should not be used around crayfish (crayfish):
  - 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 into fields where crayfish are farmed
- Fishkills from treated rice are only to be used to irrigate crops killed on Cavalier 2L’s label.
- Resists treated Roundup at least 14 days, in-grown Cavalier 2L time to dissipate
- Cavalier 2L does not control adult weevil 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.
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
Veget 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, SoybeanLooper (suspension): 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 excessive 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 pressures. Making application of Cavalier 2L at 2 to 4 fl. oz. at the R5 (beginning of pod growth) – fully developed leaf with pod of 3/16 inches in length on main stem uppermost node(s) growth stages will result in most consistent yield increase.

IMPORTANT
• Do not use on soybeans in the State of California;
• Due to the distinctive 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);
• Maximum number of applications per season is 2;
• 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 (Full, Tru, Southern Beetle, Yellow-striped), Sod Webworm, Striped Grass Looper, Granulate Cutworm, and other Lepidoptera 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.

IMPORTANT
• Maximum amount of applications per year is 4
**ORCHARD CROPS**

**ORANGE, GRAPEFRUIT, TANGERINE, PUMMEL0** and their hybrids

**Application Instructions**

*Cavalier 2L* can be applied orally, in 5 to 20 gallons (total volume) per acre, or by ground application, in 50 to 100 gallons (total volume) per acre. While the total application volume is sufficient for uniform coverage, optimum results on the larger range of pests will be gained from applying *Cavalier 2L* when new leaf 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.

**Aedias Citrus Psyllid** (*Diaspis citri*)

Make application when Aedias Psyllid (APD) oviposition is seen or expected, when early feater leaf flush is present, or when leaf distortion 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 (oviposition seen or expected, early-feater 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 90 days for subsequent applications of *Cavalier 2L*.

**Citrus Rust Mite** (*Phyllocoptruta oleivora*)

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

For CRM control purposes, make an application within 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.

**Lepidopteran Miners: Citrus Leafminer** (*Phyllonorycter 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 curling 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 (oviposition 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 90 days for subsequent applications of *Cavalier 2L*.

**Lepidopteran Miners: Citrus Plof Miner** (*Mamara sp.*)

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

To maximize coverage of the full surface, make split application by spraying half of 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 90 days for subsequent applications of *Cavalier 2L*. Protection from CPW 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 Rootknot Rove Beetle* (*Xiphinema index*), *Southern Blue-Gray Citrus Root Weevil* (*Pratylenchus vulnus*), *Blue-Green Citrus Weevil* (*Pratylenchus spatiodus*), *Fuller Rose Beetle* (*Chitonothrus podmarus*), *Little Leaf Notcher* (*Arilus croenta*)

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

**Katydid, 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 (kaydids or grasshoppers are seen, recent feeding or leaves or fruit), and the other half (10 fl. oz. per acre) to protect new growth, as needed. Wait at least 90 days for subsequent applications of *Cavalier 2L*.
Adjuvants - To enhance spray coverage, add a petroleum spray oil, such as FCX5, etc. Addition of a spray oil also aids breakdown of existing populations (OMG, penetration or absorption of Cavalier 2L into immature stages of insects, eggs, leaf mines, nymphs, and adults). A spray oil improves Cavalier 2L’s activity, which is to prevent eggs from hatching, larvae or nymphs from molting, mines from emerging from jujubes, and limiting eggs laid or able to hatch by adult females when exposed to Cavalier 2L through contact, ingestion and/or evaporation. Spray oil also limits egg mass attachment to citrus leaf surface:

1 = Asian Citrus Psyllid
2 = Citrus Rust Mite
3 = Citrus Leafminer
4 = Citrus Peel Miner
5 = Citrus Root Weevil Complex
6 = Khydrid
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.
- Ground Application: Do not apply within 25 feet of bodies of water such as lakes, reservoirs, rivers, permanent streams, natural ponds, marshes or swamps. In the State of Florida, do not apply within 100 feet of estuaries or marine bodies of water. Spray last three rows windward of surfacw 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 grave 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 swamps. 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. per year.
- Pre-harvest interval is 21 days.
- Wait a minimum of 50 days for next application (except when making split applications, as per instructions, above).
- Cavalier 2L affects existing NP, OLM and citrus root weevil populations by diminishing their reproductive ability.
- Cavalier 2L does not control the following insect growth stages:
  o Adult Asian citrus psyllid, citrus rust mite, khydrid or grasshoppers
  o Adult Citrus Rust mite or Citrus peel miner mites

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: Peel Rust Mite (pre-bloom) — apply 40 to 48 fl. oz. per acre.
  - Make application anytime from delayed dormant period to white bud. For dormant period or "popcorn" stage of growth, and during the deposition of pear psylla eggs so that Cavalier 2L contacts eggs and leaves for 24 hours. Make sure tree is completely and uniformly covered with spray for optimum control.
- Additional: 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 (hormone surfactant) (label instructions).

Controlled Molt, suppression of Peel Psylla (post bloom) — apply 12 to 16 fl. oz. per acre.
- Make application as soon as possible after first controlled molts are observed or at least 24 hours after bloom. Cavalier 2L prevents hatching of controlled molt eggs, and must be applied to trees before eggs are laid, so that hatching eggs are deposited on treated
surfaces. Make sure that entire tree surface, including fruit and foliage, is treated with Cavalier 2L. If feeding pressure is light, or if pear trees are small, use lower rates. 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 is not employed, the third application should be made 21 - 30 days after the 2nd, or 120 days after initial. The fourth application should be made 21 - 30 days after the third.

Tank Mixes: For more effective control of moderate to heavy feeding 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 boil for 1st generation, or 1200 degree days following boil for 2nd generation). Application of this tank mixture can be repeated for 2nd and 3rd generations of feeding 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 feeding 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 and organophosphates 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 restitually controlled. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.

Leafliner — apply 8 oz per acre

For control of leafliner 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 generation of leafliner. 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 leafliner larvae throughout the sap feeding stage, make sure that foliage is completely covered.

IMPORTANT

- Use oil with Cavalier 2L could cause certain pear varieties to display injury. Local fruit tree specialists can advise on compatibility of oil mixtures.
- Do not use oil with Cavalier 2L for late season (8th and 9th) applications.
- Maximum number of applications per year is 4
- Maximum amount of product per season is 64 fl oz per acre
- Pre harvest interval is 14 days.

STONEFRUIT (excluding cherries)

Insecticides: Apron, Sevin, Peach, Plum, Preme

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 Borers: apply 12 - 16 fl oz per acre (use higher rate for orchard with a history of heavy infestations)

Formulated / Dusted Formulation: 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 aidle spray).

Bloom Application: Application can be made with a vegetative oil (1 q per acre), with application starting at early bloom.
Leafhoppers (Filbert, Bicolored Banded, Omohorca, Variegated), Molt (Oriental Fruit, Winter), Full Webworms, Walnut Caterpillar: apply 8 – 10 fl oz, per acre.

Make application when insect larvae are first observed. The higher use rate will give longer residual control. It should also be used if foliage is heavy or dense, if past infestations are high, or if trees are large or crop load is low.

Grasshoppers, Katydid (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. The higher use rate should be used if foliage is heavy or dense. If past infestations are high, if trees are large, or for further residual control. Larvae and nymphs could take up to 5 to 7 days following application to show visible effects, due to the distinctive 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.

IMPORTANT:
- Maximum amount of product per year is 32 fl oz, per acre (16 fl oz, when applied to grasshoppers and katydids in peach orchards in GA only).
- Maximum amount of applications per year is 2 (or when applied to grasshoppers or katydids in peach orchards in GA only, as needed, up to application of 16 fl oz, per acre).
- Wait a minimum of 21 days between Cavalier 2L applications.
- Cavalier 2L is not to be applied to stone fruit 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 Worms: apply 12 – 16 fl oz, per acre

Apply Cavalier 2L before eggs are laid on treated foliage, or when moths first emerge from cocoons – if using pheromone detection traps, 2 to 3 days after first moth catch (traps take 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 warm pressure is low. Use higher rate if trees are larger, or warm pressure is moderate to high. If necessary (continuing high moth pressure), a subsequent application of Cavalier 2L should be made.

Hickory Sawfly: 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 sawfly moth emerges; make second 4 to 8 fl oz, applications two weeks later. Cavalier 2L can also be applied at half-shell hardening, with additional application 21 days later, up to shuck split, or while heavy insect infestations are present. Use the higher rate on heavy, dense foliage, on larger trees or low crop load, or for 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 organophosphorous insecticide at its lowest rate to control extended populations of codling moth because of variations in emergence times due to temperature fluctuations or overwintering. Application should occur at normal timeframe for an organophosphorous insecticide. Additionally, if Cavalier 2L is not initially applied prior to egg laying, then tank mixing with an organophosphorous insecticide as indicated above will enhance control. Read and follow the label of each tank mix product used for pressurisation statements, directions for use, rates and timings, and other restrictions.

Peach Twig Borer – apply 12 – 16 ft. oz. per acre (use higher rates 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.

Soil Feed (Mix Sour) or Summer Spray – Apply Cavalier 2L at initial flight activity (as determined by pheromone traps).

Pecan Nuts/Ground-Bees: apply 8 – 16 fl. oz. per acre

Apply Cavalier 2L as a split application as indicated:

- For optimum control and best net set, apply first application at 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 4 – 8 fl. oz. 8 to 15 days following first application (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 post infestations.

Pecan Weevil (suppression): apply 8 – 16 fl. oz. per acre

Use the higher rates for moderate to heavy infestations, or if weevils are attacking crop.

Leatherjacket (Rhytibius brunneus, Omnimus variegatus), Moth (Oriental Fruit, Winter), Fall Webworm, 3mm Navicular, Catepillar (Fruit-humped, Walnut): apply 8 – 16 fl. oz. per acre

Make application as soon as larval infestations are detected. Use the higher rate on heavy, dense foliage, on larger trees or low crop load, or under higher post infestations.

Tent Caterpillar (for use in almonds, pecans, pistachios and walnuts (rock and English)): apply 8 – 16 fl. oz. per acre

Make application as soon as larval infestations are detected. Use the higher rate on heavy, dense foliage, on larger trees or low crop load, or under higher post infestations.

IMPORTANT

- Pre-harvest interval is 28 days
- Maximum amount of product per growing season is 54 fl. oz. per acre
- Maximum amount of applications per year is 4 (3 for walnuts)
- If four applications are made to tree nuts, the timing should correspond to:
  - Dormant to pre-bud swell
  - Bloom to petal fall
  - Flower/stages/immature nut fruit formation
  - Hull split

18
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 bunk, fence lines of holding pens, hay bale feeders, water troughs and waste retention ponds (marginal areas c), and Cavalier 2L can control insects around bedding material, cage frames, ceilings, feed muck/ripple, floors, litter, manure, manure or manure mixtures, posts, spilled organic refuse,舐eate feed and walls/wall linings.

Application Instructions and Rate
Carries Beetle, Daring Beetle, Hide Beetle (Except California):
Apply 37 f. oz. Cavalier 2L in 2 to 20 gallons of water per 1000 ft²

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; liter 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 wet litter and other surfaces.

Dusted Application - Cavalier 2L can be applied only where pests congregate, including along perimeter walls and side and end walls, 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.

Flys (Including House, Stable, Face, Horse):
Broadcast - Apply 12 fl. oz. Cavalier 2L in 2 to 20 gallons of water per 1000 ft²

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.

Swot Treatment - Apply 6 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 ft² of surface (10 gallons spray solution treat 400 ft²). Repeat applications can be made when fly numbers begin to increase – usually within 14 to 21 days.

IMPORTANT
• Do not apply this product for control of Carus Beetle, Daring Beetle or Hide Beetle in the State of California.
• Application is not to be made directly to livestock or poultry.
• 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.
• 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 not 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 statement, directions for use, rates and limtings, and other restrictions.

• If controlling insects around hay feeding sites, make product application around entire sail surface where livestock activity mixes the waste hay and manure.
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/cereal crops grown for silage, blemsses or biorenewable production, including switchgrass, miscanthus spp., etc.

Application Instructions
Cavalier 2L may be applied either 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 galleries. 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 1/4 inch long, prior to reaching fourth instar growth stage), and at least 7 days prior to hatch out. Populations will be decreased once larval consume Cavalier 2L and undergo melting.

Grasshopper, Mormon Cricket
- Make one application at 1 to 2 fl oz. per acre on grasshoppers or Mormon crickets at early instar growth stage (i.e., 2nd through 4th instar nymphal stage). 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 postbloomed, use higher 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 treated area. For every 100 feet treated, skip the next 100 feet. Use if the target insect is at early instar growth stage, vegetation is sparse, and topography is uniform. Use higher rate and 100% coverage if most of the instillation is at the late instar growth stage, vegetation is dense, terrains 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 IVM program that takes advantage of the grasshopper's natural tendency to move as they feed. As grasshoppers move from untreated to treated areas and not foliage treated with Cavalier 2L, they are killed once mating occurs. The rate of Cavalier 2L is lowered and applied in alternating treated and untreated strips. A RAAT treatment reduces application cost, and therefore 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 rates of Cavalier 2L. Cavalier 2L should be applied after egg hatch, through early instar growth stages, as it will control the early 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

- Maximum amount of product per cutting is 2 fl. oz. per acre
- Maximum amount of product per year is 9 fl. oz. per acre
- Wait at least 1 day following Cavalier 2L application prior to cutting grass.
- 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 UTV applications, consider 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 distinctive 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, M. ornitcola could exhibit structural deformities (such as malformed abdominal segments, twisted anemone, and malformed wings, missing posterior legs, harelquin nymph 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).

NON-CROP AREAS
Including field border, fence rows, roadsides, landfills, ditches, and 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 3/8 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.

IMPORTANT

- Maximum amount of product per application is 2 fl. oz. per acre
- Maximum amount of product per year is 6 fl. oz. per acre

See Grassland Directions for Use for other restrictions and comments.
STORAGE AND DISPOSL

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

PESTICIDE STORAGE: Store product in its original labeled container only.

PESTICIDE DISPOSAL: Waste 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 rinse into a mix tank or store rinse 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. Top container on its side and roll it back and forth, ensuring at least one complete revolution, for 10 seconds. Stand the container on its end and tip it back and forth several times. Empty the rinse 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. Roll container upside down over mix tank to collect rinse for later use or disposal. Insert pressure mixing nozzle in the side of the container and rinse about 40 seconds 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 as allowed by State and local authorities, by burning. If burned, stay out of smoke.

Recycling: Container cleansing, 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 1-877-662-2277 (call free) or www.acrcycle.org.

LIMITED WARRANTY

Raymata Crop Science, Inc. warrants only that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on 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, RAYMATA CROP SCIENCES, INC. MAKES NO OTHER WARRANTIES, EITHER EXPRESSED OR IMPLIED. No agent or representative of Raymata Crop Science or Seller is authorized to make or create any other express or implied warranty.

LIMITATION OF LIABILITY

To the fullest extent allowed by law, Raymata 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 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 RAYMATA 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 RAYMATA CROP SCIENCES, INC. OR SELLER, THE REPLACEMENT OF THE PRODUCT.

22
PROMPT NOTICE OF CLAIM

To the extent consistent with applicable law allowing such requirements, Raymer 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 Raymer Crop Sciences, LLC of any claims in such period, it shall be barred from obtaining any remedy.

NO AMENDMENTS

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

Due to toxicity to aquatic invertebrates, container, for retail sale and use only
by certified applicators, or persons under their direct supervision, and only for
those uses covered by the certificate holder’s certification.

Cavaller 2L
Insect Growth Regulator + Aqueous Flowable

ACRYLIC INGREDIENTS:
- Formulations: [2-Chlorophenol resin/cutback]
- 2.6-dichlorobenzamide: 22%
- OTHER INGREDIENTS: 78%
- Total: 100%

*Contains 2 lbs. of Aqueous per gallon

KEEP OUT OF REACH OF CHILDREN

CAUTION
See attached label booklet for additional Precautionary Statements and Directions for use.

EMERGENCY ASSISTANCE: EMERGENCY PHONE 800-424-9390.

TRANSFERRABLE EQUITY (GURU): 660-218-5000.
Have the product container or label with you when calling a doctor or going for treatment.

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

ENVIRONMENTAL HAZARDS
This pesticide is toxic to beneficial animals including birds and aquatic invertebrates. Use in areas
above the mean high water mark. Do not use near or in areas where surface water is present or
in fresh water bodies or other aquatic environments. Do not use near or in areas near or in
agricultural sections in water adjacent to treated areas. Do not contaminate water when disposing
of equipment washwaters or residuals.

EPA Reg. No. 84679-1
EPA Est. No. 5905-GA-01

Manufactured for:
Raynatt Crop Science, Inc.
440 Boulder Court, Suite 300
Marianna, CA 95459
info@raynatt.com
Phone: 925-219-5950
Web Contents: 1 Gallon

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. If skin
is irritant wash with plenty of water for 15-20 minutes. Call a poison control center
or doctor for 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
rigorously. Call a poison control center or doctor for treatment advice. IF INHALED: Move
victim to fresh air. If person is not breathing, call 911 or an ambulance. Then give
appropriate respiration, preferably by mouth-to-mouth, as needed.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store product in original labeled container only.

PESTICIDE DISPOSAL: Follows resulting from the use of this product may be disposed
down a toilet or at an on-site waste disposal facility.

CONTAINER HANDLING:
Plastic containers, Recycleable container. Do not reuse or refill the container. Trip
inside or pressure for equivalent promptly after emptying.

Drain contents into: Container small enough to handle. Empty the remaining
contents into a REPLACEMENTS AND UPCYCLING DATES:
Turn container on its side and roll it back and forth, ensuring at least one complete revolution, for 30
seconds. Save the container on its end and tip it back and forth around 30 seconds. Empty the residue into
the container and one for later use or disposal. Repeat the procedure two more times.

Pressure release as follows: Slightly the remaining contents into the sink and continue
to run for 7-10 seconds after the fluid continues to drip. Hold container upright down
over the sink to collect residue in latter use or disposal. Based pressure release residue
in the sink of the container and one of 30 seconds. Do not for 5-10
seconds after the fluid stops to drip.

Shake often container for clearing or conditioning, or puncture and dispose of in
a sanitary landfill or by incineration, or if allowed by State and local authorities, by
burning. Inhale, stay out of smoke.

RECYCLING: Once drained, some agricultural pesticide containers can be taken
to a consumer collection site or picked up for recycling. To find the nearest in, contact
your chemical dealer or manufacturer or contact Container Recycling Council (ARC)
at 714-774-2272 (call toll free) or www.recyclle.org.

June 27, 2011