



MADARI™

4F

ACTIVE INGREDIENT:

Imidacloprid: 1-[(6-Chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinimine..... 40.7%

OTHER INGREDIENTS:..... 59.3%

TOTAL 100.0%

Contains 4.0 pounds of imidacloprid per gallon.

EPA Reg. No.: 93930-24

KEEP OUT OF REACH OF CHILDREN CAUTION

SHAKE WELL BEFORE USING

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.

(If you do not understand the label, find someone to explain it to you in detail.)

See below for additional Precautionary Statements.

FIRST AID	
If swallowed:	<ul style="list-style-type: none">• 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 a poison control center or doctor.• Do not give anything by mouth to an unconscious person.
If on skin or clothing:	<ul style="list-style-type: none">• Take off contaminated clothing.• Rinse skin immediately with plenty of water for 15 to 20 minutes.• Call a poison control center or doctor for treatment advice.
If inhaled:	<ul style="list-style-type: none">• Move person to fresh air.• If person is not breathing, call 911 or an ambulance, then give artificial respiration.• Call a poison control center or doctor for treatment advice.
If in eyes:	<ul style="list-style-type: none">• Hold eye open and rinse slowly and gently with water for 15 to 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 product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact SafetyCall at 1-984-465-4791 for emergency medical treatment information.	
Note to Physician: No specific antidote is available. Treat the patient symptomatically.	

For Chemical Emergency: Spill, Leak, Fire, Exposure, or Accident, Call CHEMTREC Day or Night Within USA and Canada:
1-800-424-9300 or +1 703-527-3887 (collect calls accepted)

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Harmful if swallowed, absorbed through skin, or inhaled. Causes moderate eye irritation. Avoid breathing vapor or spray mist.

PERSONAL PROTECTIVE EQUIPMENT (PPE):

Applicators and other handlers must wear:

- Long sleeved shirt and long pants,
- Chemical-resistant gloves made of nitrile rubber \geq 14 mils, neoprene rubber \geq 14 mils, barrier laminate \geq 14 mils, polyvinyl chloride (PVC) \geq 14 mils or viton \geq 14 mils,
- Shoes plus socks.

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

ENGINEERING CONTROLS STATEMENT

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

USER SAFETY RECOMMENDATIONS

Users should:

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

Do not apply directly to water, areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops/plants or weeds if bees are foraging. This product is toxic to wildlife and highly toxic to aquatic invertebrates.

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

PHYSICAL OR CHEMICAL HAZARDS

Do not mix or allow to come into contact with oxidizing agents. Hazardous chemical reaction may occur.

PROTECTION OF POLLINATORS



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

Look for the bee hazard icon  in the Directions for Use for each application site for specific use restrictions and instructions to protect bees and other insect pollinators.

This product can kill bees and other insect pollinators.

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

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

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

When Using This Product Take Steps To:

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

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

Pesticide incidents (for example, bee kills) should immediately be reported to the state/tribal lead agency.

For contact information for your state, go to: www.aapco.org/officials.html. Pesticide incidents should also be reported to the National Pesticide Information Center at: www.npic.orst.edu or directly to EPA at: beekill@epa.gov

DIRECTIONS FOR USE

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

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



FOR CROPS UNDER CONTRACTED POLLINATION SERVICES

Do not apply this product while bees are foraging. Do not apply this product until flowering is complete and all petals have fallen unless the following condition has been met:

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

FOR FOOD/FEED CROPS AND COMMERCIALLY GROWN ORNAMENTALS NOT UNDER CONTRACT FOR POLLINATION SERVICES BUT ARE ATTRACTIVE TO POLLINATORS

Do not apply this product while bees are foraging. Do not apply this product until flowering is complete and all petals have fallen unless one of the following conditions is met:

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

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

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and 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 following application.

Exception: If the product is soil injected or soil incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

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 nitrile rubber ≥ 14 mils, neoprene rubber ≥ 14 mils, barrier laminate ≥ 14 mils, polyvinyl chloride (PVC) ≥ 14 mils or viton ≥ 14 mils, and
- Shoes plus socks.

TAKE THE FOLLOWING PRECAUTIONS WHEN MIXING AND APPLYING IN THE VICINITY OF AQUATIC AREAS SUCH AS LAKES; RESERVOIRS; RIVERS; PERMANENT STREAMS, MARSHES OR NATURAL PONDS; ESTUARIES AND COMMERCIAL FISH FARM PONDS.

SPRAY DRIFT MANAGEMENT

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

Mixing and Loading

To avoid potential contamination of groundwater, the use of a properly designed and maintained containment pad for mixing and loading of any pesticide into application equipment is recommended. If containment pad is not used, maintain a minimum distance of 25 feet between mixing and loading areas and potential surface to groundwater conduits such as field sumps, uncased well head, sink-holes or field drains.

For Aerial Applications

Mount the spray boom on the aircraft so as to minimize drift caused by wing tip vortices. Use the minimum practical boom length, do not exceed 75% of the wing span or rotor diameter.

Release spray at the lowest possible height consistent with good pest control and flight safety. Do not make applications more than 10 feet above the crop canopy.

Importance of Droplet Size

An important factor influencing drift is droplet size. Small droplets (<150 to 200 microns) drift to a greater extent than large droplets. Within typical equipment specifications, make applications to deliver the largest droplet spectrum that provides sufficient control and coverage. Formation of very small droplets may be minimized by appropriate nozzle selection, by orienting nozzles away from the air stream as much as possible and by avoiding excessive spray boom pressure.

Wind Speed Restrictions

Drift potential increases at wind speeds of less than 3 mph (due to inversion potential) or more than 10 mph. However, many factors, including droplet size, canopy and equipment specifications determine drift potential at any given wind speed. Do not apply when winds are greater than 15 mph and avoid gusty and windless conditions. Risk of exposure to sensitive aquatic areas can be reduced by avoiding applications when wind direction is toward the aquatic area.

Restrictions During Temperature Inversions

Do not make aerial or ground applications during temperature inversions. Drift potential is high during temperature inversions. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain close to the ground and move laterally in a concentrated cloud. Temperature inversions are characterized by increasing temperature 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 movement of smoke from a ground source. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical mixing.

No-Spray Zone Requirements for Soil and Foliar Applications

Do not apply by ground within 25 feet, or by air within 150 feet of lakes; reservoirs; rivers; permanent streams; marshes or natural ponds; estuaries and commercial fish farm ponds.

Airblast (Air Assist) Specific Applications for Tree Crops and Vineyards

Airblast sprayers carry droplets into the canopy of trees/vineyards via a radially, or laterally directed air stream. The following specific drift management practices should be followed:

- Adjust deflectors and aiming devices so that spray is only directed into the canopy.
- Block off upward pointed nozzles when there is no overhanging canopy.
- Use only enough air volume to penetrate the canopy and provide good coverage.
- Do not allow the spray to go beyond the edge of the cultivated area (i.e., turn off sprayer when turning at end rows).
- Only spray inward, toward the orchard or vineyard, for application to the outside rows.

Runoff Management

Do not cultivate within 10 feet of the aquatic areas to allow growth of a vegetative filter strip.

When used on erodible soils, use best management practices for minimizing runoff. Consult your local Natural Resources Conservation Service for recommendations in your use area.

Endangered Species Notice

Under the Endangered Species Act, it is a Federal Offense to use any pesticide in a manner that results in the death of a member of an endangered species. Consult your local county bulletin, County Extension Agent or Pesticide State Lead Agency for information concerning endangered species in your area.

RESISTANCE MANAGEMENT

Some insects are known to develop resistance to insecticides after repeated use. As with any insecticide, the use of this product should conform to resistance management strategies established for the use area.

Madari 4 F contains a Group 4A insecticide called imidacloprid. Insect biotypes with acquired or inherent tolerance to Group 4A products may eventually dominate the insect population if Group 4A products are used repeatedly as the pre-dominant method of control for targeted species. This may eventually result in partial or total loss of control of those species by **Madari 4 F** and to other Group 4A products.

The active ingredient in **Madari 4 F** is a member of neonicotinoid chemical group. Insect pests resistant to other chemical classes have not shown cross-resistant to this product. In order to maintain susceptibility to this class of chemistry in insect species with high resistance development potential, for each crop season: 1) make only a single soil application of **Madari 4 F**; 2) foliar applications of products from the same class may not be made following a long residual soil application of **Madari 4 F** or other neonicotinoid products.

If a soil application of **Madari 4 F** has not been made during a crop season and foliar applications are to be made, avoid using a block of more than three consecutive applications of **Madari 4 F** and/or other Group 4A products having the same or similar mode of action. Following a neonicotinoid block of treatments, Avalaire, LLC strongly encourages the rotation to a block of applications with effective products from a different mode of action before using additional applications of neonicotinoid products. Using a block of rotation or windowed approach, along with other IPM practices, is considered an effective use strategy for preventing or delaying an insect pest's ability to develop resistance to this class of chemistry.

Do not make foliar applications of **Madari 4 F** or other Group 4A products on crops previously treated with a long-residual, soil-applied product from the neonicotinoid chemical class.

Other Group 4A neonicotinoid products used as foliar treatments include: Actara®, Assail®, Calypso®, Centric®, Intruder®, Leverage® and Provado®. Other 4A Group neonicotinoid products used as soil treatment include: Admire® and Platinum®.

Contact your local extension specialist, certified crop advisor and/or product manufacturer for additional insect resistance management recommendations. Also, for more information on Insect Resistance Management (IRM), visit the Insecticide Resistance Action Committee (IRAC) on the web at <http://irac-online.org/>.

APPLICATION DIRECTIONS

For soil applications of **Madari 4 F**, direct product into the seed or root zone of crop. Failure to place **Madari 4 F** into root zone may result in loss of control or delay in onset of activity. **Madari 4 F** may be applied with ground or chemigation application equipment. Regardless of formulation or method of application, apply no more than 0.5 pound active ingredient imidacloprid per acre per year, including seed treatment, soil, and foliar uses, unless specified within a crop-specific application section for a given crop.

Do not apply this product in enclosed structures such as planthouses or greenhouses.

Apply foliar applications of **Madari 4 F** as directed or a broadcast foliar spray. Thorough coverage of foliage is necessary without runoff for optimum insecticidal efficacy. Use adequate spray volumes, properly calibrated application equipment, and spray adjuvant if necessary to obtain thorough coverage. Failure to provide adequate coverage and retention of **Madari 4 F** on leaves and fruit may result in loss of insect control or delay in onset of activity. Apply **Madari 4 F** with properly calibrated ground or aerial application equipment. Minimum spray volumes, unless otherwise specified on crop-specific application sections, are 10.0 gallons per acre by ground and 5.0 gallons per acre by air. This product may also be applied by overhead chemigation (see additional information in **CHEMIGATION** section of this label below), if allowed in crop-specific application section.

When applied as a soil application, optimum activity of **Madari 4 F** results from applications to the root zone of plants to be protected. The earlier this product is available to the developing plant, the earlier the protection begins. **Madari 4 F** is continuously taken into the roots over a long period of time, and the systemic nature of **Madari 4 F** allows movement from roots through the xylem tissue to all vegetative parts of the plant. This results in extended residual activity of **Madari 4 F**, the control of insects, and the prevention and/or reduction of virus transmission or symptom expression, and plant health benefits. The rate of **Madari 4 F** applied affects the length of the plant protection period. Use higher listed rates when infestations occur later in crop development or where pest pressure is continuous. **Madari 4 F** will generally not control insects infesting flowers, blooms, or fruit. Additional crop protection may be required for insects feeding in or on these plant parts, and for insects not listed in crop-specific, pest-controlled sections of this label. Additionally, specific **Madari 4 F** application instructions are also provided in the crop-specific sections of this label.

Suppression, or less than complete control of certain insect pests that may carry diseases including reduced feeding, may also result from a **Madari 4 F** application. Complete control of these pests may require supplemental control measures.

Generally, this product is not used on crops grown for production of true seed intended for private or commercial planting but may be allowed under state-specific, 24(c) labeling. Additional information on **Madari 4 F** uses for these crops and other questions may be obtained from the Cooperative Extension Service, PCA's, consultants, or local Avalaire, LLC representatives.

Apply only to plants grown in field-type soils, potting media, or mixtures thereof. Do not apply to plants grown in nonsoil such as perlite, vermiculite, rock wool, or other soilless media, or plants growing hydroponically.

Pre-mix **Madari 4 F** with water or other appropriate diluent prior to application. Keep **Madari 4 F** and water suspension agitated to avoid settling.

Regardless of formulation or method of application, apply no more than 0.5 pound active ingredient imidacloprid per acre per year, including seed treatment, soil, and foliar uses, unless specified within a crop-specific application section for a given crop.

MIXING INSTRUCTIONS

Minimum spray volumes are 10.0 gallons per acre by ground application and 5.0 gallons per acre through aerial equipment. To prepare the application mixture, add half of the required amount of water to the spray tank and with agitation add **Madari 4 F**. Complete filling tank with balance of water needed. Maintain sufficient agitation during both mixing and application. **Madari 4 F** may also be used with other pesticides and/or fertilizer solutions. Please see **Compatibility Note** below. When tank mixtures of this product and other pesticides are involved, prepare the tank mixture as instructed above and follow **Mixing Order** below.

Mixing Order

When pesticide mixtures are needed, add wettable powders first, **Madari 4 F** or other flowables second, and emulsifiable concentrates last. Ensure good agitation as each component is added. Do not add an additional component until the previous is thoroughly mixed. If a fertilizer solution is added, a fertilizer-pesticide compatibility agent may be needed. Maintain constant agitation during both mixing and application to ensure uniformity of spray mixture.

Compatibility Note

Test compatibility of the intended tank mixture before adding this product to the spray or mix tank. Add proportionate amounts of each ingredient in the appropriate order, to a pint or quart jar, cap, shake for 5 minutes, and let set for 5 minutes. Do not use if poor mixing or formation of precipitates that do not readily re-disperse. This indicates an incompatible mixture. For further information, contact your local Avalaire, LLC representative.

Tank Mixing

When tank-mixing with other products, it is the responsibility of the end-user/applicator to ensure that all products in the mixture are registered for the intended use. Users must follow the most restrictive directions and precautionary language of the products in the mixture (for example, first aid from one product, spray drift management from another).

Chemigation

Types of Irrigation Systems: Foliar chemigation applications of this product may be made to crops through overhead sprinkler systems if specified in crop-specific application sections. Soil chemigation application of **Madari 4 F** may only be made to crops through chemigation as specified in crop-specified application sections and only through low-pressure systems specifically for a given crop. Do not apply this product through any other type of irrigation system. Make foliar chemigation

applications of this product as concentrated as possible. Retention of **Madari 4 F** on target site of insect infestation is necessary for optimum activity. Do not use chemigation of **Madari 4 F** in water volumes exceeding 0.10 inch per acre. See crop-specific application sections of the label for more information.

Uniform Water Distribution and System Calibration: The irrigation system must provide uniform distribution of treated water. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water. The system must be calibrated to uniformly apply the rates specified. If you have any questions about calibration, contact Cooperative Extension Service specialists, equipment manufacturers, or other experts.

Chemigation Monitoring: 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.

Drift: Do not apply when wind speed favors drift beyond the area intended for treatment.

Required System Safety Devices: 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.

Using Water from Public Water Systems: Public water systems means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year. Chemigation systems connected to public water systems must contain a functional reduced-pressure zone, back flow preventer (RPZ), or the functional equivalent in the water supply line upstream from the 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 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 automatic quick-closing check valve to prevent the flow of fluid back toward the injection. 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.

ROTATIONAL CROPS*

Treated areas may be replanted with any crop specified on an imidacloprid label, or any crop for which a tolerance exist for the active ingredient, as soon as practical following the last application. For crops not listed on an imidacloprid label, or for crops for which no tolerances for the active ingredient have been established, a 12-month plant-back interval must be observed.

IMMEDIATE PLANT-BACK:

All crops on this label plus the following crops not on this label: Barley, Canola, Corn (field, sweet and pop), Mustard seed, Rapeseed, Sorghum, Sunflower, Watercress, Wheat and all crops from the following Crop Groups as recognized and defined by EPA.

ROOT VEGETABLES - Crops of Crop Group 1

BULB VEGETABLES - Crops of Crop Group 3-07

LEAFY GREEN VEGETABLES - Crops of Crop Group 4

HEAD and STEM BRASSICA VEGETABLES - Crops of Crop Group 5

LEGUME VEGETABLES - Crops of Crop Group 6 including: Edible Podded plus Dried plus Succulent Shelled, Peas and Beans

FRUITING VEGETABLES - Crops of Crop Group 8

CUCURBIT VEGETABLES - Crops of Crop Group 9

CITRUS - Crops of Crop Group 10

POME FRUIT - Crops of Crop Group 11

STONE FRUIT - Crops of Crop Group 12

BUSHBERRY and CANEBERRY - Crops of Crop Group 13-07

HERBS - Crops of Crop Group 19A

TROPICAL FRUIT - Including: Acerola, Atemoya, Avocado, Birida, Black sapote, Canistel, Cherimoya, Custard apple, Feijoa, Llama, Jaboticaba, Guava, Longan, Lychee, Mamey sapote, Mango, Papaya, Passion fruit, Persimmon, Pulasan, Rambutan, Sapodilla, Soursop, Spanish lime, Star apple, Starfruit, Sugar apple, Wax jambu

30-DAY PLANT-BACK: Cereals (including buckwheat, millet, oats, rice, rye, and triticale), soybeans and safflower

10-MONTH PLANT-BACK: Onion and bulb vegetables

12-MONTH PLANT-BACK: All Other Crops

* Cover crops for soil building or erosion control may be planted any time; but do not graze or harvest for food or feed.

APPLICATION INFORMATION

Apply this product with properly calibrated ground or aerial application equipment. Apply specified rate per acre as a directed or broadcast spray to infested area at earliest threshold for target pest, as population begins to develop. Thorough uniform coverage of all plant parts is required to achieve optimum control. Scout fields and retreat if needed.

The lower rates can be used early season when pest pressures are low or when tank-mixing with other effective products registered for target insect control. Degree of control or suppression of additional labeled pests will be determined, in part, by the stage of pest development at application and infestation level of those pests. **Madari 4 F** provides optimal performance against early instar and early nymphal stages of insects as well as bollworm/budworm eggs. Applications made with less than 5.0 gallons per acre may result in slower activity and/or less overall control from a single application than an application made with higher gallonages. Use an organosilicone-based spray adjuvant for applications targeting aphids and whiteflies.

GLOBE ARTICHOKE* - Soil Treatment

Pests Controlled	Rate Fl Oz/A
Aphids	8.0 to 16.0
Leafhoppers	

Restrictions:

- Pre-Harvest Interval (PHI): **7 days**
- Maximum **Madari 4 F** amount allowed per year: **16.0 fluid ounces per acre** (0.50 pound active ingredient per acre)

Applications

Apply specified dosage in the following method:

1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.
2. In-furrow spray at planting directed on or below seed.

* Use not permitted in California unless otherwise directed by state-specific 24(c) labeling.

GLOBE ARTICHOKE - Foliar Treatment

Pests Controlled	Rate Fl Oz/A
Aphids	1.6 to 4.0
Leafhoppers	

Restrictions:

- Pre-Harvest Interval (PHI): **7 days**
- Minimum interval between applications: **14 days**
- Maximum **Madari 4 F** allowed per year: **16.0 fluid ounces per acre** (0.5 pound active ingredient per acre)

Applications

Apply specified rate per acre as a broadcast or directed foliar spray to infested area as pest populations begin to build. Thorough uniform coverage is necessary to achieve optimum control. Use a spray adjuvant such as LI 700® to improve coverage. **Madari 4 F** may not knock down established and heavy insect populations. Two applications may be required to achieve control. Scout fields and re-treat if needed. Tank mix this product with other insecticides for knockdown of pests or for improved control of other pests.

HERBS - Soil Treatment

Including: Angelica, Balm (lemon balm), Basil (fresh and dried), Borage, Burnet, Camomile, Catnip, Chervil (dried), Chinese chive, Chive, Clary, Coriander (cilantro or Chinese parsley leaves), Costmary, Culantro (leaf), Curry (leaf), Dillweed, Horehound, Hyssop, Lavender, Lemongrass, Lovage (leaf), Marigold, Marjoram, Nasturtium, Parsley (dried), Pennyroyal, Rosemary, Rue, Sage, Savory (summer and winter), Sweet bay (bay leaf), Tansy, Tarragon, Thyme, Wintergreen, Woodruff, Wormwood

Pests Controlled	Rate Fl Oz/A
Aphids Flea beetles Leafhoppers Whiteflies	8.0 to 12.0
Pests/Diseases Suppressed	
Thrips (foliage-feeding thrips only)	8.0 to 12.0

Restrictions:

- Pre-Harvest Interval (PHI): **14 days**
- Maximum **Madari 4 F** allowed per crop season: **12.0 fluid ounces per acre** (0.38 pound active ingredient per acre)

Instructions

Apply specified dosage in one of the following methods:

1. In-furrow spray during planting directed on or below seed;
2. In-furrow spray or transplant-water drench during setting or transplanting;
3. Shanked-into or below eventual seed-line;
4. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.

Not all crops and/or varieties listed above have been tested for phytotoxic effects. Without specific knowledge about a particular crop and variety, Avalaire, LLC strongly recommends that only small areas or numbers of plants of each be treated and evaluated prior to commercial use.

HERBS - Foliar Treatment

Including: Angelica, Balm (lemon balm), Basil (fresh and dried), Borage, Burnet, Chamomile, Catnip, Chervil (dried), Chinese chive, Chive, Clary, Coriander (cilantro or Chinese parsley leaves), Costmary, Culantro (leaf), Curry (leaf), Dillweed, Horehound, Hyssop, Lavender, Lemongrass, Lovage (leaf), Marigold, Marjoram, Nasturtium, Parsley (dried), Pennyroyal, Rosemary, Rue, Sage, Savory (summer and winter), Sweet bay (bay leaf), Tansy, Tarragon, Thyme, Wintergreen, Woodruff, Wormwood

Pests Controlled	Rate Fl Oz/A
Aphids Flea beetles Leafhopper Whiteflies	1.4

Restrictions:

- Pre-Harvest Interval (PHI): **7 days**
- Minimum interval between applications: **5 days**
- Maximum **Madari 4 F** allowed per season: **4.2 fluid ounces per acre** (0.13 pound active ingredient per acre)

Applications

Apply specified rate per acre as a broadcast or directed foliar spray to infested area as pest populations begin to build. Thorough uniform coverage is necessary to achieve optimum control. Use a spray adjuvant such as LI 700 to improve coverage. This product may not knock down established and heavy insect populations. Two applications may be required to achieve control. Scout fields and re-treat if needed. Tank mix this product with other insecticides for knockdown of pests or for improved control of other pests. Apply this product through properly calibrated ground and aerial application equipment. Thorough coverage with direct contact of the spray material to the target pests is required for optimal control. The addition of an organosilicone-based spray adjuvant at a rate not to exceed the adjuvant manufacturer's specified use rate may improve coverage and control.

Note: Not all crops and/or varieties listed above have been tested for phytotoxic effects. Without specific knowledge about a particular crop and variety, treat only a small area or small number of plants of each listed above and evaluate prior to commercial use.

FIELD CROPS Application Instructions

COTTON - Soil Treatment

Pests Controlled	Rate Fl Oz/ 1000 Row-Ft	Rate Fl Oz/A
Cotton aphid Plant bugs Thrips Whiteflies	0.65	8.5 to 10.5 (Depending on row-spacing)

Restrictions

- Maximum **Madari 4 F** allowed per year: **10.5 fluid ounces per acre** (0.33 pound active ingredient per acre)

Regardless of formulation or method of application, apply no more than 0.5 pound active ingredient of this product, Provado, Trimax® or Leverage per acre per year, including seed treatment as Gaucho®, soil and foliar uses. Do not apply more than a total of 6 applications of the active ingredient per year. Do not graze treated fields after any application of this product. Please see **Resistance Management** section of this label.

Instructions

Apply specified dosage of **Madari 4 F** in one of the following methods:

1. In-furrow spray during planting directed on or below seed;
2. In a narrow band directly below the eventual seed row in a bedding operation 7 or fewer days before planting;
3. Chemigation into root-zone through low-pressure drip or trickle irrigation.

COTTON - Foliar Treatment

Pests Controlled	Rate Fl Oz/A
Bandedwinged whitefly Bollworm/Budworm (ovicidal effect) Cotton aphid Cotton fleahopper Green stink bug Plant bugs (excludes <i>Lygus hesperus</i>) Southern green stink bug	1.0 to 2.0
Pests Suppressed	
Lygus bug (<i>Lygus hesperus</i>) Whiteflies (other than bandedwinged whitefly)	1.5 to 2.0

Restrictions

- Pre-Harvest Interval (PHI): **14 days**
- Minimum interval between applications: **7 days**
- Maximum **Madari 4 F** allowed per year: **10.0 fluid ounces per acre** (0.31 pound active ingredient per acre)
- Regardless of formulation or method of application, apply no more than 0.5 pound active ingredient per acre per year, including seed treatment, soil and foliar uses.
- Apply this product through properly calibrated ground, aerial, or chemical application equipment. Maximum number of **Madari 4 F** applications per year: **5**
- Do not graze treated fields after any application of this product.

Applications

Apply specified rate per acre as a broadcast or directed foliar spray to infested areas as pest populations begin to build. Thorough uniform coverage is necessary to achieve optimum control. Use a spray adjuvant such as LI 700 to improve coverage. **Madari 4 F** may not knock down established and heavy insect populations. Two applications may be required to achieve control. Scout fields and re-treat if needed. Tank mix **Madari 4 F** with other insecticides for knockdown of pests or for improved control of other pests.

TANK MIX INFORMATION

Pests Controlled (In addition to pests listed above)	Madari 4 F Rate Fl Oz/A	Bidrin® 8* Rate Fl Oz/A
For early season control of: Thrips	1.0 to 1.5	1.6 to 3.2
For mid to late season control of: Cotton leaf perforator Grasshoppers Plant bugs Saltmarsh caterpillar Stink bugs (including Brown stink bug)	1.0 to 1.5	4.0 to 8.0

Restrictions (in addition to Restrictions listed above)

*Refer to the Bidrin 8 product label; follow the most restrictive precautions and limitations on the labeling of all products used in mixtures.

PEANUT* - Soil Treatment

Pests Controlled	Rate Fl Oz/A
Aphids Leafhoppers Whiteflies	8.0 to 12.0
Pest Suppressed	
Thrips	8.0 to 12.0

Restrictions:

- Pre-Harvest Interval (PHI): **14 days**
- Maximum **Madari 4 F** allowed per year: **12.0 fluid ounces per acre** (0.38 pound active ingredient per acre)

Applications:

Apply specified dosage in one of the following methods:

1. In-furrow spray during planting directed on or below seed;
2. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.

Notes

Increases in Tomato spotted wilt virus (TSWV) incidence have been observed with applications of **Madari 4 F** on multiple varieties of peanut. This may also be the case with other tospoviruses, or other viruses transmitted by various thrips species or perhaps, other pests. Prior to applying this product to Peanuts, Avalaire, LLC recommends consultation with the State, Cooperative Extension Service, or Avalaire, LLC representative, for recommendations. Growers are advised to weigh insect control benefits against potential increase in viral disease levels. In areas where TSWV or other tospovirus are endemic, growers are encouraged to use virus resistant varieties and consult the University of Georgia, Tomato spotted wilt virus index, before applying this product.

*Use not permitted in California unless otherwise directed by state-specific 24(c) labeling.

POTATO - Soil Treatment

Pests Controlled	Rate Fl Oz/ 1000 Row-Ft	Rate Fl Oz/A
Aphids Colorado potato beetle Flea Beetles Leafhoppers Potato psyllid	0.45 to 0.65	6.5 to 10.0
Pests/Diseases Suppressed		
Symptoms of: Net necrosis (PLRV) Potato leaf roll virus (PLRV) Potato yellows Wireworms (with in-furrow spray at-planting)	0.45 to 0.65	6.5 to 10.0

Restrictions

- Maximum **Madari 4 F** allowed per year: **10.0 fluid ounces per acre** (0.31 pound active ingredient per acre)

Instructions

Apply specified dosage of this product in one of the following methods:

1. In-furrow spray during planting directed on seed pieces or seed potatoes;
2. Subsurface side-dress on both sides of the row covered with 3 or more inches of soil;
3. Narrow band spray at ground cracking directly over the row during hilling covered with 3 or more inches of soil;
4. Narrow band directly below the eventual seed row in a bedding operation 7 or fewer days before planting. For effective pest control or suppression, **Madari 4 F** applications must be placed below soil-surface and in contact with seed piece or within root-zone. For potatoes grown on highly permeable soils with shallow water table, at-plant applications of this product may be made in a 2 to 4 inch band (width of planter shoe opening) and completely covered.

POTATO - Seed Piece Treatment

Pests Controlled	Rate Fl Oz/ 100 Lb Seed	Rate Fl Oz/A**
Aphids Colorado potato beetle Flea beetles Leafhoppers Potato Psyllid Wireworms (seed-piece protection)	0.2 to 0.4	4.0 to 8.0
Pests/Diseases Suppressed		
Symptoms of: Net necrosis (PLRV) Potato leaf roll virus (PLRV) Potato yellows	0.4	8.0

Restrictions

- Maximum **Madari 4 F** allowed per year: **10.0 fluid ounces per acre** (0.31 pound active ingredient per acre)
- Do not use treated seed-pieces for food, feed, or fodder. Do not apply any subsequent application of **Madari 4 F** (in-furrow), Gaucho, Leverage or Provado following a **Madari 4 F** seed-piece treatment.

Instructions

Apply specified dosage as a diluted spray onto seed-pieces using a shielded spray system. Dilute with 3 parts water, or less, to 1 part **Madari 4 F**. Agitate or stir spray solution as needed. Fungicidal or inert absorbent dusts may be applied after **Madari 4 F** application. Apply only in areas with adequate ventilation or in areas that are equipped to remove spray mist or dust. Plant seed-pieces as soon as possible after treating avoiding prolonged exposure of **Madari 4 F** treated seed-pieces to sunlight and in accordance with the directions of your local Extension specialist.

Consult your local Avalaire, LLC representative or crop protection product dealer for information relevant to your area.

** Based on a seeding rate of 2000 pounds per acre.

POTATO - Foliar Treatment

Pests Controlled	Rate Fl Oz/A
Aphids Colorado potato beetle Flea beetles Leafhoppers Psyllids	1.52

Restrictions:

- Pre-Harvest Interval (PHI): **7 days**
- Minimum interval between applications: **7 days**
- Maximum **Madari 4 F** allowed per year: **6.4 fluid ounces per acre** (0.2 pound active ingredient per acre)

Applications

Apply specified rate per acre as a broadcast or directed foliar spray to an infested area as pest populations begin to build. Thorough uniform coverage is necessary to achieve optimum control. Use a spray adjuvant such as LI 700 to improve coverage. This product may not knock down established and heavy insect populations. Two applications may be required to achieve control. Scout fields and re-treat if needed. Tank mix this product with other insecticides for knockdown of pests or for improved control of other pests.

TOBACCO - Soil Treatment

Pests Controlled	Rate Fl Oz/ 1000 Plants (as seedling tray drench)	Rate Fl Oz/ 1000 Plants (in-furrow or transplant-water)
Aphids Flea beetles	0.5	0.7
Mole crickets Whiteflies Wireworms	0.7 to 1.4	0.9 to 1.4
Pests/Diseases Suppressed		
Cutworms Symptoms of: Tomato spotted wilt virus (TSWV)	0.7 to 1.4	0.9 to 1.4

Restrictions

- Pre-Harvest Interval (PHI): **14 days**
- Maximum **Madari 4 F** allowed per year: **16.0 fluid ounces per acre** (0.50 pound active ingredient per acre)

Instructions

Apply specified dosage of this product in one of the following methods:

1. Uniform, broadcast foliar spray to seedlings in trays (tray drench) not more than 7 days prior to transplanting followed immediately by overhead irrigation to wash **Madari 4 F** from foliage into potting media. Failure to wash this product from foliage may result in reduction in pest control. Transplants must be handled carefully during setting to avoid dislodging treated potted media from roots.
2. In-furrow spray or transplant-water drench during setting.

3. Chemigation into root-zone through low-pressure drip, trickle, micro sprinkler or equivalent equipment.

Important Note: Proper tray drench applications of this product have been shown to be the most efficacious method of application. However, the specified rate of **Madari 4 F** may be applied as a combination of the tray drench in the planthouse and/or transplant-water drench in field. Adverse growing conditions may cause a delay in uptake of this product into the plant and a delay in control.

TOBACCO - Foliar Treatment

Pests Controlled	Rate Fl Oz/A
Aphids	0.8 to 1.6
Flea beetles	1.6
Japanese beetles	

Restrictions

- Pre-Harvest Interval (PHI): **14 days**
- Minimum interval between applications: **7 days**
- Maximum **Madari 4 F** allowed per year: **8.9 fluid ounces per acre** (0.28 pound active ingredient per acre)

Applications

Apply specified rate per acre as a broadcast or directed foliar spray to an infested area as pest populations begin to build. Thorough uniform coverage is necessary to achieve optimum control. Use a spray adjuvant such as LI 700 to improve coverage. This product may not knock down established and heavy insect populations. Two applications may be required to achieve control. Scout fields and re-treat if needed. Tank mix **Madari 4 F** with other insecticides for knockdown of pests or for improved control of other pests.

VEGETABLE and SMALL FRUIT CROPS

Application Directions

Restrictions

Not for use on crops grown for seed unless allowed by state-specific 24(c) labeling.

BRASSICA (COLE) LEAFY VEGETABLES - Soil Treatment

Including: Broccoli, Broccoli raab (*rapini*), Brussels sprouts, Cabbage, Cauliflower, Cavalo broccoli, Chinese (*gai lan*) broccoli, Chinese (*bok choy*) cabbage, Chinese (*napa*) cabbage, Chinese mustard (*gai choy*) cabbage, Collards, Kale, Kohlrabi, Mizuna, Mustard greens, Mustard spinach, Rape greens, Turnip tops (leaves)

AND

LEAFY VEGETABLES - Soil Treatment

Including: Amaranth (leafy amaranth, Chinese spinach, tampala), Arugula (Rocket), Chervil, Chrysanthemum (edible leaved and garland), Cilantro, Corn salad, Cress (garden), Cress (upland, yellow rocket, winter cress), Dandelion, Dock (sorrel), Endive (escarole), Lettuce (head and leaf), Orach, Parsley, Purslane (garden and winter), Radicchio (red chicory), Spinach (including New Zealand and vine (Malabar spinach, Indian Spinach)), Watercress (commercial production only, applications must not be made to native cress growing in streams or other bodies of water), Watercress (upland)

Pests Controlled	Rate Fl Oz/A (on 36 inch rows)
Aphids Leafhoppers Thrips (foliage feeding thrips only) Whiteflies	5.0 to 12.0

Restrictions

- Pre-Harvest Interval (PHI): **21 days**
- Maximum **Madari 4 F** allowed per crop season: **12.0 fluid ounces per acre** (0.38 pound active ingredient per acre)

Instructions

Apply specified dosage of this product in one of the following methods:

1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment;
2. In-furrow spray directed on or below seed;
3. Narrow (2" or less) surface band spray over seed-line during planting incorporated to a depth of 1 to 1.5" with sufficient irrigation within 24 hours of application;
4. Narrow band spray directly below eventual seed row in bedding operation 14 or fewer days before planting;
5. Post-seeding drench, transplant-water drench, or hill drench;
6. Subsurface side-dress on both sides of each row. This product must be incorporated into root-zone.
7. Not for use on crops grown for seed unless allowed by state-specific 24(c) labeling.

BRASSICA (COLE) LEAFY VEGETABLES¹ - Foliar Treatment

Including: Broccoli, Broccoli raab (*rapini*), Brussels sprouts, Cabbage, Cauliflower, Cavalo broccoli, Chinese (*gai lan*) broccoli, Chinese (*bok choy*), cabbage, Chinese (*napa*) cabbage, Chinese mustard (*gai choy*) cabbage, Collards, Kale, Kohlrabi, Mizuna, Mustard greens, Mustard spinach, Rape greens, Turnip tops (leaves)

Pests Controlled	Rate Fl Oz/A
Aphids Flea beetles Leafhoppers Whiteflies	1.5

Restrictions

- Pre-Harvest Interval (PHI): **7 days**
- Minimum interval between applications: **5 days**
- Maximum **Madari 4 F** allowed per crop season: **7.68 fluid ounces per acre** (0.24 pound active ingredient per acre)

¹Not for use on crops grown for seed unless allowed by state-specific 24(c) labeling.

Applications

Apply specified rate per acre as a broadcast or directed foliar spray to infested area as pest populations begin to build. Thorough uniform coverage is necessary to achieve optimum control. Use a spray adjuvant such as LI 700 to improve

coverage. **Madari 4 F** may not knock down established and heavy insect populations. Two applications may be required to achieve control. Scout fields and re-treat if needed. Tank mix this product with other insecticides for knockdown of pests or for improved control of other pests.

LEAFY VEGETABLES¹ - Foliar Treatment

Including: Amaranth (leafy amaranth, Chinese spinach, tampala), Arugula (Roquette), Chervil, Chrysanthemum, (edible leaved and garland), Cilantro, Corn salad, Cress (garden), Cress (upland, yellow rocket, winter cress), Dandelion, Dock (sorrel), Endive (escarole), Lettuce (head and leaf), Orach, Parsley, Purslane (garden and winter), Radicchio (red chicory), Spinach (including New Zealand and vine (Malabar spinach, Indian spinach), Watercress (commercial production only, applications must not be made to native cress growing in streams or other bodies of water), Watercress (upland)

Pests Controlled	Rate Fl Oz/A
Aphids Flea beetles Leafhoppers Whiteflies	1.5

Restrictions

- Pre-Harvest Interval (PHI): **7 days**
- Minimum interval between applications: **5 days**
- Maximum **Madari 4 F** allowed per crop season: **7.6 fluid ounces per acre** (0.24 pound active ingredient per acre)

¹Not for use on crops grown for seed unless allowed by state-specific 24(c) labeling.

Applications

Apply specified rate per acre as a broadcast or directed foliar spray to infested area as pest populations begin to build. Thorough uniform coverage is necessary to achieve optimum control. Use a spray adjuvant such as LI 700 to improve coverage. **Madari 4 F** may not knock down established and heavy insect populations. Two applications may be required to achieve control. Scout fields and re-treat if needed. Tank mix this product with other insecticides for knockdown of pests or for improved control of other pests.

For applications made to watercress, production fields must be drained of water at least 24 hours prior to application, and water must not be reapplied to the field for a minimum of 24 hours following the applications. Applications must be made to fully leafed-up canopies only.

LEAFY PETIOLE VEGETABLES - Soil Treatment

Including: Cardoon, Celery, Celtuce, Chinese celery (fresh leaves and stalk only), Florence fennel (including sweet anise, sweet fennel, Finocchio), Rhubarb, Swiss chard

Pests Controlled	Rate Fl Oz/A
Aphids Leafhoppers Thrips (foliage feeding thrips only) Whiteflies	5.0 to 12.0

Restrictions

- Pre-Harvest Interval (PHI): **45 days**
- Maximum **Madari 4 F** allowed per crop season: **12.0 fluid ounces per acre** (0.38 pound active ingredient per acre)

Instructions

Apply specified dosage of this product in one of the following methods:

1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment;
2. In-furrow spray directed on or below seed;
3. Narrow (2" or less) surface band spray over seed-line during planting incorporated to a depth of 1 to 1.5" with sufficient irrigation within 24 hours of application;
4. Narrow band spray directly below eventual seed row in bedding operation 14 or fewer days before planting;
5. Post-seeding drench, transplant-water drench, or hill drench;
6. Subsurface side-dress on both sides of each row. This product must be incorporated into root zone.
7. Not for use on crops grown for seed unless allowed by state-specific 24(c) labeling.

BULB VEGETABLES (*Allium* sp.)¹ - Soil Treatment

Including: Chinese chive (fresh leaves), Chive (fresh leaves), Daylily (bulb), Elegans hosta, Fritillaria (bulb and leaves), Garlic (common group, great-headed group, serpent group), Kurrat group, Leek group (including common, lady's and wild), Lily (bulb), Onion (bulb and green leaves including: common group, Beltsville bunching, Chinese bulb, fresh, green, macrostem, Pearl group, potato onion group, tree onion-tops, Welsh-tops), Shallot, plus cultivars, varieties, and/or hybrids of these.

Pests Controlled	Rate Fl Oz/A
Thrips (foliage feeding thrips only)	16.0

Restrictions:

- Pre-Harvest Interval (PHI): **21 days**
- Maximum **Madari 4 F** allowed per crop season: **16.0 fluid ounces per acre** (0.5 pound active ingredient per acre)
- Applications made to higher organic matter soils may result in reduced or shortened activity on pest.

¹Not for use on crops grown for seed unless allowed by state-specific 24(c) labeling.

Instructions

Apply specified dosage in one of the following methods:

1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment;
2. In-furrow spray directed on or below seed;
3. Narrow band spray directly below eventual seed row in bedding operation 14 or fewer days before planting;
4. Post-seeding drench, transplant-water drench, or hill drench.

CUCURBIT VEGETABLES - Soil Treatment

Including: Chayote (fruit), Chinese waxgourd (Chinese preserving melon), Citron melon, Cuban pumpkin, Cucumber, Gherkin, Gourd (edible, includes hyotan, cucuzza, hechima, Chinese okra), *Momordica* spp. (includes balsam apple, balsam pear, bitter melon, Chinese cucumber), Muskmelon (hybrids and/or cultivars of *Cucumis melo* including true cantaloupe, cantaloupe, casaba, Crenshaw melon, golden pershaw melon, honeydew melon, honey balls, mango melon, Persian melon, pineapple melon, Santa Claus melon, snake melon, and Winter melon), Pumpkin, Squash (includes summer squash types such as: butternut squash, calabaza, crookneck squash, Hubbard squash, scallop squash, straightneck squash, vegetable marrow and zucchini, and winter squash types such as acorn squash and spaghetti squash), Watermelon (includes hybrids and/or varieties of *Citrullus lanatus*)

Field Application Instructions

See details below for additional planthouse instructions.

Pests Controlled	Rate Fl Oz/A
Aphids Cucumber beetles Leafhoppers Thrips (foliage-feeding thrips only) Whiteflies	8.0 to 12.0
Pests/Diseases Suppressed	
Bacterial wilt (as vectored by various cucumber beetles) Leaf silencing resulting from whitefly feeding	8.0 to 12.0

Restrictions

- Pre-Harvest Interval (PHI): **21 days**
- Maximum **Madari 4 F** allowed per crop season: **12.0 fluid ounces per acre** (0.38 pound active ingredient per acre)

Instructions

Apply specified dosage of **Madari 4 F** in one of the following methods:

1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment;
2. In-furrow spray directed on or below seed;
3. Narrow (2" or less) surface band spray over seed-line during planting incorporated to a depth of 1 to 1.5" with sufficient irrigation within 24 hours of application;
4. Narrow band spray directly below eventual seed row in bedding operation 14 or fewer days before planting;
5. Post-seeding drench, transplant-water drench, or hill drench;
6. Subsurface side-dress on both sides of each row. This product must be incorporated into root-zone.

Planthouse Application Instructions*

Pests Controlled	Rate Fl Oz/1000 Plants
Aphids Whiteflies	0.05

Restrictions

- Maximum amount of **Madari 4 F** applied in the planthouse: **0.05 fluid ounce** (0.00156 pound active ingredient) per **1000 plants**.
- Maximum number **Madari 4 F** applications in planthouse: **1**

Instructions:

Apply specified dosage to seedlings in trays in the planthouse, targeting soil media (tray drench), not more than 7 days prior to transplanting, in one of the following manners:

1. Uniform, broadcast high-volume foliar spray, followed immediately by sufficient overhead irrigation to wash this product from foliage into potting media without loss of gravitational liquid from the bottom of the tray. Failure to wash this product from foliage may result in reduced pest control;
2. Injection into overhead irrigation system, using adequate volume to thoroughly saturate soil media without loss of gravitational solution from the bottom of the tray.

The application made in the planthouse will only provide short-term protection and is not intended as a substitution for a field application. An additional field application must be made within 2 weeks following transplanting to provide continuous protection. Applications of higher listed rates or increased number of applications in planthouse may result in significant plant injury. Transplants must be handled carefully during setting to avoid dislodging treated potting media from roots.

Not all varieties of cucurbit vegetables have been tested for tolerance to **Madari 4 F** applied to seedling flats. Therefore, treat a small number of plants and confirm tolerance for 7 days prior to treating entire planthouse.

* Use not permitted in California unless otherwise directed by state-specific 24(c) labeling.

FRUITING VEGETABLES¹ - Soil Treatment

Including: Eggplant, Ground cherry, Okra, Pepinos, Pepper (including bell, chili, cooking, pimento and sweet) Tomato, and Tomatillo

Field application instructions. See details below for additional planthouse instructions.

Pests Controlled	Rate Fl Oz/A
Aphids Colorado potato beetle Flea beetles Leafhoppers Thrips (foliage-feeding thrips, only) Whiteflies	Okra and Pepper 8.0 to 16.0 Other Crops 8.0 to 12.0

(continued)

FRUITING VEGETABLES¹ - Soil Treatment (continued)

Pests/Diseases Suppressed	
Symptoms of:	Okra and Pepper
Tomato mottle virus	8.0 to 16.0
Tomato spotted wilt virus	Other Crops
Tomato yellow leaf curl virus	8.0 to 12.0

Restrictions

- Pre-Harvest Interval (PHI): **21 days**
- Maximum **Madari 4 F** allowed on pepper and okra crops per crop season: **16.0 fluid ounces per acre** (0.50 pound active ingredient per acre)
- Maximum **Madari 4 F** allowed on other fruiting crops per crop season: **12.0 fluid ounces per acre** (0.38 pound active ingredient per acre)

Instructions

Apply specified dosage of this product in one of the following methods:

1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment;
2. In-furrow spray directed on or below seed;
3. Narrow (2" or less) surface band spray over seed-line during planting incorporated to a depth of 1 to 1.5" with sufficient irrigation within 24 hours of application;
4. Narrow band spray directly below eventual seed row in bedding operation 14 or fewer days before planting;
5. Post-seeding drench, transplant-water drench, or hill drench;
6. Subsurface side-dress on both sides of each row. This product must be incorporated into root-zone.

Planthouse Application Instructions²

Pests Controlled	Rate Fl Oz/1000 Plants
Aphids	0.05
Whiteflies	

Restrictions

- Maximum amount of **Madari 4 F** applied in the planthouse: **0.05 fluid ounce** (0.00156 pound active ingredient) per **1000 plants**.
- Maximum number **Madari 4 F** applications in planthouse: **1**

Instructions

Apply specified dosage to seedlings in trays in the planthouse, targeting soil media (tray drench), not more than 7 days prior to transplanting, in one of the following manners:

1. Uniform, broadcast high-volume foliar spray, followed immediately by sufficient overhead irrigation to wash this product from foliage into potting media without loss of gravitational liquid from the bottom of the tray. Failure to wash this product from foliage may result in reduced pest control;
2. Injection into overhead irrigation system, using adequate volume to thoroughly saturate soil media without loss of gravitational solution from the bottom of the tray.

The application made in the planthouse will only provide short-term protection and is not intended as a substitution for a field application. An additional field application must be made within 2 weeks following transplanting to provide continuous protection.

Applications of higher listed rates or increased number of applications in planthouse may result in significant plant injury. Transplants must be handled carefully during setting to avoid dislodging treated potted media from roots.

Not all varieties of fruiting vegetables have been tested for tolerance to **Madari 4 F** applied to seedling flats. Therefore treat a small number of plants and confirm tolerance for 7 days prior to treating entire planthouse.

¹Not for use on crops grown for seed unless allowed by state-specific 24(c) labeling.

²Use not permitted in CA unless otherwise directed by state-specific 24(c) labeling.

FRUITING VEGETABLES¹ - Foliar Treatment

Including: Eggplant, Ground cherry, Okra, Pepinos, Pepper (including bell, chili, cooking, pimento, and sweet), Tomato, and Tomatillo

Pests Controlled	Rate Fl Oz/A
Aphids	1.5 to 2.4
Colorado potato beetle	
Leafhoppers	
Whiteflies	
Pepper weevil	2.4

Restrictions

- Pre-Harvest Interval (PHI): **0 day**
- Minimum interval between applications: **5 days**
- Maximum **Madari 4 F** allowed per crop season: **7.6 fluid ounces per acre** (0.24 pound active ingredient per acre)

¹Not for use on crops grown for seed unless allowed by state-specific 24(c) labeling.

Applications

Apply specified rate per acre as a broadcast or directed foliar spray to infested area as pest populations begin to build. Thorough uniform coverage is necessary to achieve optimum control. Use a spray adjuvant such as LI 700 to improve coverage. This product may not knock down established and heavy insect populations. Two applications may be required to achieve control. Scout fields and re-treat if needed. Tank mix this product with other insecticides for knockdown of pests or for improved control of other pests.

For pepper weevil, apply specific dosage of **Madari 4 F** by ground equipment only, timing applications prior to a damaging population becoming established. Good coverage of foliage and fruit is necessary for optimum control. Applications of this product must be incorporated into a full-season program where alternations of effective products from multiple classes of chemistry and different modes of action are utilized in a blocked or windowed approach.

For additional information, please contact your Avalaire, LLC representative, Extension Specialist, or crop advisor.

When targeting adult whiteflies, use higher listed rates.

LEGUME VEGETABLES except Soybean, Dry - Soil Treatment

Edible Podded and Succulent Shelled Pea and Bean and Dried Shelled Pea and Bean

Bean (*Lupinus* spp., includes grain lupin, sweet lupin, white lupin, and white sweet lupin)

Bean (*Phaseolus* spp., includes field bean, kidney bean, lima bean, navy bean, pinto bean, runner bean, snap bean, tepary bean, wax bean)

Bean (*Vigna* spp., includes adzuki bean, asparagus bean, blackeye pea, catjang, Chinese longbean, cowpea, Crowder pea, moth bean, mung bean, rice bean, Southern pea, urd bean, yardlong bean)

Pea (*Pisum* spp., includes dwarf pea, edible-pod pea, English pea, field pea, garden pea, green pea, snow pea, sugar snap pea)

Other Beans and Peas (Broad bean (fava), Chickpea (garbanzo bean), Guar, Jack-bean, Lablab bean (hyacinth bean), Lentil, Pigeon pea, Soybean (immature seed), Sword bean)

Pests Controlled	Rate Fl Oz/A
Aphids Leafhoppers Thrips (foliage feeding thrips, only) Whiteflies	8.0 to 12.0
Pests/Diseases Suppressed	
Symptoms of: Bean common mosaic virus (BCMV) Bean golden mosaic virus (BGMV) Beet curly top hybrigeminivirus (BCTV)	8.0 to 12.0

Restrictions

- Pre-Harvest Interval (PHI): **21 days**
- Maximum **Madari 4 F** allowed per crop season: **12.0 fluid ounces per acre** (0.38 pound active ingredient per acre)

Instructions

Apply specified dosage of this product in one of the following methods:

1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.
2. In-furrow spray at planting directed on or below seed;
3. In a narrow (2" or less) surface band over seed-line during planting incorporated to a depth of 1 to 1.5" with sufficient irrigation within 24 hours following application;
4. In a narrow band directly below the eventual seed row in a bedding operation 7 or fewer days before planting;
5. As a post-seeding drench, transplant drench, or hill drench.
6. Not for use on crops grown for seed unless allowed by state-specific 24(c) labeling.

LEGUME VEGETABLES¹ except Soybean, Dry - Foliar Treatment

Edible Podded and Succulent Shelled Pea and Bean and Dried Shelled Pea and Bean

Bean (*Lupinus* spp., includes grain lupin, sweet lupin, white lupin, and white sweet lupin)

Bean (*Phaseolus* spp., includes field bean, kidney bean, lima bean, navy bean, pinto bean, runner bean, snap bean, tepary bean, wax bean)

Bean (*Vigna* spp., includes adzuki bean, asparagus bean, blackeye pea, catjang, Chinese longbean, cowpea, Crowder pea, moth bean, mung bean, rice bean, Southern pea, urd bean, yardlong bean)

Pea (*Pisum* spp., includes dwarf pea, edible-pod pea, English pea, field pea, garden pea, green pea, snow pea, sugar snap pea)

Other Beans and Peas (Broad bean (fava), Chickpea (garbanzo bean), Guar, Jack-bean, Lablab bean (hyacinth bean), Lentil, Pigeon pea, Soybean (immature seed), Sword bean)

Pests Controlled	Rate Fl Oz/A
Aphids Leafhoppers Whiteflies	1.4

Restrictions

- Pre-Harvest Interval (PHI): **7 days**
- Minimum interval between applications: **7 days**
- Maximum **Madari 4 F** allowed per crop season: **4.2 fluid ounces per acre** (0.13 pound active ingredient per acre)

¹Not for use on crops grown for seed unless allowed by state-specific 24(c) labeling.

Applications

Apply specified rate per acre as a broadcast or directed foliar spray to infested area as pest populations begin to build. Thorough uniform coverage is necessary to achieve optimum control. Use a spray adjuvant such as LI 700 to improve coverage. This product may not knock down established and heavy insect populations. Two applications may be required to achieve control. Scout fields and re-treat if needed. Tank mix **Madari 4 F** with other insecticides for knockdown of pests or for improved control of other pests.

ROOT VEGETABLES* - Soil Treatment

Including: Beet (garden)¹, Burdock (edible)¹, Carrot¹, Celeriac¹, Chervil (turnip-rooted)¹, Chicory¹, Ginseng, Horseradish, Kava^{1,2}, Parsley (turnip-rooted), Parsnip¹, Radish¹, Oriental radish (daikon)¹, Rutabaga¹, Salsify (oyster plant), Salsify (black)¹, Salsify (Spanish), Skirret and Turnip¹

Pests Controlled	Rate Fl Oz/ 1000 Row-Ft	Rate Fl Oz/A
Aphids Flea beetles Leafhoppers Thrips (foliage-feeding thrips only) Whiteflies	0.35 to 0.8	5.0 to 12.0

Restrictions

- Pre-Harvest Interval (PHI): **21 days**
- Maximum **Madari 4 F** allowed per crop season: **12.0 fluid ounces per acre** (0.38 pound active ingredient per acre)
- Maximum **Madari 4 F** applications per crop season: **1**

Instructions

Apply specified dosage of this product in one of the following methods:

1. Chemigation into root-zone through low pressure drip, trickle, micro-sprinkler or equivalent equipment;
2. In-furrow spray (rate specified per 1000 row-feet) or, shanked-in 1 to 2 inches below seed depth during planting;
3. In a narrow (2 inches or less) band directly (1 to 2 inches) below the eventual seed row in a bedding operation 14 or fewer days before planting.

Important Note: The rate applied affects the length of control. Use higher listed rates where infestations occur later in crop development, or where pest pressure is continuous. **Madari 4 F** rates less than 0.7 fluid ounce per 1000 row-feet will not provide adequate residual pest control. **Madari 4 F** treated crops grown on very high organic matter soils (muck) may also require additional pest management control.

¹ Tops and greens from these crops may be utilized for food or feed.

² Use not permitted in California unless otherwise directed by state-specific 24(c) labeling.

* Not for use on crops grown for seed unless allowed by state-specific 24(c) labeling.

ROOT VEGETABLES¹ - Foliar Treatment

Including: Beet (garden)², Burdock (edible)², Carrot², Celeriac², Chervil (turnip-rooted)², Chicory², Ginseng, Horseradish, Kava^{2,3}, Parsley (turnip-rooted), Parsnip², Radish², Oriental radish (daikon)², Rutabaga², Salsify (oyster plant), Salsify (black)², Salsify (Spanish), Skirret, Turnip²

Pests Controlled	Rate Fl Oz/A
Aphids Flea beetles Leafhoppers Whiteflies	1.4

Restrictions

- Pre-Harvest Interval (PHI): **7 days**
- Minimum interval between applications: **5 days**
- Maximum **Madari 4 F** allowed per crop season: **1.4 fluid ounces per acre** (0.044 pound active ingredient per acre) on Radish, **4.2 fluid ounces per acre** (0.13 pound active ingredient per acre) on other crops. Maximum **Madari 4 F** application(s) per crop season: **1 on radish, 3 on all other crops.**

¹ Not for use on crops grown for seed unless allowed by state-specific 24(c) labeling.

² Tops and greens from these crops may be utilized for food or feed.

³ Use not permitted in California unless otherwise directed by state-specific 24(c) labeling.

Applications

Apply specified rate per acre as a broadcast or directed foliar spray to infested area as pest populations begin to build. Thorough uniform coverage is necessary to achieve optimum control. Use a spray adjuvant such as LI 700 to improve coverage. This product may not knock down established and heavy insect populations. Two applications may be required to achieve control. Scout fields and re-treat if needed. Tank mix **Madari 4 F** with other insecticides for knockdown of pests or for improved control of other pests.

SOYBEAN* - Foliar Treatment

Pests Controlled	Rate Fl Oz/A
Aphids Bean leaf beetle Cucumber beetles/Rootworm adults Japanese beetle (adults) Leafhoppers Whiteflies	1.5

Restrictions:

- Pre-Harvest Interval (PHI): **21 days**
- Minimum interval between applications: **7 days**
- Maximum **Madari 4 F** amount allowed per year: **4.5 fluid ounces per acre** (0.14 pound active ingredient per acre)

* Use not permitted in California or New York unless otherwise directed by state-specific 24(c) labeling.

STRAWBERRY¹ - Soil Treatment

Annual and Perennial Crops	
Pests Controlled	Rate Fl Oz/A
Aphids Whiteflies	12.0 to 16.0

Restrictions

- Pre-Harvest Interval (PHI): **14 days**
- Maximum **Madari 4 F** allowed per crop season: **16.0 fluid ounces per acre** (0.50 pound active ingredient per acre)

Instructions

Apply specified dosage of this product in one of the following methods:

1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment after plants are established or on perennial crops in early spring prior to bud opening;
2. As a plant material or plant hole treatment just prior to, or during transplanting.
3. As a band spray over-the-row in a minimum of 20.0 gallons of water per acre, followed immediately by overhead irrigation to incorporate product into root zone. Do not use plastic or other mulches that limit movement of this product into root zone.

The rate applied affects the length of control. Use higher listed rates where infestations may occur later in crop development or where pest exposure is continuous.

Post-harvest Use on Perennial Crops	
Pests Controlled	Rate Fl Oz/A
White grub complex (grubs of Asiatic garden beetle, European and Masked chafer, Japanese beetle, Oriental beetle)	8.0 to 12.0

Restrictions

- Pre-Harvest Interval (PHI): **14 days**
- Maximum **Madari 4 F** allowed per year: **12.0 fluid ounces per acre** (0.38 pound active ingredient per acre)

Instructions

Apply a single application **post-harvest to coincide with renovation of strawberry fields** and during active egg-laying period of beetles. Apply specified dosage of **Madari 4 F** in one of the following methods:

1. As a ground spray via boom or backpack sprayer in a minimum of 20.0 gallons of water per acre;
2. As a row-band spray using an adjusted amount of product based on the treated row band area in proportion to the amount required per full acre. The band-width should be equivalent to the width of the anticipated fruiting bed;
3. As a chemigation application with 600 to 1000 gallons of water followed by 0.10 to 0.25 inches irrigation.

Important: All soil-surface applications must be followed by 0.25 inches of rain-fall or overhead irrigation water per acre within 2 hours of application. Failure to adequately incorporate this product into egg-deposition zone may result in decreased activity of beetle grubs.

¹Do not use both application methods on the same crop in the same season.

STRAWBERRY - Foliar Treatment

Pests Controlled	Rate Fl Oz/A
Aphids Spittlebugs Whiteflies	1.5

Restrictions

- Pre-Harvest Interval (PHI): **7 days**
- Minimum interval between applications: **5 days**
- Maximum **Madari 4 F** allowed per crop season: **4.5 fluid ounces per acre** (0.14 pound active ingredient per acre)
- Do not apply during bloom or within 10 days prior to bloom or when bees are foraging.

Applications

Apply specified rate per acre as a broadcast or directed foliar spray to infested area as pest populations begin to build. Thorough uniform coverage is necessary to achieve optimum control. Use a spray adjuvant such as LI 700 to improve coverage. This product may not knock down established and heavy insect populations. Two applications may be required to achieve control. Scout fields and re-treat if needed. Tank mix **Madari 4 F** with other insecticides for knockdown of pests or for improved control of other pests.

SUGAR BEET* - Soil Treatment

(for use only in CA)

Pests Controlled	Rate Fl Oz/A
Aphids Flea beetles Leafhoppers Whiteflies	3.0 to 6.0
Pests/Diseases Suppressed	
Symptoms of: Western yellows/Beet curly top hybrigeminivirus (BCTV)	3.0 to 6.0

Restrictions

- Maximum **Madari 4 F** allowed per year: **6.0 fluid ounces per acre** (0.18 pound active ingredient per acre)
- Maximum imidacloprid allowed per year: **0.18 pound active ingredient per acre** (from any formulation) on any row spacing. Do not apply immediately prior to bud opening or during bloom or when bees are foraging.

Instructions

Apply specified dosage of this product in the following method:

1. Apply specified dosage in sufficient carrier volume to insure uniform application. Apply directly below each seed furrow either during the bedding operation immediately prior to planting or at the time of planting.

The low rate may be applied to aid establishment of stands in whitefly areas, or for early season control of the other pests listed.

*Not for use on crops grown for seed unless allowed by state-specific 24(c) labeling.

Madari 4 F Conversion Chart for Linear Application

RATE:	Rate: Fl Oz/1000 row-ft Based on average row spacing (in inches)							
	10	15	20	25	30	35	40	45
5	0.10	0.14	0.19	0.24	0.29	0.33	0.38	0.43
6	0.11	0.17	0.23	0.29	0.34	0.40	0.46	0.51
7	0.13	0.20	0.27	0.33	0.40	0.47	0.53	0.60
8	0.15	0.23	0.30	0.38	0.46	0.53	0.61	0.68
9	0.17	0.26	0.34	0.43	0.51	0.60	0.68	0.77
10	0.19	0.29	0.38	0.48	0.57	0.67	0.76	0.86
12	0.23	0.34	0.46	0.57	0.69	0.80	0.92	1.03
14	0.27	0.40	0.54	0.67	0.80	0.94	1.07	1.21
16	0.31	0.46	0.61	0.77	0.92	1.07	1.22	1.38

TREE, BUSH and VINE CROPS

Application Directions

BANANA and PLANTAIN - Soil Treatment

Pests Controlled	Rate Fl Oz/A
Aphids Leafhoppers	8.0 to 16.0
Pests/Diseases Suppressed	
Scales	8.0 to 16.0

Restrictions

- Pre-Harvest Interval (PHI): **0 day**
- Maximum **Madari 4 F** allowed per year: **16.0 fluid ounces per acre** (0.50 pound active ingredient per acre)

Instructions

Apply specified dosage of this product in the following method:

1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.

BANANA and PLANTAIN - Foliar Treatment

Pests Controlled	Rate Fl Oz/A
Aphids Leafhoppers Thrips	3.2

Restrictions

- Pre-Harvest Interval (PHI): **0 day**
- Minimum interval between applications: **14 days**
- Maximum **Madari 4 F** allowed per year: **16.0 fluid ounces per acre** (0.5 pound active ingredient per acre)

Applications

Apply specified rate per acre as a broadcast or directed foliar spray to infested area as pest populations begin to build. Thorough uniform coverage is necessary to achieve optimum control. Use a spray adjuvant such as LI 700 to improve coverage. This product may not knock down established and heavy insect populations. Two applications may be required to achieve control. Scout fields and re-treat if needed. Tank mix this product with other insecticides for knockdown of pests or for improved control of other pests. Aerial application of **Madari 4 F** may result in slower activity and reduced control relative to results from ground application. For tree and vine crops, application rates are based on full-size mature trees or vines.

Apply specified dosage as a broadcast or directed spray to infested area ensuring thorough coverage. This product may be applied through properly calibrated ground or aerial application equipment. Aerial applications of this product may result in slower activity and reduced control relative to results from ground application.

BUSHBERRY - Soil Treatment

Including: Blueberry, Currant, Elderberry, Gooseberry, Huckleberry, Juneberry, Ligonberry, Salal

Pests Controlled	Rate Fl Oz/A
Japanese beetle (adults, feeding on foliage) White grub complex (grubs of Asiatic garden beetle, European and Masked chafer, Japanese beetle and Oriental beetle)	8.0 to 16.0

Restrictions

- Pre-Harvest Interval (PHI): **7 days**
- Maximum **Madari 4 F** allowed per year: **16.0 fluid ounces per acre** (0.50 pound active ingredient per acre)

Instructions

Apply specified dosage of this product in one of the following methods:

1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment;
2. 18-inch band on each side of the row followed with 0.25 inches of irrigation immediately after application.

For optimal grub control, apply **Madari 4 F** to control 1st or 2nd instar larvae. Application may be made post-bloom up to 7 days prior to harvest, or post-harvest until October 1st. For optimum control of Japanese beetle larvae, make applications from June 1 to July 15. Do not apply pre-bloom or during bloom or when bees are foraging.

Application to grass covered rows, row middles, drive lanes, headlands, and other grassy areas in and around the berry field will control resident grub populations. Applications directed to the root-zone will help protect berry plant roots from grub feeding.

Apply this product to moist soil. If necessary, apply one hour of irrigation water immediately before application of **Madari 4 F**. To facilitate movement of this product into the soil and root-zone, 1/2 to 1 inch of irrigation water or rainfall must be applied or received within 24 hours of application.

BUSHBERRY - Foliar Treatment

Including: Blueberry, Currant, Elderberry, Gooseberry, Huckleberry, Juneberry, Lingonberry, and Salal

Pests Controlled	Rate Fl Oz/A
Aphids Leafhoppers/Sharpshooters	1.2 to 1.6
Blueberry maggot Japanese beetle (adults), Thrips (foliage-feeding thrips only)	2.4 to 3.2

Restrictions

- Pre-Harvest Interval (PHI): **3 days**
- Minimum interval between applications: **7 days**
- Maximum **Madari 4 F** allowed per year: **16.0 fluid ounces per acre** (0.5 pound active ingredient per acre)
- Do not make more than 5 foliar applications of **Madari 4 F** per year.
- Minimum application volume (water): 20.0 GPA - ground, 5.0 GPA - aerial.
- Do not apply pre-bloom or during bloom or when bees are foraging.

Applications

Apply specified rate per acre as a broadcast or directed foliar spray to infested area as pest populations begin to build. Thorough uniform coverage is necessary to achieve optimum control. Use a spray adjuvant such as LI 700 to improve coverage. This product may not knock down established and heavy insect populations. Two applications may be required to achieve control. Scout fields and re-treat if needed. Tank mix this product with other insecticides for knockdown of pests or for improved control of other pests. Aerial application of **Madari 4 F** may result in slower activity and reduced control relative to results from ground application. For tree and vine crops, application rates are based on full-size mature trees or vines.

CANEBERRY - Soil Treatment

Including: Blackberry (*Rubus eubatus*, including bingleberry, black satin berry, boysenberry, Cherokee blackberry, Chesterberry, Cheyenne blackberry, coryberry, darrowberry, dewberry, Dirksen thornless berry, Himalayaberry, hullberry, Lavacaberry, Loganberry, lowberry, Lucretiaberry, mammoth blackberry, marionberry, nectarberry, olallieberry, Oregon evergreen berry, phenomenalberry, rangeberry, ravenberry, rossberry, Shawnee blackberry, youngberry, and varieties and/or hybrids of these), Raspberry (black and red, *Rubus occidentalis*, *Rubus strigosus*, *Rubus idaeus*)

Pests Controlled	Rate Fl Oz/A
Aphids Leafhoppers Whiteflies	8.0 to 16.0
Rednecked cane borer	12.0 to 16.0
Pest Suppressed	
Thrips (foliage feeding thrips only)	8.0 to 16.0

Restrictions:

- Pre-Harvest Interval (PHI): **7 days**
- Maximum **Madari 4 F** allowed per year: **16.0 fluid ounces per acre** (0.50 pound active ingredient per acre)
- Do not apply pre-bloom or during bloom or when bees are foraging.

Applications:

Apply specified dosage in one of the following methods:

1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.
2. Basal, soil drench in a minimum of 500 gallons solution per acre.

CITRUS (Containerized) - Soil Treatment

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

Pests Controlled	Rate mL/ft ³ Container Media
Aphids Asian citrus psyllid Black fly Citrus leafminer Leafhoppers/Sharpshooters Mealybugs Scales Whiteflies	0.375
Citrus root weevil (larval complex)	0.625 to 1.25
Pests/Diseases Suppressed	
Citrus thrips (foliage feeding thrips only)	1.25

Instructions

Determine volume of container and calculate dosage necessary to treat container. Apply calculated dosage of this product per container as a soil drench or through low-pressure drip or trickle irrigation water. Use sufficient carrier volume to ensure thorough uniform distribution throughout the media without loss of gravitational water from the container. For optimal results, treatment should be made at planting prior to insect infestation. Retreat if necessary. For control of larvae of the citrus root weevil complex, application should be made prior to neonate larvae entering potting media. Utilize higher listed dosage for heavy infestations.

CITRUS (Field) - Soil Treatment

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

Pests Controlled	Rate Fl Oz/A
Aphids Asian citrus psyllid Black fly Citrus leafminer Leafhoppers/Sharpshooters Mealybugs Scales Termites (FL only) Whiteflies	8.0 to 16.0
Pests/Diseases Suppressed	
Citrus nematode Symptoms of: Citrus tristeza virus (CTV) through vector control Citrus yellows Thrips (foliage feeding thrips only)	16.0

Restrictions

- Pre-Harvest Interval (PHI): **0 day**
- Maximum **Madari 4 F** allowed per year: **16.0 fluid ounces per acre** (0.50 pound active ingredient per acre)

Instructions

Apply specified dosage of this product in one of the following methods:

1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment. For optimum results, apply to newly planted trees or those previously trained to drip, trickle or micro-sprinkler irrigation. To break soil surface tension, lightly pre-wet soil prior to applications of **Madari 4 F**. Chemigation application can be made separate to normal irrigation but followed by 10 to 20 minutes of additional watering to move this product into root-zone. Allow 24 hours before initiating subsequent irrigations;
2. Soil surface band spray on both sides of the tree. Overlap bands at the base of the tree to create a continuous band within the drip-line area of the tree, to be followed immediately with light sprinkler irrigation sufficient to move the product into the upper portion of the root-zone. This method is suitable for very coarse soils with 0.75% organic matter or less;
3. Drench to base of tree not exceeding 1.0 quart total solution/tree immediately around trunk of tree and extending outward covering the entire fibrous root system of the tree. Only suitable for trees up to 8 feet tall;
4. For control of existing termite infestations, apply specified dosage in 1.0 to 4.0 quarts of total solution volume, depending on size of tree, as a drench application to the basal portion of the tree trunk and surrounding soil in the immediate vicinity of the tree trunk.

5. For suppression of citrus nematode, apply specified dosage through low-pressure chemigation or soil surface band spray only, ensuring complete coverage of the root system and utilizing application directions stated above for the respective application method. Repeated and regular use of this product over several consecutive growing seasons provides the greatest degree of nematode suppression and yields the greatest plant response.

CITRUS (Field) - Foliar Treatment

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

Pests Controlled	Rate Fl Oz/A
Aphids Asian citrus psyllid Blackfly Leafhoppers/Sharpshooters Leafminers Mealybugs Scales Whiteflies	4.0 to 8.0 (depending on tree size, target pest, and infestation pressure)
Pests Suppressed	Rate Fl Oz/A
Thrips (foliage-feeding thrips only)	4.0 to 8.0

Restrictions

- Pre-Harvest Interval (PHI): **0 day**
- Minimum interval between applications: **10 days**
- Maximum **Madari 4 F** allowed per year: **16.0 fluid ounces per acre** (0.5 pound active ingredient per acre)
- Do not apply during bloom or within 10 days prior to bloom or when bees are foraging.

Application

Scales - time applications to the crawler stage. Treat each generation.

Apply specified rate per acre as a broadcast or directed foliar spray to infested area as pest populations begin to build. Thorough uniform coverage is necessary to achieve optimum control. Use a spray adjuvant such as LI 700 to improve coverage. This product may not knock down established and heavy insect populations. Two applications may be required to achieve control. Scout fields and re-treat if needed. Tank mix this product with other insecticides for knockdown of pests or for improved control of other pests. Aerial application of this product may result in slower activity and reduced control relative to results from ground application. For tree and vine crops, application rates are based on full-size mature trees or vines.

COFFEE - Soil Treatment

Pests Controlled	Rate Fl Oz/A
Aphids Leafhoppers Leafminer	8.0 to 16.0
Pests/Diseases Suppressed	
Scales	8.0 to 16.0

Restrictions

- Pre-Harvest Interval (PHI): **7 days**
- Maximum **Madari 4 F** allowed per year: **16.0 fluid ounces per acre** (0.50 pound active ingredient per acre)
- Do not apply pre-bloom or during bloom or when bees are foraging.

Instructions

Apply specified dosage in one of the following methods:

1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.
2. Subsurface side-dress shanked into the root-zone on both sides of the plants followed by irrigation;
3. Basal, soil drench in sufficient water to insure incorporation into the root-zone followed by irrigation.

COFFEE - Foliar Treatment

Pests Controlled	Rate Fl Oz/A
Aphids Leafhoppers Whiteflies	3.2
Pests Suppressed	Rate Fl Oz/A
Scales	3.2

Restrictions

- Pre-Harvest Interval (PHI): **7 days**
- Minimum interval between applications: **7 days**
- Maximum **Madari 4 F** allowed per year: **16.0 fluid ounces per acre** (0.5 pound active ingredient per acre)
- Do not apply pre-bloom or during bloom or when bees are foraging.

Applications

Apply specified dosage as a broadcast or directed spray to infested area insuring thorough coverage. Apply this product through properly calibrated ground or aerial application equipment. Aerial application of this product may result in slower activity and reduced control relative to results from ground application.

Apply specified rate per acre as a broadcast or directed foliar spray to infested area as pest populations begin to build. Thorough uniform coverage is necessary to achieve optimum control. Use a spray adjuvant such as LI 700 to improve coverage. This product may not knock down established and heavy insect populations. Two applications may be required to achieve control.

Scout fields and re-treat if needed. Tank mix this product with other insecticides for knockdown of pests or for improved control of other pests. Aerial application of **Madari 4 F** may result in slower activity and reduced control relative to results from ground application. For tree and vine crops, application rates are based on full-size mature trees or vines.

CRANBERRY - Soil Treatment

Pests Controlled	Rate Fl Oz/A
Rootgrubs (<i>Scarabaeidae</i>) Rootworms (<i>Chrysomelidae</i>)	8.0 to 16.0

Restrictions

- Pre-Harvest Interval (PHI): **30 days**
- Maximum **Madari 4 F** allowed per year: **16.0 fluid ounces per acre** (0.50 pound active ingredient per acre)
- Do not apply pre-bloom or during bloom or when bees are foraging.

Instructions

Apply this product to moist soil. Apply specified dosage of **Madari 4 F** in one of the following methods:

1. As a soil spray (ground application) directed to the root and crown area using a minimum of 20.0 gallons of water per acre;
2. As a chemigation application with 600 to 1000 gallons water.

Immediately upon application, this product must be incorporated into root-zone by 0.1 to 0.3 inch water per acre, either with the chemigation application or through irrigation/rainfall if not applied through chemigation. Inadequate incorporation within 24 hours of application may result in reduced control.

Rootgrubs and Rootworms

Best control may be achieved when application is made post-bloom immediately after bees are removed. Applications should target early instar larvae.

This product has not been tested for crop response in tank mixes with other registered fungicides or insecticides. If tank mixing is desired, premix a sample of this product and the desired fungicide or insecticide partner at labeled rates and apply to a small area. Evaluate crop response within 48 hours and for at least two weeks prior to utilizing the tank mix on larger acreage. If crop injury results from the premix test, do not apply the tank mix to larger acreage.

GRAPE - Soil Treatment

Including: American bunch grape, Muscadine grape and Vinifera grape

Pests Controlled	Rate Fl Oz/A
European fruit lecanium Leafhoppers/Sharpshooters Mealybugs <i>Phylloxera</i> * spp.	8.0 to 16.0
Pests/Diseases Suppressed	
Grapeleaf skeletonizer Nematodes Pierce's disease	12.0 to 16.0

Restrictions

- Pre-Harvest Interval (PHI): **30 days**
- Maximum **Madari 4 F** allowed per year: **16.0 fluid ounces per acre** (0.50 pound active ingredient per acre)

Instructions

Apply specified dosage of this product in one of the following methods:

1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment;
2. Subsurface side-dress shanked into the root-zone on both sides of the plants followed by irrigation;
3. Hill drench in sufficient water to insure incorporation into the root-zone followed by irrigation.
4. For suppression of nematodes, apply 16.0 fluid ounces in a single application or two 8.0 fluid ounces applications on a 30- to 45-day interval. Apply only by 1) chemigation into root-zone through above ground low-pressure drip, trickle, micro-sprinkler, or equivalent equipment; or 2) French plow technique, followed immediately by sufficient irrigation to move the product into the entire root-zone of the plant. Repeated and regular use of **Madari 4 F** over several consecutive growing seasons provides the greatest degree of nematode suppression and yields the greatest plant response. For optimal results, make application(s) between bud-break and the pea-berry stage. A total of 16.0 fluid ounces per acre is recommended under any of the following conditions:
 - Where vigorous vine growth is expected;
 - In warmer growing areas;
 - Where mealybug and European fruit lecanium populations are expected to be heavy;
 - Where vine populations exceed 600 per acre, or;
 - For suppression of nematodes.

*Repeated and regular use of this product over several, consecutive growing seasons controls existing *Phylloxera* infestations over time or prevents *Phylloxera* from becoming established.

GRAPE - Foliar Treatment

Including: American bunch grape, Muscadine grape, and Vinifera grape

Pests Controlled	Rate Fl Oz/A
Leafhoppers/Sharpshooters Mealybugs	1.2 to 1.6
Grape skeletonizer	1.5 to 1.6

Restrictions

- Pre-Harvest Interval (PHI): **0 days**
- Minimum interval between applications: **14 days**
- Maximum **Madari 4 F** allowed per year: **3.2 fluid ounces per acre** (0.1 pound active ingredient per acre)
- Apply **Madari 4 F** by ground application only.

Apply specified rate per acre as a broadcast or directed foliar spray to infested area as pest populations begin to build. Thorough uniform coverage is necessary

to achieve optimum control. Use a spray adjuvant such as LI 700 to improve coverage. This product may not knock down established and heavy insect populations. Two applications may be required to achieve control. Scout fields and re-treat if needed. Tank mix this product with other insecticides for knockdown of pests or for improved control of other pests. Aerial application of this product may result in slower activity and reduced control relative to results from ground application. For tree and vine crops, application rates are based on full-size mature trees or vines.

HOP - Soil Treatment

Pests Controlled	Rate Fl Oz/A
Aphids	9.6

Restrictions

- Pre-Harvest Interval (PHI): **60 days**
- Maximum **Madari 4 F** allowed per year: **9.6 fluid ounces per acre** (0.3 pound active ingredient per acre)

Instructions

Apply specified dosage of **Madari 4 F** in one of the following methods:

1. Chemigation into root-zone through low-pressure drop, trickle, micro-sprinkler or equivalent equipment;
2. Subsurface side-dress shanked into the root-zone on both sides of the plants followed by irrigation;
3. Hill drench in sufficient water to insure incorporation into the root-zone followed by irrigation.
4. Use the higher listed dosage where extended residual control is desired or for treating larger vines with dense foliage volume.

HOP - Foliar Treatment

Pests Controlled	Rate Fl Oz/A
Aphids	3.2

Restrictions

- Pre-Harvest Interval (PHI): **28 days**
- Minimum interval between applications: **21 days**
- Maximum **Madari 4 F** allowed per year: **9.6 fluid ounces per acre** (0.3 pound active ingredient per acre)

Applications

Apply specified rate per acre as a broadcast or directed foliar spray to infested area as pest populations begin to build. Thorough uniform coverage is necessary to achieve optimum control. Use a spray adjuvant such as LI 700 to improve coverage. This product may not knock down established and heavy insect populations. Two applications may be required to achieve control. Scout fields and re-treat if needed. Tank mix this product with other insecticides for knockdown of pests or for improved control of other pests. Aerial application of **Madari 4 F** may result in slower activity and reduced control relative to results from ground application. For tree and vine crops, application rates are based on full-size mature trees or vines.

POME FRUIT - Soil Treatment

Including: Apple, Crabapple, Loquat, Mayhaw, Pear (including Oriental pear), Quince

Pests Controlled	Rate Fl Oz/A
Aphids (including woolly apple aphid) Leafhoppers	8.0 to 12.0

Restrictions

- Pre-Harvest Interval (PHI): **21 days**
- Maximum **Madari 4 F** allowed per year: **12.0 fluid ounces per acre** (0.38 pound active ingredient per acre)
- Do not apply pre-bloom or during bloom or when bees are foraging.

Instructions

Apply specified dosage of this product in the following method:

1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.

POME FRUIT - Foliar Treatment

Including: Apples, Crabapple, Loquat, Mayhaw, Pear (including Oriental pear), Quince

Pests Controlled	Rate Fl Oz/A
Leafhoppers	1.6 to 3.2
Aphids (except woolly apple aphid) Apple maggot Leafminers San Jose scale	3.2
FOR PEAR ONLY: Mealybugs Pear psylla	8.0

Restrictions

- Pre-Harvest Interval (PHI): **7 days**
- Minimum interval between applications: **10 days**
- Maximum **Madari 4 F** allowed per year: **16.0 fluid ounces per acre** (0.5 pound active ingredient per acre)
- Do not apply pre-bloom or during bloom or when bees are foraging.

Applications

Combine applications targeting apple maggots with an approved sticker at the manufacturer's specified rates.

Apply specified rate per acre as a broadcast or directed foliar spray to infested area as pest populations begin to build. Thorough uniform coverage is necessary to achieve optimal control. Use a spray adjuvant such as LI 700 to improve coverage. This product may not knock down established and heavy insect populations. Two applications may be required to achieve control. Scout fields and re-treat if needed. Tank mix this product with other insecticides for knockdown

of pests or for improved control of other pests. Aerial application of this product may result in slower activity and reduced control relative to results from ground application. For tree and vine crops, application rates are based on full-size mature trees or vines.

POMEGRANATE - Soil Treatment

Pests Controlled	Rate Fl Oz/A
Aphids Leafhoppers/Sharpshooters Whiteflies	8.0 to 16.0

Restrictions

- Pre-Harvest Interval (PHI): **0 day**
- Maximum **Madari 4 F** allowed per year: **16.0 fluid ounces per acre** (0.50 pound active ingredient per acre)
- Do not apply pre-bloom or during bloom or when bees are foraging.

Instructions

Apply specified dosage of this product in the following method:

1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.

POMEGRANATE - Foliar Treatment

Pests Controlled	Rate Fl Oz/A
Aphids Leafhoppers/Sharpshooters Whiteflies	3.2
Pests Suppressed	Rate Fl Oz/A
Scales	3.2

Restrictions

- Pre-Harvest Interval (PHI): **7 days**
- Minimum interval between applications: **7 days**
- Maximum **Madari 4 F** allowed per year: **9.6 fluid ounces per acre** (0.3 pound active ingredient per acre)
- Do not apply pre-bloom or during bloom or when bees are foraging.

Applications

Apply specified rate per acre as a broadcast or directed foliar spray to infested area as pest populations begin to build. Thorough uniform coverage is necessary to achieve optimal control. Use a spray adjuvant such as LI 700 to improve coverage. This product may not knock down established and heavy insect populations. Two applications may be required to achieve control. Scout fields and re-treat if needed. Tank mix this product with other insecticides for knockdown of pests or for improved control of other pests. Aerial application of this product may result in slower activity and reduced control relative to results from ground application. For tree and vine crops, application rates are based on full-size mature trees or vines.

STONE FRUIT - Soil Treatment

Including: Apricot, Cherry (including sweet and tart), Nectarine, Peach, Plum (including Chickasaw, Damson, and Japanese), Plumcot, Prune (fresh and dried)

In-field, Soil Application

Pests Controlled	Rate Fl Oz/A
Aphids (including woolly apple aphid) Leafhoppers	8.0 to 12.0

Restrictions

- Pre-Harvest Interval (PHI): **21 days**
- Maximum **Madari 4 F** allowed per year: **12.0 fluid ounces per acre** (0.38 pound active ingredient per acre)
- Do not apply pre-bloom or during bloom or when bees are foraging.

Instructions

Apply specified dosage of **Madari 4 F** in the following method:

1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.

Pre-plant, Root Dip Application

Pests Controlled	Rate Fl Oz/ 10.0 Gal Root-Dip Solution
Black peach aphid (infesting roots)	1.0

Mix this product at **1.0** fluid ounce per 10.0 gallons of water. Thoroughly wet bare-root transplant to slightly above the graft union by soaking roots in the **Madari 4 F** solution for up to 5 minutes. Allow solution to dry on roots and transplant trees as soon as possible following treatment.

STONE FRUIT - Foliar Treatment

Including: Apricot, Cherry (including sweet and tart), Nectarine, Peach, Plum (including Chickasaw, Damson, and Japanese), Plumcot, Prune (fresh and dried)

Pests Controlled	Rate Fl Oz/A
Aphids Green June beetle Japanese beetle Leafhoppers/Sharpshooters Plant bugs Rose chafer San Jose scale	1.6 to 3.2
Cherry fruit fly	2.4 to 3.2
Pests Suppressed	Rate Fl Oz/A
Plum curculio Stink bugs	3.2

Restrictions for Apricot, Nectarine, Peach:

- Pre-Harvest Interval (PHI): **0 days**
- Minimum interval between applications: **7 days**

- Maximum **Madari 4 F** allowed per year: **9.6 fluid ounces per acre** (0.3 pound active ingredient per acre)
- Minimum application volume (water): 50.0 GPA - ground application, 25.0 GPA - aerial application.
- Do not apply pre-bloom or during bloom or when bees are foraging.

Restrictions for Cherries, Plums, Plumcot, Prune:

- Pre-Harvest Interval (PHI): **7 days**
- Minimum interval between applications: **10 days**
- Maximum **Madari 4 F** allowed per year: **16.0 fluid ounces per acre** (0.5 pound active ingredient per acre)
- Minimum application volume (water): 50.0 GPA - ground application, 25.0 GPA - aerial application.
- Do not apply pre-bloom or during bloom or when bees are foraging.

Applications

Apply specified rate per acre as a broadcast or directed foliar spray to infested area as pest populations begin to build. Thorough uniform coverage is necessary to achieve optimal control. Use a spray adjuvant such as LI 700 to improve coverage. This product may not knock down established and heavy insect populations. Two applications may be required to achieve control. Scout fields and re-treat if needed. Tank mix this product with other insecticides for knockdown of pests or for improved control of other pests. Aerial application of this product may result in slower activity and reduced control relative to results from ground application. For tree and vine crops, application rates are based on full-size mature trees or vines.

TROPICAL FRUIT - Soil Treatment

Including: Acerola, Atemoya, Avocado, Birida, Black sapote, Canistel, Cherimoya, Custard apple, Feijoa, Guava, Jaboticaba, Llama, Longan, Lychee, Mamey sapote, Mango, Papaya, Passionfruit, Persimmon, Pulasan, Rambutan, Sapodilla, Soursap, Spanish lime, Star apple, Starfruit, Sugar apple, Wax jambu

Pests Controlled	Rate Fl Oz/A
Aphids Avocado lacebug Leafhoppers Whiteflies	12.0 to 16.0
Pests/Diseases Suppressed	
Scales Thrips (foliage-feeding thrips only)	16.0

Restrictions

- Pre-Harvest Interval (PHI): **6 days**
- Maximum **Madari 4 F** allowed per year: **16.0 fluid ounces per acre** (0.50 pound active ingredient per acre)
- Do not apply pre-bloom or during bloom or when bees are foraging.

Instructions

Apply specified dosage of this product in the following method:

1. Chemigation through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.

TROPICAL FRUIT - Foliar Treatment

Including: Acerola, Atemoya, Avocado, Birida, Black sapote, Canistel, Chermoya, Custard apple, Feijoa, Jaboticaba, Guava, Llama, Longan, Lychee, Mamey sapote, Mango, Papaya, Passionfruit, Persimmon, Pulasan, Rambutan, Sapodilla, Soursop, Spanish lime, Star apple, Starfruit, Sugar apple, Wax jambu

Pests Controlled	Rate Fl Oz/A
Aphids Leafhoppers/Sharpshooters Mealybugs Thrips (foliage-feeding thrips only) Whiteflies	3.2
Pests Suppressed	Rate Fl Oz/A
Scales	3.2

Restrictions

- Pre-Harvest Interval (PHI): **7 days**
- Minimum interval between applications: **10 days**
- Maximum **Madari 4 F** allowed per year: **16.0 fluid ounces per acre** (0.5 pound active ingredient per acre).
- Do not apply pre-bloom or during bloom or when bees are foraging.

Applications

Apply specified rate per acre as a broadcast or directed foliar spray to infested area as pest populations begin to build. Thorough uniform coverage is necessary to achieve optimal control. Use a spray adjuvant such as LI 700 to improve coverage. This product may not knock down established and heavy insect populations. Two applications may be required to achieve control. Scout fields and re-treat if needed. Tank mix this product with other insecticides for knockdown of pests or for improved control of other pests. Aerial application of this product may result in slower activity and reduced control relative to results from ground application. For tree and vine crops, application rates are based on full-size mature trees or vines.

TREE NUTS (except Almond) - Soil Treatment

Including: Beechnut, Brazil nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert, Hickory nut, Macadamia nut, Pecan, Pistachio, Walnut (black and English)

Pests Controlled	Rate Fl Oz/A
Aphids Leafhoppers/Sharpshooters Mealybugs Spittlebugs Termites Whiteflies	8.0 to 16.0
Pests/Diseases Suppressed	
Pecan scab (from reduction in honeydew deposition)	8.0 to 16.0
Thrips (foliage-feeding thrips only)	16.0

Restrictions

- Pre-Harvest Interval (PHI): **7 days**
- Maximum **Madari 4 F** allowed per year: **16.0 fluid ounces per acre** (0.50 pound active ingredient per acre)

- Do not apply pre-bloom or during bloom or when bees are foraging.

Instructions

Apply specified dosage prior to or at onset of pest infestation in one of the following methods:

1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment. Pre-wet soil prior to applications of this product and allow soil to dry following application and prior to subsequent irrigation;
2. Emitter or spot application in a minimum of 4.0 fluid ounces of mixture/emitter site;
3. Shank or subsurface side-dress, injected to a depth just above or just within the root zone and between the trunk and drip line of the tree canopy. Product should be applied in a minimum of 10.0 gallons per acre using multiple shanks on both sides of trees. Ensure product placement is below sod or orchard floor debris. Irrigation covering entire treated area should follow within 48 hours to promote uptake by root system.
4. For control of termites, apply specified dosage to slightly moist soil as a high-volume drench to the basal portion of the tree trunk and surrounding soil in the immediate vicinity of the tree trunk. Utilize sufficient carrier volume to penetrate the soil to a depth of 18 to 24 inches to obtain optimum control. Allow soil to dry following treatment and prior to applying any irrigation.

Use the higher listed rates when applied by shank or subsurface side-dress, used on larger trees, soils are high in clay content, high plant populations exist, and/or where extended control is desired. Under some conditions, control may not occur for 14 or more days or until two (2) irrigations have been made. Applications made later in the season may result in reduced efficacy.

TREE NUTS (except Almond) - Foliar Treatment

Including: Beechnut, Brazil nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert, Hickory nut, Macadamia nut, Pecan, Pistachio, Walnut (black and English)

Pests Controlled	Rate Fl Oz/A
Aphids (except black pecan aphid) Leafhoppers/Sharpshooters Phylloxera spp. (leaf infestations) Spittlebugs Whiteflies	1.5 to 3.0
Black pecan aphid Mealybugs San Jose scale	3.0

Restrictions

- Pre-Harvest Interval (PHI): **7 days**
- Minimum interval between applications: **6 days**
- Maximum **Madari 4 F** allowed per year: **10.4 fluid ounces per acre** (0.36 pound active ingredient per acre)
- Minimum application volume (water); 50.0 GPA - ground application, 25.0 GPA - aerial application.
- Do not apply within 10 days prior to bloom or during bloom or when bees are foraging.

Apply specified rate per acre as a broadcast or directed foliar spray to infested area as pest populations begin to build. Thorough uniform coverage is necessary

to achieve optimum control. Use a spray adjuvant such as LI 700 to improve coverage. This product may not knock down established and heavy insect populations. Two applications may be required to achieve control. Scout field and re-treat if needed. Tank mix this product with other insecticides for knockdown of pests or for improved control of other pests. Aerial applications of this product may result in slower activity and reduced control relative to results from ground application. For tree and vine crops, application rates are based on full-size mature trees or vines.

Applications:

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

Two applications on a 10- to 14-day interval may be required to achieve control.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store in a cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area.

Handle and open container in a manner as to prevent spillage. If the container is leaking, invert to prevent leakage. If container is leaking or material spilled for any reason or cause, carefully dam up spilled material to prevent runoff. Refer to **PRECAUTIONARY STATEMENTS** on label for hazards associated with the handling of this material. Do not walk through spilled material. Absorb spilled material with absorbing type compounds and dispose of as directed for pesticides below. In spill or leak incidents, keep unauthorized people away.

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: Nonrefillable Container (five gallons or less): Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by incineration. **Nonrefillable Container (greater than five gallons):** Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or 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. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by incineration.

LIMITATION OF WARRANTY AND LIABILITY

IMPORTANT: READ BEFORE USE. Read the entire Directions for Use, Conditions of Warranties and Limitations of Liability before using this product. If these terms and conditions are not acceptable, return the unopened product container at once. By using this product, user or buyer accepts the following Disclaimer of Warranties and Limitations of Liability. **CONDITIONS:** The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Ineffectiveness, injury, and other unintended consequences may result because of such factors as manner of use or application (including misuse), the presence of other materials, weather conditions, and other unknown factors, all of which are beyond the control of AVALAIRE, LLC. To the extent consistent with applicable law, all such risks shall be assumed by the user or buyer. **DISCLAIMER OF WARRANTIES:** To the extent consistent with applicable law, AVALAIRE, LLC makes no other warranties, express or implied, of merchantability or of fitness for a particular purpose or otherwise, that extend beyond statements on this label. **LIMITATIONS OF LIABILITY:** To the extent consistent with applicable law, neither AVALAIRE, LLC the manufacturer, nor the Seller shall be liable for any indirect, special, incidental or consequential damages resulting from the use, handling, application, storage, or disposal of this product. To the extent consistent with applicable law, the exclusive remedy of the user or buyer for any and all losses, injuries or damages resulting from the use, handling, application, or storage of this product, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall not exceed the purchase price paid.

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