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Guarda®

SPECIMEN LABEL

EPA REGISTRATION NO. 92144-2-70299

ACTIVE INGREDIENTS:

Thyme oil..... 3%
OTHER INGREDIENTS:..... 97%
TOTAL:..... 100%

KEEP OUT OF REACH OF CHILDREN
CAUTION

FIRST AID

If swallowed
- Call poison control center or doctor immediately for treatment advice.
- Have person sip a glass of water if able to swallow.
- Do not induce vomiting unless told to do so by the poison control center or doctor.
- Do not give anything by mouth to an unconscious person.

If on skin or clothing
- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15–20 minutes.
- Call a poison control center or doctor for treatment advice.

If inhaled
- Move person to fresh air.
- If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.
- Call a poison control center or doctor for further treatment advice.

If in eyes
- Hold eye open and rinse slowly and gently with water for 15–20 minutes.
- Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
- Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Avoid contact with skin, eyes, or clothing. Wear goggles or safety glasses. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:
- Long-sleeved shirt and long pants
- Shoes plus socks
- Waterproof gloves
- Protective eyewear

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

USER SAFETY RECOMMENDATIONS

- User should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- User should remove PPE immediately after handling this product. As soon as possible, wash thoroughly and change into clean clothing.
- Wash the outside of gloves before removing.

ENVIRONMENTAL HAZARDS

For terrestrial uses: Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwater or rinsate.

(Use the following additional statement for containers that hold 5 gallons or more: Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.)

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the State or Tribal agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries and greenhouses and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification and emergency assistance. It also contains specific instructions and exemptions pertaining to the statements on this label about personal protective equipment (PPE) and the restricted-entry interval (REI). 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 0 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated such as plants, soil or water is:
- Coveralls
- Waterproof gloves
- Shoes plus socks
- Protective eyewear

GENERAL INFORMATION

Guarda is formulated with thyme oil, a botanical extract. Guarda's proprietary formulation stabilizes the thyme oil, reducing its volatility, improving contact time with plant surfaces, and improving efficacy against target fungal and bacterial pathogens. The product is for bacterial and fungal disease control on ornamental plants, turf, and edible crops. Guarda applied to actively growing plants (see DIRECTIONS FOR USE) will reduce or control incidence of bacterial and fungal disease and improve plant health. Plant health benefits often result in greater yields and improved crop quality at harvest, especially when crops are stressed by pathogens or environmental conditions. Use Guarda as a curative application when disease is evident but preventative application is recommended when conditions favor development of bacterial or fungal

disease. Apply prior to disease infestation to protect the growing leaf tissue. See specific information for diseases controlled and use rates on ornamental plants, turf, and edible crops.

MODE OF ACTION

Thyme oil extracted from *Thymus* spp. plant material is a powerful antifungal and antibacterial agent. The extract, when applied to growing crops, controls fungal and bacterial disease organisms by membrane disruption. Guarda is an improved efficacy formulation using a proprietary stabilization technology to reduce the volatility of the the botanical active, increasing contact time with target disease organisms to reduce or control both bacterial and fungal diseases.

The control of diseases is not systemic, but provides some translaminar protection. Repeat foliar applications at 7-14 day intervals to maintain disease control and to protect new plant growth.

Use Guarda as a preventative or curative treatment.

MIXING AND APPLICATION INSTRUCTIONS

– SHAKE WELL PRIOR TO USE –

Guarda is an emulsifiable concentrate containing oil extracted from *Thymus* spp. Use 100-mesh nozzle screens or larger.

See CHEMIGATION section for chemigation use directions.
See PRE-PLANT DIP section for pre-plant dip use directions.
See SEED TREATMENT section for seed treatment use directions.
See SOIL TREATMENT section for soil application use directions.

Use higher water volumes with larger sized crops and extensive foliage to secure thorough coverage.

Guarda alone: Add ½ of the required amount of water to the mix tank. With the agitator running, add the Guarda to the mix tank. Continue agitation while adding the remainder of the water. Begin application of the solution after the Guarda has completely dispersed into the mix water. Maintain agitation until all the mixture has been applied.

Guarda + tank-mixtures: Add ½ - ¾ of the required amount of water to the mix tank. Start the agitation before adding any tank mix partners. In general, tank-mix partners should be added in this order: wettable powders, dry flowable formulations, liquid flowable formulations, and emulsifiable formulations such as Guarda. Always allow each tank-mix partner to become completely dispersed before adding the next component. Maintain continuous agitation until all components have been dispersed and throughout the application process. After all components are completely dispersed add the remainder of the water. Guarda cannot be mixed with another product with a prohibition against mixing. Use of the tank mix must be in accordance with the more restrictive label limitations and precautions. Do not pre-mix Guarda with any other tank mix component prior to adding to the spray tank.

Compatibility: Do not combine Guarda in the spray tank with pesticides, adjuvants, or fertilizers if there has been no previous experience or use of the combination to show it is physically compatible, effective, and non-injurious under your use conditions.

Guarda is compatible with many commonly used pesticides, fertilizers, adjuvants, and surfactants, but has not been evaluated with all potential combinations. To ensure compatibility of the tank mix combinations, evaluate prior to use as follows: Using a suitable container, add the proportional amounts of product to water. Add wettable powders first, then water dispersible granules, then liquid flowables, and lastly, emulsifiable concentrates. Mix thoroughly and let stand for at least five minutes. If the combination stays mixed or can be remixed, it is physically compatible. Test the mix on a small portion of the crop to be treated to ensure that a phytotoxic response will not occur as a result of the application.

CHEMIGATION USE DIRECTIONS

Apply Guarda at 1 gallon per acre according to the instructions below unless specified differently in the SELECTED CROPS section.

CHEMIGATION

General Requirements -

1. Apply this product only through a drip system or sprinkler including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, hand move, flood (basin), furrow, border or drip (trickle) irrigation systems. Do not apply this product through any other type of irrigation system.
2. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.
3. If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.
4. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.
5. 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.

Specific Requirements for Chemigation Systems Connected to Public Water Systems -

1. Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
2. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from 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.
3. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
4. 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.
5. 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.
6. 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.
7. Do not apply when wind speed favors drift beyond the area intended for treatment.

Specific Requirements for Sprinkler Chemigation -

1. 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.
2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
3. 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.
4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
5. 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.
6. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being filled with a system interlock.
7. Do not apply when wind speed favors drift beyond the area intended for treatment.

Specific Requirements for Flood (Basin), Furrow and Border Chemigation -

1. Systems using a gravity flow pesticide dispensing system must meter the pesticide into the water at the head of the field and downstream of a hydraulic discontinuity such as a drop structure or weir box to decrease potential for water source contamination from backflow if water flow stops.
2. The systems utilizing a pressurized water and pesticide injection system must meet the following requirements:
   a. 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.
   b. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
   c. 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.
   d. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
   e. 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.
   f. 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.

Specific Requirements for Drip (Trickle) Chemigation -

1. 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.
2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
3. 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.
4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
5. 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.
6. 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.

Application Instructions for All Types of Chemigation -

1. Remove scale, pesticide residues, and other foreign matter from the chemical supply tank and entire injector system. Flush with clean water. Failure to provide a clean tank, void of scale or residues may cause product to lose effectiveness or strength.
2. Determine the treatment rates as indicated in the directions for use and make proper dilutions. Product can be applied continuously or at any time during the water application.
3. Prepare a solution in the chemical tank by filling the tank with the required water and then adding product as required.

PRE-PLANT DIP USE DIRECTIONS

Guarda can be applied as a pre-plant dip for improved plant health and suppression of certain soil-borne diseases. Apply Guarda at (32-64 ounces) (1-2 quarts) product per 10 gallons of water as a pre-plant dip immediately prior to transplanting, unless specified differently in the SELECTED CROPS section.

SOIL TREATMENT USE DIRECTIONS

Guarda can be applied by soil drench, in-furrow spray, or soil injection to improve plant health and to protect against certain soil-borne diseases.

In general, Guarda can be applied by the following methods, unless specified differently in the SELECTED CROPS section:

Soil Drench Applications: Apply Guarda at a concentration of 4 gallons per 100 gallons of water, and at a sufficient rate to thoroughly soak the growing media and root zone. Make an initial application of Guarda during or shortly after transplant to reduce transplant shock, suppress soil-borne diseases and improve root growth. Multiple drench applications can be made on a 10 -14 day interval.

Shanked-In and Injected Applications: Guarda can be shanked-in or injected into the soil alone, or with most types of liquid nutrients.

In-Furrow Applications: At planting, apply Guarda as an in-furrow spray at the rate of 1 gallon per acre or 8.8 fluid ounces per 1000 feet of row according to the chart below. Apply Guarda in 5 - 15 gallons of water so as the spray is directed into the seed furrow just before the seeds are covered.

Rate	In-Furrow Application Rates Product per Acre (fl. oz.)					
	30" Rows	32" Rows	34" Rows	36" Rows	38" Rows	40" Rows
8.8 fl. oz. per 1,000 ft. row	153.2	144.0	135.2	128.0	121.2	114.8

30" = 17,424 row ft./acre, 32" = 16,315 row ft./acre, 34" = 15,374 row ft./acre, 36" = 14,520 row ft./acre, 38" = 13,754 row ft./acre, 40" = 13,068 row ft./acre.

APPLICATION RATES FOR SELECTED CROPS

Guarda used as specified will improve plant health and reduce or control incidence of the bacterial and fungal diseases listed below.

Guarda is exempt from tolerances and may be applied as directed to any food or non-food crop up to and including the day of harvest at a rate not exceeding 240 fl. oz. (7.2 oz. active ingredient) per acre per application.

The use rate for Guarda applied alone, tank mixed, or as an alternate spray is 1 gallon per 29-159 gallons of water (0.625%-3.3% v/v dilution of Guarda) applied at a spray volume of 15-100 gallons per acre. Use higher water volumes with larger sized crops and extensive foliage in order to secure thorough coverage. See specific application instructions pertaining to each crop for additional details.

For greenhouse application on the crops and diseases listed, the use rate for Guarda applied alone, tank mixed, or as an alternate spray is 1 gallon in 29-119 gallons of water (0.833%-3.3% v/v dilution of Guarda) sprayed until just before point of runoff. Repeat at 7-14 day intervals as needed. See specific application instructions for each crop for additional details.

Crop	Target Disease	Application Method	Product Use Rate per Application	Application Instructions
Artichoke	Powdery Mildew *(Erysiphe cichoracearum) (Leveillula taurica)* Ramularia Leaf Spot *(Ramularia cynarae)*	Foliar (Ground)	1 gallon per 29-159 gallons of water (0.625%-3.3% v/v dilution)	Apply at a spray volume sufficient to ensure thorough coverage to the point of runoff – generally 15-25 gallons per acre. Apply this product preventatively or when the first disease symptoms are visible and reapply every 7-14 days.
		Chemigation	1 gallon per 29-159 gallons of water (0.625%-3.3% v/v dilution)	For chemigation applications for improved plant growth and suppression of soil-borne diseases, apply this product through drip irrigation immediately after transplant and at 14 day intervals or begin 14 days after transplant when soil drench applications are used.
Asparagus	Botrytis Blight *(Botrytis cinerea)* Rust *(Puccinia aspargi)*	Foliar (Ground)	1 gallon per 29-159 gallons of water (0.625%-3.3% v/v dilution)	Apply at a spray volume sufficient to ensure thorough coverage to the point of runoff – generally 15-25 gallons per acre. Apply this product preventatively or when the first disease symptoms are visible and reapply every 7-14 days.
Bushberries and Caneberries Blueberry Blackberry (all varieties) Cranberry Currant Elderberry Gooseberry Huckleberry Juneberry Ligonberry Loganberry Raspberry (red and black) Salal and other berry crops	Mummy Berry *(Monilinia vaccinii-corymbosi)* Alternaria Fruit Rot (*Alternaria* spp.) Anthracnose Fruit Rot *(Colletotrichum acutatum)* Bacterial Canker *(Pseudomonas syringae)* Botrytis Blight *(Botrytis cinerea)* Leaf Rust *(Pucciniastrum vaccinii)* Leaf Spot and Blotch (*Mycosphaerella* spp.) (*Septoria* spp.) Phomopsis Leaf Spot, Twig Blight, and Fruit Rot (*Phomopsis* spp.) Powdery Mildew *(Microsphaera alni)* Spur Blight (*Didymella* spp.) (*Phoma* spp.)	Foliar (Ground)	1 gallon per 29-159 gallons of water (0.625%-3.3% v/v dilution)	Apply at a spray volume sufficient to ensure thorough coverage to the point of runoff – generally 15-25 gallons per acre. Apply this product preventatively or when the first disease symptoms are visible and reapply every 7-14 days. Mummy Berry – Initiate application at bud break stage of development. Apply this product preventatively and repeat on a 7-10-day interval or as needed. For best performance, tank mix this product with other registered fungicides for Mummy Berry control. Botrytis Blight – Apply this product preventatively when the first disease symptoms are visible and reapply every 7-14 days. Bacterial Canker – Apply this product prior to Fall rains and repeat applications during dormancy before Spring growth. This product can be tank mixed with another registered fungicide for improved control of bacterial canker. Anthracnose Fruit Rot and Alternaria Fruit Rot on blueberries – Initiate application at green tip and continue applications on a 7-10 day.
Bulb Vegetables Onion (Bulb and Green) Garlic Leek Shallot and other bulb vegetable crops	Botrytis Leaf Blight *(Botrytis squamosa)* Botrytis Neck Rot (*Botrytis* spp.) Downy Mildew (*Peronospora* spp.) Onion Downy Mildew *(Peronospora destructor)* Onion Purple Blotch *(Alternaria porri)* Powdery Mildew (*Erysiphe* spp.) Rust *(Puccinia porri)* Stemphyllium Leaf Blight *(Stemphylium vesicarium)*	Foliar	1 gallon per 29-159 gallons of water (0.625%-3.3% v/v dilution)	Apply at a spray volume sufficient to ensure thorough coverage to the point of runoff – generally 15-25 gallons per acre. Apply this product preventatively or when the first disease symptoms are visible and reapply every 7-14 days.

(continued) **Bulb Vegetables** Onion (Bulb and Green) Garlic Leek Shallot and other bulb vegetable crops	*Fusarium* spp. *Pythium* spp. *Rhizoctonia* spp.	Soil Drench	4 gallons per 100 gallons of water (3.84% v/v dilution)	For soil drench applications, apply this product at a concentration of 4 gallons per 100 gallons of water, and at a sufficient rate to thoroughly soak the growing media and root zone. Make an initial application of this product during or shortly after transplant to reduce transplant shock, suppress soil-borne diseases and improve root growth. Multiple drench applications can be made on a 10-14 day interval.
		In-Furrow	1 gallon per acre or 8.8 fluid ounces per 1,000 feet of row.	For in-furrow applications, at planting apply this product as an in-furrow spray at the rate of 1 gallon per acre or 8.8 fluid ounces per 1,000 feet of row according to the chart in the SOIL TREATMENT USE DIRECTIONS section. Apply this product in 5-15 gallons of water so as the spray is directed into the seed furrow just before the seeds are covered.
		Chemigation	1 gallon per 29-159 gallons of water (0.625%-3.3% v/v dilution)	For chemigation applications, apply this product through irrigation at the rate of 1-4 quarts per acre immediately after transplant and at 14-day intervals or begin 14 days after transplant when plant dip or soil drench applications are used.
		Plant Dip	1-2 quarts (32-64 oz.) per 10 gallons water (2.4-4.8% v/v dilution)	For plant dip applications for improved plant growth and suppression of soil-borne diseases, apply this product as a pre-plant dip immediately prior to transplanting.
Cereal Grains Barley Buckwheat Grain Amaranth Milo Oat Millets Rice Rye Sorghum Triticale Wheat and other cereal grain crops	Powdery Mildew *(Erysiphe graminis)* Bacterial Blight and Streak (*Xanthomonas* spp.) Brown Rot, Leaf Spots & Smuts (*Ceratobasidium* spp.) (*Cercospora* spp.) (*Cochliobolus* spp.) (*Drechslera* spp.) Rice Blast *(Pyricularia grisea)* Rust (*Puccinia* spp.) Septoria Leaf Spot (*Septoria* spp.) Sheath Spot and Blight *(Rhizoctonia oryzae)* *(Thanatephorus cucumeris)* Stem Rot *(Sclerotium oryzae)* Smut *(Tilletia barclayana)*	Foliar (Ground)	1 gallon per 29-159 gallons of water (0.625%-3.3% v/v dilution)	For ground applications to optimize disease control and to maximize yields, apply this product in 15-40 gallons of water per acre. It is important to apply this product at the flag leaf stage to maximize yield. Apply this product preventatively or when the first disease symptoms appear. Repeat applications in 7-14 day intervals depending upon crop growth and disease pressure. When the plants are under high disease pressure, tank mix this product with another fungicide for more effective control.
		Foliar (Aerial)	1 gallon per 5-15 gallons of water (6.25-16.67% v/v dilution)	For aerial applications, apply this product in a minimum of 5 gallons water per acre. It is important to apply this product at the flag leaf stage to maximize yield. Apply this product preventatively or when the first disease symptoms appear. Repeat applications in 7-14 day intervals depending upon crop growth and disease pressure. When the plants are under high disease pressure, tank mix this product with another registered fungicide for more effective control.
Citrus Crops Orange Grapefruit Lemon Tangelo Tangerine Pummelo and other citrus crops	Bacterial Canker (*Xanthomonas* spp.) Alternaria Brown Spot *(Alternaria alternata)* Bacterial Blast (Pseudomonas syringae) Black Spot *(Guignardia citricarpa)* *(Phyllosticta citricarpa)* Greasy Spot *(Mycosphaerella citri)* Melanose *(Diaporthe citri)* Postbloom Fruit Drop *(Colletotrichum acutatum)* Scab *(Elsinoe australis)* *(Elsinoe fawcetti)*	Foliar (Ground)	1 gallon per 29-159 gallons of water (0.625%-3.3% v/v dilution)	For ground applications, apply this product preventatively in 50-150 gallons of water per acre. For improved performance, use this product in a tank mix or rotational program with other registered fungicides. Repeat applications at 7-14 day intervals. Avoid excessive amounts of water that result in the runoff of spray material.
		Foliar (Aerial)	1 gallon per 5-15 gallons of water (6.25-16.67% v/v dilution)	For aerial applications, apply this product in a minimum of 5 gallons water per acre. For improved performance, use this product in a tank mix or rotational program with other registered fungicides. Repeat applications at 7-14 day intervals.

Cole Crops (Brassicas) Broccoli Broccoli Rabe Brussels Sprouts Cabbage Chinese Broccoli Chinese Cabbage (Bok Choy) Chinese Cabbage (Napa) Chinese Mustard Cabbage (Gai Choy) Cauliflower Cavalo Collards Kale Kohlrabi Mizuna Mustard Greens Mustard Spinach Rape Greens Turnip and other cole crops	Powdery Mildew *(Erysiphe cruciferarum) (Erysiphe polygoni)* Alternaria Leaf Spot (*Alternaria* spp.) Downy Mildew *(Peronospora parasitica)* Pin Rot Complex *(Alternaria/Xanthomonas)* Xanthomonas Leaf Spot *(Xanthomonas campestris)*	Foliar (Ground)	1 gallon per 29-159 gallons of water (0.625%-3.3% v/v dilution)	Apply at a spray volume sufficient to ensure thorough coverage to the point of runoff – generally 15-25 gallons per acre. Apply this product preventatively or when the first disease symptoms are visible and reapply every 7-14 days.
		Foliar (Aerial)	1 gallon per 5-15 gallons of water (6.25-16.67% v/v dilution)	For aerial applications, apply this product in a minimum of 5 gallons water per acre. For improved performance, use this product in a tank mix or rotational program with other registered fungicides. Repeat applications at 7-14 day intervals.
Corn Sweet Corn Field Corn Popcorn Silage Corn Seed Corn and other corn crops (includes crops grown for seed)	Anthracnose Leaf Blight *(Colletotrichum graminicola)* Eye Spot *(Aureobasidium zeae)* Gray leafspot *(Cercospora zeae-maydis)* Rusts (Puccinia spp.) Northern Leaf Blight *(Exserohilum turcicum)* Northern Leaf Spot *(Cochiliobus carbonum)* Southern Leaf Blight *(Cochliobolus heterostrophus)*	Foliar (Ground)	1 gallon per 29-159 gallons of water (0.625%-3.3% v/v dilution)	For ground applications to optimize disease control and to maximize yields, apply this product preventatively in 15-40 gallons of water per acre prior to disease development using sufficient volume for thorough coverage. Consult your local Extension Specialist or Crop Consultant regarding the optimum timing of fungicide applications.
		Foliar (Aerial)	1 gallon per 5-15 gallons of water (6.25-16.67% v/v dilution)	For aerial applications, apply this product in a minimum of 5 gallons water per acre. For improved performance, use this product in a tank mix or rotational program with other registered fungicides. Repeat applications at 7-14 day intervals.
Cotton	Alternaria Leaf Spot, Boll Rot (*Alternaria* spp.) Anthracnose, Boll Rot (*Glomeria* spp.) Ascochyta Blight, Boll Rot (*Ascochyta* spp.) Cercospora Blight and Leaf Spot (*Cercospora* spp.) Diplodia Boll Rot (*Diplodia* spp.) Hard Lock, Boll Rot (*Fusarium* spp.) Leaf Spot *(Corynespora cassicola)* Phoma Blight, Boll Rot (*Phoma* spp.) Rust (*Puccinia* spp.) (*Phykopsora* spp.) Stemphyllium Leaf Spot (*Stemphyllium* spp.)	Foliar (Ground)	1 gallon per 29-159 gallons of water (0.625%-3.3% v/v dilution)	For ground applications for foliar and Boll Rot disease control, apply this product preventatively in 15 gallons of water per acre prior to disease development using sufficient volume for thorough coverage. Repeat applications at 7-14 day intervals.
		Foliar (Aerial)	1 gallon per 5-15 gallons of water (6.25-16.67% v/v dilution)	For aerial applications, apply this product in a minimum of 5 gallons water per acre. For improved performance, use this product in a tank mix or rotational program with other registered fungicides. Repeat applications at 7-14 day intervals.
	Fusarium spp. *Phytophthora* spp. *Pythium* spp. *Rhizoctonia* spp. *Verticillium* spp.	In-Furrow	1 gallon per acre or 8.8 fluid ounces per 1,000 feet of row.	For in-furrow applications, at planting apply this product as an in-furrow spray at the rate of 1 gallon per acre or 8.8 fluid ounces per 1,000 feet of row according to the chart in the SOIL TREATMENT USE DIRECTIONS section. Apply this product in 5-15 gallons of water so as the spray is directed into the seed furrow just before the seeds are covered.

Cucurbits Includes all types and hybrids of: Chayote Chinese waxgourd Cucumber Citron melon Gherkin Pumpkin Watermelon **Edible Gourd:** Chinese okra Cucuzza Hyotan ***Mormordica* spp.:** Balsam apple Balsam pear Bitter melon Chinese cucumber **Muskmelon:** Cantaloupe Casaba Crenshaw melon Golden pershaw melon Honeydew melon Honey balls Mango melon Persian melon Pineapple melon Santa Claus melon Snake melon **Summer Squash:** Crookneck squash Scallop squash Straightneck squash Vegetable marrow Zucchini **Winter Squash:** Acorn squash Butternut squash Calabaza Hubbard squash Spaghetti squash and other cucurbit crops	Powdery Mildew *(Erysiphe cichoracearum) (Sphaerotheca fuliginea)* Anthracnose *(Colletotrichum lagenarium)* Alternaria Blight *(Alternaria cucumerina)* Cercospora Leaf Spot *(Cercospora citrulina)* Damping-off (*Fusarium* spp.) (*Pythium* spp.) (*Phytophthora* sp.) *(Rhizoctonia solani)* Downy Mildew *(Pseudoperonospora cubensis)* Gummy Stem Blight *(Didymella bryoniae)* Phytophthora Blight *(Phytophthora capsici)*	Foliar (Ground)	1 gallon per 29-159 gallons of water (0.625%-3.3% v/v dilution)	Apply at a spray volume sufficient to ensure thorough coverage to the point of runoff – generally 15-25 gallons per acre. Apply this product preventatively or when the first disease symptoms are visible and reapply every 7-14 days.
		Foliar (Aerial)	1 gallon per 5-15 gallons of water (6.25-16.67% v/v dilution)	For aerial applications, apply this product in a minimum of 5 gallons water per acre. For improved performance, use this product in a tank mix or rotational program with other registered fungicides. Repeat applications at 7-14 day intervals.
	Fusarium spp. *Phytophthora* spp. *Pythium* spp. *Rhizoctonia* spp. *Verticillium* spp.	Soil Drench	4 gallons per 100 gallons of water (3.84% v/v dilution)	For soil drench applications, apply this product at a concentration of 4 gallons per 100 gallons of water, and at a sufficient rate to thoroughly soak the growing media and root zone. Make an initial application of this product during or shortly after transplant to reduce transplant shock, suppress soil-borne diseases and improve root growth. Multiple drench applications can be made on a 10-14 day interval.
		In-Furrow	1 gallon per acre or 8.8 fluid ounces per 1,000 feet of row.	For in-furrow applications, at planting apply this product as an in-furrow spray at the rate of 1 gallon per acre or 8.8 fluid ounces per 1000 feet of row according to the chart in the SOIL TREATMENT USE DIRECTIONS section. Apply this product in 5-15 gallons of water so as the spray is directed into the seed furrow just before the seeds are covered.
		Plant Dip	1-2 quarts (32-64 oz.) per 10 gallons water (2.4-4.8% v/v dilution)	For plant dip applications for improved plant growth and suppression of soil-borne diseases, apply this product as a pre-plant dip immediately prior to transplanting.
		Chemigation	1 gallon per 29-159 gallons of water (0.625%-3.3% v/v dilution)	For chemigation applications for improved plant growth and suppression of soil-borne diseases, apply this product through drip irrigation immediately after transplant and at 14 day intervals or begin 14 days after transplant when soil drench applications are used.
Fruiting Vegetables Tomato Pepper Eggplant Ground Cherry Okra Tomatillo and other fruiting vegetable crops	Bacterial Blight (*Xanthomonas* spp.) Bacterial Spot (*Xanthomonas* spp.) Bacterial Speck *(Pseudomonas syringae)* Black Mold *(Alternaria alternata)* Damping-off (*Fusarium* spp.) (*Pythium* spp.) *(Rhizoctonia solani)* Early Blight *(Alternaria solani)* Gray Mold *(Botrytis cinerea)* Late Blight *(Phytophthora infestans)* Phytophthora Blight *(Phytophthora capsici)* Powdery Mildew (*Erysiphe* spp.) *(Leveillula taurica) (Oidopsis taurica)* (*Sphaerotheca* spp.) Target Spot *(Corynespora cassiicola)*	Foliar (Ground)	1 gallon per 29-159 gallons of water (0.625%-3.3% v/v dilution)	For ground applications, apply this product preventatively in 25-100 gallons of water per acre. Increase water volume as plant size increases. Repeat applications at 7-10 day intervals. Tank mix this product with other registered fungicides for improved disease control under heavy pressure. Phytophthora Blight – Apply this product in combination with labeled rates of a copper fungicide or with another fungicide labeled for Phytophthora Blight control.
		Foliar (Aerial)	1 gallon per 5-15 gallons of water (6.25-16.67% v/v dilution)	For aerial applications, apply this product in a minimum of 10 gallons of water per acre. Repeat applications at 7-10 day intervals. Tank mix this product with other registered fungicides for improved disease control under heavy pressure. Phytophthora Blight – Apply this product in combination with labeled rates of a copper fungicide.

(continued) **Fruiting Vegetables** Tomato Pepper Eggplant Ground Cherry Okra Tomatillo and other fruiting vegetable crops	*Fusarium* spp. *Phytophthora* spp. *Pythium* spp. *Rhizoctonia* spp. *Verticillium* spp.	Soil Drench	4 gallons per 100 gallons of water (3.84% v/v dilution)	For soil drench applications, apply this product at a concentration of 4 gallons per 100 gallons of water, and at a sufficient rate to thoroughly soak the growing media and root zone. Make an initial application of this product during or shortly after transplant to reduce transplant shock, suppress soil-borne diseases and improve root growth. Multiple drench applications can be made on a 10-14 day interval.
		In-Furrow	1 gallon per acre or 8.8 fluid ounces per 1,000 feet of row.	For in-furrow applications, at planting apply this product as an in-furrow spray at the rate of 1 gallon per acre or 8.8 fluid ounces per 1,000 feet of row according to the chart in the SOIL TREATMENT USE DIRECTIONS section. Apply this product in 5-15 gallons of water so as the spray is directed into the seed furrow just before the seeds are covered.
		Plant Dip	1-2 quarts (32-64 oz.) per 10 gallons water (2.4-4.8% v/v dilution)	For plant dip applications for improved plant growth and suppression of soil-borne diseases, apply this product as a pre-plant dip immediately prior to transplanting.
		Chemigation	1 gallon per 29-159 gallons of water (0.625%-3.3% v/v dilution)	For chemigation applications for improved plant growth and suppression of soil-borne diseases, apply this product through drip irrigation immediately after transplant and at 14 day intervals or begin 14 days after transplant when soil drench applications are used.
Grape	Powdery Mildew *(Uncinula necator)* Angular Leaf Spot *(Mycosphaerella angulata)* Anthracnose *(Elsinoe ampelina)* Botrytis Bunch Rot *(Botrytis cinerea)* Black Rot *(Guignardia bidwellii)* Downy Mildew *(Plasmopara viticola)* Eutypa *(Eutypa lata)* Leaf Blight *(Pseudocercospora vitis)* Phomopsis Fruit Rot *(Phomopsis viticola)* Ripe Rot *(Colletotrichum gloeosporioides)* Sour Rot *(Alternaria tenuis)* (*Aspergillus* spp.) *(Botrytis cinerea)* *(Cladosporium herbarum)* (*Penicillium* spp.) *(Rhizopus arrhizus)*	Foliar	1 gallon per 29-159 gallons of water (0.625%-3.3% v/v dilution)	Apply at a spray volume sufficient to ensure thorough coverage to the point of runoff – generally 15-25 gallons per acre. Apply this product preventatively or when the first disease symptoms are visible and reapply every 7-14 days.
	Phytophthora spp. *Verticillium* spp.	Plant Dip	1-2 quarts (32-64 oz.) per 10 gallons water (2.4-4.8% v/v dilution)	For plant dip applications for improved plant growth and suppression of soil-borne diseases, apply this product as a pre-plant dip immediately prior to transplanting.
Grass Seed	Powdery Mildew *(Erysiphe graminis)* (*Oidium* spp.) (*Podosphaera* spp.) (*Sphaerotheca* spp.) Rust (*Puccinia* spp.)	Foliar (Ground)	1 gallon per 29-159 gallons of water (0.625%-3.3% v/v dilution)	Apply at a spray volume sufficient to ensure thorough coverage to the point of runoff – generally 15-25 gallons per acre. Apply this product preventatively or when the first disease symptoms are visible and reapply every 7-14 days.
		Foliar (Aerial)	1 gallon per 5-15 gallons of water (6.25-16.67% v/v dilution)	For aerial applications, apply this product in a minimum of 5 gallons water per acre. For improved performance, use this product in a tank mix or rotational program with other registered fungicides. Repeat applications at 7-14 day intervals.

Hops	Downy Mildew *(Pseudoperonospora humuli)* Powdery Mildew *(Sphaerotheca macularis)*	Foliar	1 gallon per 29-159 gallons of water (0.625%-3.3% v/v dilution)	Apply this product preventatively when disease symptoms are first visible or when environmental conditions are conducive to rapid disease development. Continue sprays at 7 day intervals or as needed. Minimum spray volumes for hop growth stages are as follows: Emergence to Training: Apply this product using a minimum spray volume of 20 gallons per acre. Coverage will vary with the size of the vines and the type of spray equipment. Apply adequate spray volume to achieve complete spray coverage. Training to Wire-Touch: Apply this product using a minimum spray volume of 50 gallons per acre. Coverage will vary with the size of the vines and the type of spray equipment. Apply adequate spray volume to achieve complete spray coverage. Wire-Touch through Harvest: Apply this product using a minimum of 100 gallons of water per acre. Higher water volumes may be necessary to achieve thorough coverage after side arms develop. Apply adequate spray volume to achieve complete spray coverage. Use the higher rates when moderate to high disease pressure is present or expected.
Leafy Vegetable Crops Arugula Beet Celery Chervil Cilantro Corn Salad Cress Dandelion Dock Edible Chrysanthemum Endive Fennel Garden Peas Head Lettuce Leaf Lettuce Parsley Purslane Radicchio Rhubarb Spinach Swiss Chard Watercress and other leafy vegetable crops	Downy Mildew *(Bremia lactuca)* (*Peronospora* spp.) Bacterial Blight/Rot (*Xanthomonas* spp.) Cercospora leafspot (*Cercospora* spp.) Late Blight *(Septoria apiicola)* Pink Rot *(Sclerotinia sclerotiorum)* Powdery Mildew *(Erysiphe cichoracearum)* Sclerotinia Head and Leaf Drop *(Sclerotinia minor)* *(Sclerotinia sclerotiorum)* White Rust *(Albugo occidentalis)*	Foliar (Ground)	1 gallon per 29-159 gallons of water (0.625%-3.3% v/v dilution)	Apply at a spray volume sufficient to ensure thorough coverage to the point of runoff – generally 15-25 gallons per acre. Apply this product preventatively or when the first disease symptoms are visible and reapply every 7-14 days.
		Foliar (Aerial)	1 gallon per 5-15 gallons of water (6.25-16.67% v/v dilution)	For aerial applications, apply this product in a minimum of 5 gallons water per acre. For improved performance, use this product in a tank mix or rotational program with other registered fungicides. Repeat applications at 7-14 day intervals.
Legumes/ Vegetables (not including soybeans and peanuts) Chick Peas Dry Beans Garbanzo Beans Green Beans Lentils Lima Beans Peas Shell Beans Snap Beans Split Peas and other legume crops (including those grown for seed or oil production)	Bacterial Blight *(Xanthomonas campestris)* Gray Mold *(Botrytis cinerea)* Pythium *(aerial blight phase)* (*Pythium* spp.) Powdery Mildew (*Erysiphe* spp.) Rust (*Puccinia* spp.) *(Uromyces appendiculatus)* White Mold *(Sclerotinia sclerotiorum)*	Foliar	1 gallon per 29-159 gallons of water (0.625%-3.3% v/v dilution)	Apply at a spray volume sufficient to ensure thorough coverage to the point of runoff – generally 15-25 gallons per acre. Apply this product preventatively or when the first disease symptoms are visible and reapply every 7-14 days.
	Fusarium spp. *Phytophthora* spp. *Pythium* spp. *Rhizoctonia* spp.	In-Furrow	1 gallon per acre or 8.8 fluid ounces per 1,000 feet of row.	For in-furrow applications, at planting apply this product as an in-furrow spray at the rate of 1 gallon per acre or 8.8 fluid ounces per 1,000 feet of row according to the chart in the SOIL TREATMENT USE DIRECTIONS section. Apply this product in 5-15 gallons of water so as the spray is directed into the seed furrow just before the seeds are covered.

Mint and Other Herbs/Spices Angelica Balm Basil Borage Burnet Chamomile Catnip Chervil Chive Clary Coriander Costmary Cilantro Curry Dillweed Horehound Hyssop Lavender Lemongrass Lovage Marjoram Nasturtium Parsley (dried) Peppermint Rosemary Sage Savory (summer and winter) Sweet Bay Tansy Tarragon Thyme Wintergreen Woodruff Wormwood and other herbs/ spices	Downy Mildew (*Peronospora* spp.) Powdery Mildew (*Erysiphe* spp.) Rust *(Puccinia menthae)*	Foliar (Ground)	1 gallon per 29-159 gallons of water (0.625%-3.3% v/v dilution)	Apply at a spray volume sufficient to ensure thorough coverage to the point of runoff – generally 15-25 gallons per acre. Apply this product preventatively or when the first disease symptoms are visible and reapply every 7-14 days.
		Foliar (Aerial)	1 gallon per 5-15 gallons of water (6.25-16.67% v/v dilution)	For aerial applications, apply this product in a minimum of 5 gallons water per acre. For improved performance, use this product in a tank mix or rotational program with other registered fungicides. Repeat applications at 7-14 day intervals.
Oil Seed Crops (not including cotton, peanut, or soybean) Canola Castor Flax Industrial Hemp Rapeseed Safflower Sesame Sunflower and other oilseed crops	Bacterial Pustule (*Xanthomonas* spp.) Bacterial Speck *(Pseudomonas syringe pv. glycinea)* Brown Spot *(Septoria glycines)* Cercospora Leaf Spot (*Cercospora* spp.) Downy Mildew *(Peronospora mansherica)* Pod and Stem Blight (*Diaporthe phaseolorum* var. *sojae*) *(Phomopsis longicola)* White Mold/Sclerotinia Stem Rot *(Sclerotinia sclerotiorum)*	Foliar (Ground)	1 gallon per 29-159 gallons of water (0.625%-3.3% v/v dilution)	Apply at a spray volume sufficient to ensure thorough coverage to the point of runoff – generally 15-50 gallons per acre. Apply this product preventatively or when the first disease symptoms are visible and reapply every 7-14 days.
		Foliar (Aerial)	1 gallon per 5-15 gallons of water (6.25-16.67% v/v dilution)	For aerial applications, apply this product in a minimum of 5 gallons water per acre. For improved performance, use this product in a tank mix or rotational program with other registered fungicides. Repeat applications at 7-14 day intervals.
Olive	Olive Knot *(Pseudomonas savastanoi)*	Foliar	1 gallon per 29-159 gallons of water (0.625%-3.3% v/v dilution)	For ground applications, apply this product preventatively in 50-150 gallons of water per acre. For improved performance, use this product in a tank mix or rotational program with other registered fungicides. Repeat applications at 7-14 day intervals. Avoid excessive amounts of water that result in the runoff of spray material.

Ornamentals **Herbaceous Ornamentals** Flowering Plants Foliage Plants Bedding Plants **Woody Ornamentals** Broadleaves, Shrubs and Trees Conifers, Shrubs and Trees	*Anthracnose (Colletotrichum spp.)* *Bacteria (Erwinia spp.) (Pseudomonas spp.) (Xanthomonas spp.)* *Black Spot of Rose (Diplocarpon rosae)* *Blossom Blight (Monilinia spp.)* *Downy Mildew (Peronospora spp.) (Plasmopara viburni)* *Gray Mold (Botrytis cinerea)* *Leaf Spot (Alternaria spp.) (Cercospora spp.) (Entomosporium spp.) (Myrothecium spp.) (Septoria spp.)* *Powdery Mildew (Erysiphe spp.) (Oidium spp.) (Podosphaera spp.) (Sphaerotheca spp.)* *Rust (Puccinia spp.)* *Scab (Venturia spp.)*	Foliar	1 gallon per 29-159 gallons of water (0.625%-3.3% v/v dilution)	Apply at a spray volume sufficient to ensure thorough coverage to the point of runoff – generally 15-150 gallons per acre. Apply this product preventatively or when the first disease symptoms are visible and reapply every 7-14 days. Begin applications preventatively (before disease symptoms become visible) at the 4-6 leaf stage and treat at 7-14 day intervals as needed prior to sale or harvest. Spray until just before point of runoff. This product may be used to control certain diseases of container, bench, flat, plug, bed, or field-grown ornamentals in greenhouses, shade-houses, outdoor nurseries, retail nurseries, and other landscape areas.
	Fusarium spp. *Phytophthora spp.* *Pythium spp.* *Rhizoctonia spp.* *Verticillium spp.*	Soil Drench	4 gallons per 100 gallons of water (3.84% v/v dilution)	For soil drench applications, apply this product at a concentration of 4 gallons per 100 gallons of water, and at a sufficient rate to thoroughly soak the growing media and root zone. Make an initial application of this product during or shortly after transplant to reduce transplant shock, suppress soil-borne diseases and improve root growth. Multiple drench applications can be made on a 10-14 day interval.
		Plant Dip	1-2 quarts (32-64oz.) per 10 gallons water (2.4-4.8% v/v dilution)	For plant dip applications for improved plant growth and suppression of soil-borne diseases, apply this product as a pre-plant dip immediately prior to transplanting.
		Chemigation	1 gallon per 29-159 gallons of water (0.625%-3.3% v/v dilution)	Apply at a spray volume sufficient to ensure thorough coverage to the point of runoff – generally 15-25 gallons per acre. Apply this product preventatively or when the first disease symptoms are visible and reapply every 7-14 days.
Peanut	Aspergillus Crown Rot *(Aspergillus niger)* Damping-off *(Aspergillus flavus)* (*Fusarium* spp.) (*Pythium* spp.) (*Rhizoctonia* spp.) Early Leaf Spot *(Cercospora arachidicola)* Late Leaf Spot *(Cerosporidium personatum)* Rhizoctonia Foliar Blight, Peg, and Root Rot *(Rhizoctonia solani)* White Mold *(Sclerotium rolfsii)*	Foliar	1 gallon per 29-159 gallons of water (0.625%-3.3% v/v dilution)	Apply at a spray volume sufficient to ensure thorough coverage to the point of runoff – generally 15-25 gallons per acre. Apply this product preventatively or when the first disease symptoms are visible and reapply every 7-14 days.
	Aspergillus Crown Rot *(Aspergillus niger)* *Fusarium* spp. *Phytophthora* spp. *Pythium* spp. *Rhizoctonia* spp. *Verticillium* spp. White Mold *(Sclerotium rolfsii)*	Soil Drench	4 gallons per 100 gallons of water (3.84% v/v dilution)	For soil drench applications, apply this product at a concentration of 4 gallons per 100 gallons of water, and at a sufficient rate to thoroughly soak the growing media and root zone. Make an initial application of this product during or shortly after transplant to reduce transplant shock, suppress soil-borne diseases and improve root growth. Multiple drench applications can be made on a 10-14 day interval.
		In-Furrow	1 gallon per acre or 8.8 fluid ounces per 1,000 feet of row.	For in-furrow applications, at planting apply this product as an in-furrow spray at the rate of 1 gallon per acre or 8.8 fluid ounces per 1,000 feet of row according to the chart in the SOIL TREATMENT USE DIRECTIONS section. Apply this product in 5-15 gallons of water so as the spray is directed into the seed furrow just before the seeds are covered.

Pome Fruits Apple Crabapple Loquat Oriental Pear Pear Quince Mayhaw and other pome fruit crops	Powdery Mildew *(Podosphaera leucotricha)* Alternaria Blotch *(Alternaria mali)* Apple Scab *(Venturia inaequalis)* Bitter Rot *(Colletotrichum spp.)* Black Rot/Frogeye Leaf Spot *(Botryosphaeria obtusa)* Bot Rot *(Botryosphaeria dothidea)* Brooks Spot *(Mycosphaerella pomi)* Bull's Eye Rot (*Neofabraea* spp.) Cedar-Apple Rust *(Gymnosporangium juniperi-virginianae)* Fire Blight *(Erwinia amylovora)* Flyspeck *(Zygophiala jamaicensis)* Scab (*Venturia* spp.) Sooty Blotch *(Geastrumia polystigmati)* *(Leptodontium elatius)* *(Peltaster fructicola)* White Rot *(Botryosphaeria dothidea)*	Foliar	1 gallon per 29-159 gallons of water (0.625%-3.3% v/v dilution)	For ground applications, apply this product preventatively in 50-100 gallons of water per acre. For improved performance, use this product in a tank mix or rotational program with other registered fungicides. Repeat applications at 7-14 day intervals. Avoid excessive amounts of water that result in the runoff of spray material.
	Phytophthora spp. *Pythium* spp.	Plant Dip (bare root)	1-2 quarts (32-64 oz.) per 10 gallons water (2.4-4.8% v/v dilution)	For plant dip applications for improved plant growth and suppression of soil-borne diseases, apply this product as a pre-plant dip immediately prior to transplanting.
Root, Tuber and Corm Crops Potato Beet Carrot Cassava Ginger Ginseng Horseradish Radish Sweet Potato Turnip and other root crops (including those for seed production)	Bacterial Leaf Blight *(Xanthomonas campestris)* Black Root Rot / Black Crown Rot (*Alternaria* spp.) Downy Mildew (*Peronospora* spp.) Early Blight *(Alternaria solani)* Gray Mold (*Botrytis* spp.) Late Blight *(Phytophthora infestans)* Powdery Mildew (*Erysiphe* spp.) White Mold *(Sclerotinia sclerotiorum)*	Foliar	1 gallon per 29-159 gallons of water (0.625%-3.3% v/v dilution)	Apply at a spray volume sufficient to ensure thorough coverage to the point of runoff – generally 15-25 gallons per acre. Apply this product preventatively or when the first disease symptoms are visible and reapply every 7-14 days.
	Clubroot *(Plasmodiophora brassicae)* Common Scab *(Streptomyces scabies)* *Fusarium* spp. *Phytophthora* spp. *Pythium* spp. *Rhizoctonia* spp. *Verticillium* spp.	Soil Drench	4 gallons per 100 gallons of water (3.84% v/v dilution)	For soil drench applications, apply this product at a concentration of 4 gallons per 100 gallons of water, and at a sufficient rate to thoroughly soak the growing media and root zone. Make an initial application of this product during or shortly after transplant to reduce transplant shock, suppress soil-borne diseases and improve root growth. Multiple drench applications can be made on a 10-14 day interval.

(continued) **Root, Tuber and Corm Crops** Potato Beet Carrot Cassava Ginger Ginseng Horseradish Radish Sweet Potato Turnip and other root crops (including those for seed production)	Clubroot *(Plasmodiophora brassicae)* Common Scab *(Streptomyces scabies)* *Fusarium* spp. *Phytophthora* spp. *Pythium* spp. *Rhizoctonia* spp. *Verticillium* spp.	In-Furrow	1 gallon per acre or 8.8 fluid ounces per 1,000 feet of row.	For in-furrow applications, at planting apply this product as an in-furrow spray at the rate of 1 gallon per acre or 8.8 fluid ounces per 1000 feet of row according to the chart in the SOIL TREATMENT USE DIRECTIONS section. Apply this product in 5-15 gallons of water so as the spray is directed into the seed furrow just before the seeds are covered.
		Seed Piece Dip	1-2 quarts (32-64 oz.) per 10 gallons water (2.4-4.8% v/v dilution)	For seed piece dip applications for improved plant growth and suppression of soil-borne diseases, apply this product as a pre-plant dip to transplants or seed pieces immediately prior to transplanting.
		Chemigation	1 gallon per 29-159 gallons of water (0.625%-3.3% v/v dilution)	For chemigation applications for improved plant growth and suppression of soil-borne diseases, apply this product through drip irrigation immediately after transplant and at 14 day intervals or begin 14 days after transplant when soil drench applications are used.
Soybean	Aerial Web Blight *(Rhizoctonia solani)* Alternaria Leafspot (*Alternaria* spp.) Anthracnose *(Colletotrichum truncatum)* Asian Soybean Rust *(Phakopsora pachyrhizi)* Brown Spot *(Septoria glycines)* Cercospora Blight *(Cercospora kikuchii)* Frog-eyed Leaf Spot *(Cercospora sojina)* Pod and Stem Blight (*Diaporthe* spp.) Septoria Brown Spot *(Septoria glycines)* White Mold *(Sclerotinia sclerotiorum)*	Foliar (Ground)	1 gallon per 29-159 gallons of water (0.625%-3.3% v/v dilution)	Apply at a spray volume sufficient to ensure thorough coverage to the point of runoff – generally 15-25 gallons per acre. Apply this product preventatively or when the first disease symptoms are visible and reapply every 7-14 days.
		Foliar (Aerial)	1 gallon per 5-15 gallons of water (6.25-16.67% v/v dilution)	For aerial applications, apply this product in a minimum of 5 gallons water per acre. For improved performance, use this product in a tank mix or rotational program with other registered fungicides. Repeat applications at 7-14 day intervals.
	Fusarium spp. *Phytophthora* spp. *Pythium* spp. *Rhizoctonia* spp.	In-Furrow	1 gallon per acre or 8.8 fluid ounces per 1,000 feet of row.	For in-furrow applications, at planting apply this product as an in-furrow spray at the rate of 1 gallon per acre or 8.8 fluid ounces per 1,000 feet of row according to the chart in the SOIL TREATMENT USE DIRECTIONS section. Apply this product in 5-15 gallons of water so as the spray is directed into the seed furrow just before the seeds are covered.
Stone Fruits Apricot Cherry (sweet and tart) Nectarine Peach Plum Plumcot Prune and other stone fruit crops	Alternaria Spot/Fruit Rot *(Alternaria alternata)* Anthracnose (*Colletotrichum* spp.) Bacterial Canker (*Pseudomonas* spp.) Bacterial Spot *(Xanthomonas pruni)* Brown Rot Blossom Blight *(Monilinia laxa)* Brown Rot Fruit Rot *(Monilinia fruticola)* Cercospora Leaf Spot (*Cercospora* spp.) Cherry Leaf Spot *(Blumeriella jaapii)* Gray Mold *(Botrytis cinerea)* Powdery Mildew (*Podosphaera* spp.) *(Sphaerotheca pannosa)* Rust *(Tranzschelia discolor)* Rusty Spot *(Podosphaera leucotricha)* Scab *(Cladosporium carpophilum)*	Foliar	1 gallon per 29-159 gallons of water (0.625%-3.3% v/v dilution)	For ground applications, apply this product preventatively in 50-150 gallons of water per acre. For improved performance, use this product in a tank mix or rotational program with other registered fungicides. Repeat applications at 7-14 day intervals. Avoid excessive amounts of water that result in the runoff of spray material.

Strawberry	Anthracnose (*Collectotrichum* spp.) Suppression only Botrytis *(Botrytis cinerea)* Leaf Spot *(Mycosphaerella fragariae)* Phomopsis Leaf Blight (Phomopsis obscurans) Powdery Mildew (Sphaerotheca macularis)	Foliar	1 gallon per 29-159 gallons of water (0.625%-3.3% v/v dilution)	Apply at a spray volume sufficient to ensure thorough coverage to the point of runoff – generally 15-25 gallons per acre. Apply this product preventatively or when the first disease symptoms are visible and reapply every 7-14 days.
	Black Root Rot (*Rhizoctonia* spp.) (*Pythium* spp.) (*Fusarium* spp.) (*Cylindrocarpon* spp.)	Plant Dip	1-2 quarts (32-64 oz.) per 10 gallons water (2.4-4.8% v/v dilution)	For plant dip applications for improved plant growth and suppression of soil-borne diseases, apply this product as a pre-plant dip immediately prior to transplanting.
	Colletotrichum Crown Rot (*Colletotrichum* spp.) Phytophthora Root Rot and Crown Rot (*Phytophthora* spp.) Verticillium Wilt (*Verticillium* spp.) *Fusarium* spp. *Pythium* spp. *Phytophthora* spp. *Rhizoctonia* spp. *Verticillium* spp.	Soil Drench	4 gallons per 100 gallons of water (3.84% v/v dilution)	For soil drench applications, apply this product at a concentration of 4 gallons per 100 gallons of water, and at a sufficient rate to thoroughly soak the growing media and root zone. Make an initial application of this product during or shortly after transplant to reduce transplant shock, suppress soil-borne diseases and improve root growth. Multiple drench applications can be made on a 10-14 day interval.
		Chemigation	1 gallon per 29-159 gallons of water (0.625%-3.3% v/v dilution)	For chemigation applications for improved plant growth and suppression of soil-borne diseases, apply this product through drip irrigation immediately after transplant and at 14 day intervals or begin 14 days after transplant when soil drench applications are used.
Sugar Beets (includes crop for seed production)	Powdery Mildew *(Erysiphe betae) (Erysiphe polygoni)* Leaf Spot *(Cercospora beticola)* Ramularia (*Ramularia* spp.) Rust *(Uromyces betae)*	Foliar	1 gallon per 29-159 gallons of water (0.625%-3.3% v/v dilution)	Apply at a spray volume sufficient to ensure thorough coverage to the point of runoff - generally 15-25 gallons per acre. Apply this product preventatively or when the first disease symptoms are visible and reapply every 7-14 days.
Sugarcane	Brown Rust *(Puccinia melanocephela)* Orange Rust *(Puccinia kuehnii)*	Foliar (Ground)	1 gallon per 29-159 gallons of water (0.625%-3.3% v/v dilution)	Apply at a spray volume sufficient to ensure thorough coverage to the point of runoff – generally 15-25 gallons per acre. Apply this product preventatively or when the first disease symptoms are visible and reapply every 7-14 days.
		Foliar (Aerial)	1 gallon per 5-15 gallons of water (6.25-16.67% v/v dilution)	For aerial applications, apply this product in a minimum of 5 gallons water per acre. For improved performance, use this product in a tank mix or rotational program with other registered fungicides. Repeat applications at 7-14 day intervals.
	Fusarium spp. *Phytophthora* spp. *Pythium* spp. *Rhizoctonia* spp.	In-Furrow	1 gallon per acre or 8.8 fluid ounces per 1,000 feet of row.	For in-furrow applications, at planting apply this product as an in-furrow spray at the rate of 1 gallon per acre or 8.8 fluid ounces per 1,000 feet of row according to the chart in the SOIL TREATMENT USE DIRECTIONS section. Apply this product in 5-15 gallons of water so as the spray is directed into the seed furrow just before the seeds are covered.

Tobacco	Blue Mold *(Peronospora tabacina)*	Foliar	1 gallon per 29-159 gallons of water (0.625%-3.3% v/v dilution)	Apply at a spray volume sufficient to ensure thorough coverage to the point of runoff – generally 15-40 gallons per acre. Apply this product preventatively or when the first disease symptoms are visible and reapply every 7-14 days.
	Fusarium spp. *Phytophthora* spp. *Pythium* spp. *Rhizoctonia* spp. *Verticillium* spp.	Plant Dip	1-2 quarts (32-64 oz.) per 10 gallons water (2.4-4.8% v/v dilution)	For plant dip applications for improved plant growth and suppression of soil-borne diseases, apply this product as a pre-plant dip immediately prior to transplanting.
Tree Nut Crops Walnut (Black and English) Almond Beech nut Brazil nut Butternut Cashew Chestnut Chinquapin Filbert Hickory nut Macadamia nut Pecan Pistachio and other tree nut crops	Walnut Blight *(Xanthomonas campestris)* Alternaria Late Blight, Alternaria Leaf Spot (*Alternaria* spp.) Anthracnose (*Collectotrichum* spp.) *(Gnomonia leptostyla)* Bacterial Canker *(Erwinia nigrifluens) (Pseudomonas syringae)* Botryosphaeria Blight *(Botryosphaeria dothidea)* Brown Rot (*Monilinia* spp.) Eastern Filbert Blight *(Anisogramma anomala)* Green Fruit Rot *(Botrytis cinerea)* Leaf Rust *(Tranzschelia discolor)* Scab *(Cladosporium carpophilum) (Sphaceloma perseae)* Shot Hole *(Wilsonomyces carpophilus)*	Foliar (Ground)	1 gallon per 29-159 gallons of water (0.625%-3.3% v/v dilution)	For ground applications, apply this product preventatively in 50-150 gallons of water per acre. For improved performance, use this product in a tank mix or rotational program with other registered fungicides. Repeat applications at 7-14 day intervals. Avoid excessive amounts of water that result in the runoff of spray material.
		Foliar (Aerial)	1 gallon per 5-15 gallons of water (6.25-16.67% v/v dilution)	For aerial applications, apply this product in a minimum of 5 gallons water per acre. For improved performance, use this product in a tank mix or rotational program with other registered fungicides. Repeat applications at 7-14 day intervals.
	Fusarium spp. *Phytophthora* spp. *Pythium* spp. *Rhizoctonia* spp. *Verticillium* spp.	Plant Dip (bare root)	1-2 quarts (32-64 oz.) per 10 gallons water (2.4-4.8% v/v dilution)	For plant dip applications for improved plant growth and suppression of soil-borne diseases, apply this product as a pre-plant dip immediately prior to transplanting.
Tropical Fruits Avocado Banana Kiwi Mango Papaya Plantain Pineapple Pomegranate and other tropical fruit crops	Anthracnose *(Colletotrichum gloeosporioides)* Bacterial Blight *(Pseudomonas syringae) (Pseudomonas viridiflava)* Bacterial Canker *(Xanthomonas campestris)* Botrytis Fruit Rot *(Botrytis cinerea)* Scab *(Elsinoe mangiferae)* Sigatoka *(Mycosphaerella fijiensis)*	Foliar (Ground)	1 gallon per 29-159 gallons of water (0.625%-3.3% v/v dilution)	Apply at a spray volume sufficient to ensure thorough coverage to the point of runoff – generally 15-150 gallons per acre. Apply this product preventatively or when the first disease symptoms are visible and reapply every 7-14 days.
		Foliar (Aerial)	1 gallon per 5-15 gallons of water (6.25-16.67% v/v dilution)	For aerial applications, apply this product in a minimum of 5 gallons water per acre. For improved performance, use this product in a tank mix or rotational program with other registered fungicides. Repeat applications at 7-14 day intervals.
	Fusarium spp. *Phytophthora* spp. *Pythium* spp. *Rhizoctonia* spp. *Verticillium* spp.	Plant Dip	1-2 quarts (32-64oz.) per 10 gallons water (2.4-4.8% v/v dilution)	For plant dip applications for improved plant growth and suppression of soil-borne diseases, apply this product as a pre-plant dip immediately prior to transplanting.

Guarda has a pre-harvest interval (PHI) of 0 days.
Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 0 hours.

Crop	Target Disease	
Turfgrass Bluegrass Bentgrass Bermudagrass Dichondra Fescue Orchardgrass *Poa annua* Ryegrass St. Augustine Zoysia mixtures and other grasses **Ornamental Grasses**	Anthracnose *(Colletotrichum graminicola)* Bentgrass/Bermudagrass Dead Spot *(Ophiosphaerella EP #1stis)* Bermudagrass Decline *(Gaeumannomyces graminis var. graminis)* Brown patch *(Rhizoctonia solani)* Copper Spot *(Gloeocercospora sorghi)* Dichondra Rust *(Puccinia dichondorae)* Dollar Spot (*Lanzia* spp.) (*Moellerodiscus* spp. formerly *Sclerotinia homeocarpa*) Fusarium Patch *(Fusarium nivale)* Gray Leaf Spot *(Pyricularia grisea)* Melting Out Leaf Spot (*Bipolaris* spp.) (*Drechslera* spp.) Necrotic Ring Spot *(Leptosphaeria korrae)* Pink Patch *(Limonomyces roseipellis)* Powdery Mildew *(Erysiphe graminis)* Pythium Blight Pythium Root Rot (*Pythium aphanidermatum*) (*Pythium* spp.)	Red Thread *(Laetisaria fuciformis)* Rust (*Puccinia* spp.) Rhizoctonia Large Patch *(Rhizoctonia solani)* Snowmold, Gray (*Typhula* spp.) Snowmold, Pink *(Microdochium nivale)* Southern Blight *(Sclerotium rolfsii)* Spring Dead Spot *(Leptosphaeria korrae) (Leptosphaeria narmari) (Ophiosphaerella herpotricha) (Gaeumannomyces graminis)* Stripe Smut *(Ustilago striiformis) (Urocystis EP #1pyri)* Summer Bentgrass Decline Summer Patch Poa Patch *(Magnaporthe poae)* Take-All Patch *(Gaeumannomyces graminis)* Yellow Patch *(Rhizoctonia cerealis)* Yellow Tuft/Downy Mildew *(Sclerophthora macrospora)* Zoysia Patch *(Rhizoctonia solani)*

Application Method	Product Use Rate per Application (per 1,000 sq. ft.)	Product Use Rateper Application (per Acre)	Application Instructions
Foliar	1 gallon per 29-159 gallons of water (0.625%-3.3% v/v dilution), applied at a rate of 1 gallon of spray solution per 1,000 square feet of turf, sod, or ornamental turf.	1 gallon per 29-159 gallons of water (0.625%-3.3% v/v dilution). Apply at a spray volume sufficient to ensure thorough coverage to the point of runoff – generally 15-50 gallons per acre.	Apply this product preventatively or when the first disease symptoms are visible and reapply every 7-14 days.

INTEGRATED PEST MANAGEMENT (IPM)

Many conventional fungicides have been tested in an IPM regime with Guarda with very satisfactory results. One of the major objectives of IPM has been to reduce the probability of disease resistance development to a particular active ingredient.
The alternate use of (1-2 sprays) followed by a conventional, registered fungicide (1-2 sprays) has been successfully used in many crops. In addition, the use of tank mixes with a conventional fungicide has also been successful.

Follow label instructions of the particular registered product: Do not exceed amounts or treatment intervals on the label.

STORAGE AND DISPOSAL

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

Pesticide Storage: Store in a cool, dry place. Avoid freezing.

Pesticide Disposal: To avoid wastes, use all material in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (often such programs are run by state or local governments or by industry).

Container Handling (under 5 gallons): Non-refillable container. Do not reuse or refill this container. 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 ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill or by incineration. Do not burn unless allowed by state and local ordinances.

Container Handling (over 5 gallons): Non-refillable container. Do not reuse or refill this container Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. 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 puncture and dispose of in a sanitary landfill or by incineration. Do not burn unless allowed by state and local ordinances.

IMPORTANT: READ BEFORE USE

Read the entire Directions for Use, Conditions, Disclaimer of Warranties and Limitations of Liability before using this product. If terms are not acceptable, return the unopened product container at once. By using this product, user or buyer accepts the following Conditions, 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, plant injury, other property damage, as well as other unintended consequences may result because of factors beyond the control of BioSafe Systems, LLC. Those factors include, but are not limited to, weather conditions, presence of other materials or the manner of use or application. All such risks shall be assumed by the user or buyer.

DISCLAIMER OF WARRANTIES: To the extent consistent with applicable law, BioSafe Systems, LLC. makes no other warranties, express or implied, of merchantability or of fitness for a particular purpose or otherwise, that extend beyond the statements made on this label. To the extent consistent with applicable law, BioSafe Systems, LLC. disclaims any liability whatsoever for special, incidental, or consequential damages resulting from the use or handling of this product.

LIMITATIONS OF LIABILITY: 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 or handling of this product, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall not exceed the purchase price paid, or at Lidan Inc's election, the replacement of product.

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