

LifeGard[®] LC

BIOLOGICAL PLANT ACTIVATOR

To Reduce Occurrence and Severity of Plant Disease on Listed Crops



CAN BE USED IN ORGANIC PRODUCTION

ACTIVE INGREDIENT:

Bacillus mycooides isolate J[†]99.5%

OTHER INGREDIENTS:0.5%

TOTAL100.0%

[†] Contains a minimum of 1 billion (1×10⁹) viable spores/mL of product.

KEEP OUT OF REACH OF CHILDREN

See attached booklet for precautionary statements and directions for use.

MANUFACTURED BY:

Certis USA LLC
9145 Guilford Road, Suite 175
Columbia, MD 21046



EPA Reg. No. 70051-126

EPA Est. No. 70051-CA-1

Lot Number:

Net Weight: 2.5 gal

ESL20191021

Ver20191209

This is a Specimen Label. It may not reflect the most-recent approved label for use in your state. Always refer to the label on the product packaging for approved use instructions. Please contact your Certis sales representative for more information.

PRECAUTIONARY STATEMENTS

Personal Protective Equipment (PPE):

Applicators and other handlers must wear:

- long-sleeved shirt
- long pants
- socks and shoes
- a NIOSH-approved particulate respirator with any N, R, or P filter with NIOSH approval number prefix TC-84A; or a NIOSH-approved powered air purifying respirator with an HE filter with NIOSH approval number prefix TC-21C. (Repeated exposure to high concentrations of microbial proteins can cause allergic sensitization.)

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

Engineering controls

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.

IMPORTANT: When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for "applicators and other handlers" and have such PPE immediately available for use in an emergency, such as a spill or equipment breakdown.

User Safety Recommendations

Users should:

- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

For Terrestrial Uses: Do not apply directly to water or 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.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. These use directions must be in the possession of the user at the time of pesticide application. 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 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 4 hours.

For early entry into treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, wear:

- Coveralls
- Chemical-resistant gloves (made of any waterproof material)
- Shoes plus socks

BIOLOGICAL ACTIVITY

LifeGard® LC contains a biological disease control agent (*Bacillus mycooides* isolate J, or BmJ) that reduces the occurrence and severity of plant disease by triggering the plant's natural defense mechanisms against pathogens. BmJ itself has no direct effect on plant pathogens, but preventative applications (before infection or appearance of disease symptoms) can reduce the incidence and severity of subsequent disease. LifeGard® LC should be tank mixed with other registered products with curative activity if disease is present at the time of application. LifeGard® LC is most effective when used in combination or alternation with fungicides having other modes of action, registered for the control of labeled diseases, which may themselves be rendered more effective due to the elevated state of plant resistance to pathogens.

Mixing procedures:

LifeGard® LC is a liquid concentrate (LC) formulation that must be mixed with water and applied as a foliar spray. Mix the specified amount of LifeGard® LC in clean water with sufficient agitation to maintain a uniform suspension in the spray or mixing tank.

Prepare only the amount of spray mix that is required for the immediate operation. Do not allow the mixture to stand overnight in the spray tank.

Application timing:

Apply LifeGard® LC as a preventative spray before disease is observed in the field. Initial triggering of plant defense response occurs within minutes of application, but 3 – 5 days are required to attain maximum level of protection, which lasts up to 18 days after application.

Apply to healthy, actively growing plants. Do not apply to plants that are stressed due to drought, excessive moisture, excessively hot or cold temperatures, herbicide injury, or other environmental stress.

LifeGard® LC is exempt from the requirement for residue tolerance and can be applied up to the day of harvest. **Preharvest Interval (PHI) = 0 days.**

Application method:

Ground applications: LifeGard® LC can be applied in most commonly-used ground application equipment, such as tractor-mounted boom, airblast, high clearance, backpack, and other pressurized sprayers; hose-end or hand-held sprayers; and foggers or mist blowers. Apply in sufficient volume of water to provide uniform coverage.

Aerial applications: LifeGard® LC can be applied by fixed or rotary winged aircraft in a minimum of 5 gallons of water per acre. Standard precautions should be taken to minimize spray drift.

Chemigation: LifeGard® LC can be applied to the crop canopy through overhead sprinkler systems by injecting the specified rate (see below) at the very end of the irrigation period. Injection should occur only within the minimum time required to ensure complete flushing of the product from the system and onto the crop canopy. Keep supply tank agitated during application. See “Chemigation Instructions” below for additional information about application of LifeGard® LC through sprinkler irrigation systems. **Do not apply LifeGard® LC through any other type of irrigation system.**

FOR PROTECTION AGAINST DISEASE CAUSED BY FUNGI, OOMYCETES, OR BACTERIA IN CROPS GROWN OUTDOORS OR IN GREENHOUSES, SHADEHOUSES, OR OTHER COVER (HOOPHOUSE, HIGH TUNNEL, LOW TUNNEL, POLYTUNNEL, POLYHOUSE, GROW TUNNEL, COLD FRAME, CLOCHE):

Application rate: Apply LifeGard® LC at a concentration of **1 gallon per 100 gallons of water**.

The amount of LifeGard® LC applied per acre will depend on the finished spray volume (gallons per acre or GPA) required to adequately cover the crop. Lower volume (≤ 20 GPA) may be sufficient for uniform coverage of newly emerged or transplanted annual crops, or smaller crops such as leaf lettuce or spinach. Mature annual crops and those with large canopies (including trees) may require higher volumes (≥ 50 GPA) if using ground spray equipment.

Almonds	
Target disease/pathogen (bacteria & fungi)	Additional information
<i>Alternaria</i> leaf spot (<i>Alternaria alternata</i>)	<p>Begin applications before first symptoms appear, when environmental conditions (such as leaf wetness) favor infection.</p> <p>Consult your State Extension Service for advice on disease monitoring and timing of applications for <i>Alternaria</i> management.</p> <p>Apply in sufficient water to achieve complete coverage of the tree canopy.</p>

Berry and Small Fruit – Caneberry (Crop Subgroup 13-07A):	
Blackberry; loganberry; raspberry, red and black; wild raspberry; cultivars, varieties, and/or hybrids of these.	
Target disease/pathogen (bacteria & fungi)	Additional information
Powdery mildew (<i>Podosphaera macularis</i>)	<p>Begin as a preventative spray. Repeat every 7-14 days as part of a rotational program with fungicides labeled for this use.</p>

Berry and Small Fruit – Bushberry (Crop Subgroup 13-07B): Blueberry, highbush; blueberry, lowbush	
Target disease/pathogen (bacteria & fungi)	Additional information
Mummyberry <i>(Monilinia vaccinia-corymbosi)</i>	Begin as a preventative spray. Repeat every 7-14 days as part of a rotational program with fungicides labeled for this use.

Berry and Small Fruit – Small Fruit Vine Climbing (Crop Subgroup 13-07D – Grape) Grape	
Target disease/pathogen (bacteria & fungi)	Additional information
Downy mildew <i>(Plasmopara viticola)</i>	Make first applications 2 – 3 weeks before bloom. Repeat applications at 7-21 day intervals as part of a rotational program with fungicides labeled for this use. Continue applications until 2-4 weeks after fruit set. Applications can be made up to and including the day of harvest if necessary to maintain disease control.
Powdery mildew <i>(Uncinula necator)</i>	Begin as a preventative spray. Repeat every 7-14 days as part of a rotational program with fungicides labeled for this use.

Berry and Small Fruit – Low Growing Berry (Crop Subgroup 13-07G – Cranberry)* Cranberry	
Target disease/pathogen (bacteria & fungi)	Additional information
Cranberry fruit rot disease complex	Begin as a preventative spray. Repeat every 7-14 days as part of a rotational program with fungicides labeled for this use. Do not apply to flooded fields.

* Not for use in California.

Berry and Small Fruit – Low Growing Berry (Crop Subgroup 13-07G – Strawberry) Strawberry	
Target disease/pathogen (bacteria & fungi)	Additional information
Powdery mildew <i>(Podosphaera aphanis)</i>	Begin as a preventative spray. Repeat every 7-14 days as part of a rotational program with fungicides labeled for this use.

Brassica Head and Stem Vegetables (Crop Group 5-16) Broccoli; Brussels sprouts; cabbage; cabbage (Chinese, napa); cauliflower; cultivars, varieties and/or hybrids of these (including those grown for seed production)	
Target disease/pathogen (bacteria & fungi)	Additional information
Downy mildew (<i>Peronospora</i> <i>(Halyoperonospora)</i> species)	<p><i>For direct-seeded crops:</i> Apply any time following emergence of first true leaf.</p> <p><i>For transplants:</i> Begin applications immediately before or after transplanting. Transplants may be treated in the greenhouse or nursery prior to transplanting in the field.</p> <p><i>For seed crops:</i> Begin applications at first sign of flowering.</p> <p><i>For all of the above:</i> Repeat applications at 7 – 14 day intervals as needed to prevent or reduce disease infection.</p>

Carrots	
Target disease/pathogen (bacteria & fungi)	Additional information
<i>Alternaria</i> leaf blight (<i>Alternaria dauci</i>)	Begin applications soon after plant emergence and before disease develops. Repeat at 7-14 day intervals as long as conditions favor disease development.

Citrus Fruits (Crop Group 10-10) Calamondin; citron; citrus hybrids; grapefruit (including Japanese summer); kumquat; lemon; limes; mandarin (Mediterranean, satsuma); orange (sour, sweet, tachibana, trifoliolate); pummelo; tangelo; tangerine (mandarin); tangor; unqi fruit; cultivars, varieties and/or hybrids of these	
Target disease/pathogen (bacteria & fungi)	Additional information
Citrus canker (<i>Xanthomonas axonopodis</i> pv. <i>citri</i> and <i>Xanthomonas axonopodis</i> pv. <i>aurantifolii</i>)	<p>To reduce infection of new foliage, apply at spring flush, before symptoms appear.</p> <p>Make subsequent applications at 2-4 week intervals, preferably in an alternating program with copper or other products labeled for this use.</p>

**Cucurbit Vegetables
(Crop Group 9)**

Chayote (fruit); Chinese waxgourd (Chinese preserving melon); citron melon; cucumber; gherkin; gourds (edible, all types); *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); squash (summer and winter including acorn squash, butternut squash, Calabaza, crookneck squash, hubbard squash, scallop squash, spaghetti squash, straightneck squash, vegetable marrow, zucchini); watermelon (including hybrids and/or varieties of *Citrullus lanatus*)

Target disease/pathogen (bacteria & fungi)	Additional information
<p>Anthracnose (<i>Colletotrichum lagenarium</i> <i>Colletotrichum orbiculare</i> (=<i>Glomerella cingulata</i> var. <i>orbiculare</i>))</p> <p>Powdery mildew (<i>Sphaerotheca fuliginea</i> (=<i>Podosphaera xanthii</i>) (<i>Erysiphe cichoracearum</i> (=<i>Golovinomyces cichoracearum</i>))</p> <p>Downy mildew (<i>Peronospora</i> species)</p> <p>Gummy stem blight (<i>Didymella bryoniae</i>)</p> <p><i>Alternaria</i> leaf spot (<i>Alternaria cucumerina</i>)</p> <p>Target spot* (<i>Corynespora cassiicola</i>)</p>	<p><i>For direct-seeded crops:</i> Apply any time following emergence of first true leaf.</p> <p><i>For transplants:</i> Begin applications immediately before or after transplanting. Transplants may be treated in the greenhouse or nursery prior to transplanting in the field.</p> <p>For all of the above, repeat applications at 7-14 day intervals as needed to prevent or reduce disease infection.</p>

* Not for use in California.

Fruiting Vegetables (Crop Group 8-10)	
African eggplant; bush tomato; currant tomato; eggplant; okra; pea eggplant; pepino; pepper (bell and nonbell); scarlet eggplant; tomatillo; tomato; tree tomato	
Target disease/pathogen (bacteria & fungi)	Additional information
Bacterial leaf spot (<i>Xanthomonas</i> species) Bacterial speck (<i>Pseudomonas syringae</i> pv. <i>Tomato</i>) Early blight (<i>Alternaria solani</i>) Gray mold (<i>Botrytis cinerea</i>) Late blight (<i>Phytophthora infestans</i>)	<p><i>For direct-seeded crops:</i> Apply any time following emergence of first true leaf.</p> <p><i>For transplants:</i> Begin applications immediately before or after transplanting. Transplants may be treated in the greenhouse or nursery prior to transplanting in the field.</p> <p><i>For bacterial leaf spot, early blight, gray mold, and late blight:</i> Repeat applications at 7-day intervals.</p> <p><i>For bacterial speck:</i> Repeat applications at 7-14 day intervals. Use the 7-day interval under high disease pressure.</p>

Leafy Vegetables (Crop Group 4-16)	
Amaranth (Chinese and leafy); arugula; aster (Indian); blackjack; broccoli (Chinese); broccoli raab; cabbage (abyssinian); cabbage (Chinese, bok choy); cabbage (seakale); cat's whiskers; cham-chwi; cham-na-mul; chervil (fresh leaves); chipilin; chrysanthemum (garland); cilantro (fresh leaves); collards; corn salad; cosmos; cress (garden and upland); dandelion (leaves); dang-gwi (leaves); dillweed; dock (sorrel); dol-nam-mul; ebolo; endive; escarole; fameflower; feather cockscomb; Good King Henry; Hanover salad; huazontle; jute (leaves); kale; lettuce (bitter, head, leaf, including baby leaf and spring mix); orach; parsley (fresh leaves); plantain (buckthorn); primrose (English); purslane (garden and winter); radicchio (red chicory); radish (leaves); rape greens; rocket (wild); shepherd's purse; spinach (including Malabar, New Zealand, tanier); Swiss chard; turnip greens; violet (Chinese, leaves); watercress	
Target disease/pathogen (bacteria & fungi)	Additional information
Downy mildew (<i>Bremia lactucae</i>) (<i>Peronospora</i> species) Powdery mildew (<i>Erysiphe cichoracearum</i>) Leaf spots (<i>Cladosporium</i> and <i>Stemphylium</i> spp.) White rust (<i>Albugo occidentalis</i>)	<p><i>For control of downy mildew, powdery mildew, leaf spot, and white rust:</i> Begin applications at first true leaf or after thinning. Make preventative applications every 7-14 days as needed to maintain control.</p> <p><i>For control of <u>Stemphylium</u> leaf spot (<i>Stemphylium botryosum</i> f. sp. <u>spinacia</u>) in spinach:</i> Start applications at least 3 days prior to an anticipated infection event, or at first true leaf. Repeat applications at 3-7 day intervals as needed to reduce disease infection. Rotate or mix LifeGard® L with other fungicides if disease pressure is high.</p>

Legume Vegetables (Crop Group 6)	
Beans (including bean [adzuki, asparagus, field, kidney, lima, moth, mung, navy, pinto, rice, runner, snap, tepary, urd, wax, yardlong], blackeyed pea, catjang, Chinese longbean, cowpea, Crowder pea, lupin [grain, sweet, white, white sweet], southern pea); broad bean (fava bean); chickpea (garbanzo bean); guar; jackbean; lablab bean; lentil; peas (including dwarf, edible-pod, English, field, garden, green, snow, sugar snap); pigeon pea; soybeans (including immature seed); sword bean	
Target disease/pathogen (bacteria & fungi)	Additional information
White mold (<i>Sclerotinia sclerotiorum</i> and <i>Sclerotinia trifolium</i>)	Apply in an alternating or tank mix program with labeled fungicides as part of a disease management program. Mix only with fungicides having label instructions that do not prohibit such mixtures.

Onions	
Target disease/pathogen (bacteria & fungi)	Additional information
Bacterial bulb rot (species complex)	Apply starting after emergence or transplanting on a 7- to 14-day schedule. Apply in an alternating or tank mix program with labeled bactericides such as copper as part of a disease management program.

Peanuts*	
Target disease/pathogen (bacteria & fungi)	Additional information
Late leaf spot (<i>Cercosporidium personatum</i>) Southern blight (<i>Sclerotium rolfsii</i>)	Start applications at least 5 days prior to an anticipated infection event. Repeat applications at 7- to 21-day intervals as needed to reduce disease infection. Rotate or mix with other fungicides if disease pressure is high.

* Not for use in California.

Pecans	
Target disease/pathogen (bacteria & fungi)	Additional information
Pecan scab (<i>Cladosporium caryigenum</i>)	Apply in sufficient water to attain good coverage of the tree canopy.

Pome Fruits (Crop Group 11-10)	
Apple; azarole; crabapple; loquat; mayhaw; medlar; pears (including Asian); quinces (including Chinese, Japanese); tejocote; cultivars, varieties and/or hybrids of these	
Target disease/pathogen (bacteria & fungi)	Additional information
Fire blight (<i>Erwinia amylovora</i>)	<i>For fire blight control:</i> Begin applications when green tissue is present, prior to infection period. If no pre-bloom applications have been made, then combine applications with other standard bloom sprays targeting fire blight.

Pome Fruits (Crop Group 11-10)	
Apple; azarole; crabapple; loquat; mayhaw; medlar; pears (including Asian); quinces (including Chinese, Japanese); tejocote; cultivars, varieties and/or hybrids of these	
Target disease/pathogen (bacteria & fungi)	Additional information
Flyspeck* <i>(Zygophiala jamaicensis)</i> Glomorella leaf spot, bitter rot* <i>(Colletotrichum gloeosporioides</i> species complex) Sooty blotch disease complex*	<p><i>For summer disease control:</i> Apply starting at petal fall through the cover sprays on a 10- to 14-day schedule.</p> <p>Apply in an alternating or tank-mix program with labeled fungicides as part of a disease management program.</p>

* Not for use in California.

Potatoes (for consumption or processing)	
Target disease/pathogen (bacteria & fungi)	Additional information
Early blight <i>(Alternaria solani)</i> Late blight <i>(Phytophthora infestans)</i> White mold <i>(Sclerotinia sclerotiorum)</i>	<p>Apply in an alternating or tank mix program with labeled fungicides as part of a disease management program.</p> <p>Mix only with fungicides having label instructions that do not prohibit such mixtures.</p>

Sugar Beets and Garden (Table) Beets	
Target disease/pathogen (bacteria & fungi)	Additional information
Cercospora leaf spot <i>(Cercospora beticola)</i>	<p>Apply at 7- to 14-day intervals. For sugar beets, use in rotation with fungicides labeled for this use, as part of a resistance management strategy.</p>

Tobacco (including burley, binder, flue-cured, and dark)	
Target disease/pathogen (bacteria & fungi)	Additional information
Blue mold <i>(Peronospora tabacinum)</i>	<p>Make preventive applications on a 7- to 14-day schedule whenever conditions favor disease development.</p>

* Not for use in California.

TO REDUCE INFECTION BY POTATO VIRUS Y (PVY) IN POTATOES GROWN FOR SEED:

Mix the specified amount (listed below) of LifeGard® LC in clean water with sufficient agitation to maintain a uniform suspension in the spray or mixing tank.

Apply as a foliar spray in sufficient water to provide thorough and uniform coverage of the crop canopy.

Make the first application within 60-65 days after planting. Repeat application at 14-day intervals as long as aphid vectors are present and conditions are favorable for infection.

LifeGard® LC may be applied up to five (5) times per crop cycle.

LifeGard® LC may be tank mixed or applied in rotation with chemical fungicides and insecticides used as part of standard pest management practices. Best results may occur when LifeGard® LC is used in conjunction with a “no gap” insecticide program for control of aphid vectors of PVY. Observe the most restrictive of the labeling limitations and precautions of all products used in mixtures. LifeGard® LC can be tank mixed with petroleum-based (paraffinic) oils used for aphid control, up to a maximum concentration of 2% oil (by volume) in the final spray mix. Effectiveness of LifeGard® LC may be reduced at oil concentrations higher than 2%.

Ground application rate: Apply ½ gallon of LifeGard® LC in 15 to 30 gallons of water per acre.

Aerial application rate: Apply ¼ gallon of LifeGard® LC in 5 gallons of water per acre.

TO REDUCE INFECTION BY TOBACCO MOSAIC VIRUS (TMV) AND CUCUMBER MOSAIC VIRUS (CMV) IN TOMATOES GROWN OUTDOORS OR IN GREENHOUSES, SHADEHOUSES, OR OTHER COVER (HOOPHOUSE, HIGH TUNNEL, LOW TUNNEL, POLYTUNNEL, POLYHOUSE, GROW TUNNEL, COLD FRAME, CLOCHE):

Mix LifeGard® LC at a rate of **1 gallon per 100 gallons of water** with sufficient agitation to maintain a uniform suspension in the spray or mixing tank. Refer to the **Rate Table** in the **FUNGI, OOCYTES, OR BACTERIA** section to determine the amount of LifeGard® LC required for different spray volumes.

Apply as a foliar spray in sufficient water to provide thorough and uniform coverage of the crop canopy.

For direct-seeded tomatoes: Apply any time following emergence of first true leaf.

For transplants: Begin applications immediately before or after transplanting. Transplants may be treated in the greenhouse or nursery prior to transplanting in the field.

STORAGE AND DISPOSAL

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

Pesticide Storage: Store in a dry area inaccessible to children. Store in original container only. Keep container closed when not in use. Store at temperatures below 77°F (25°C).

Pesticide Disposal: Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

Container Handling: Nonrefillable container. Do not reuse or refill this container.

{For containers less than or equal to 5 gallons}

Completely empty bottle into application equipment. 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 $\frac{1}{4}$ 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 dispose of empty bottle in a sanitary landfill or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

{For containers greater than 5 gallons}

Triple Rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container $\frac{1}{4}$ 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 dispose of empty container in a sanitary landfill or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

WARRANTY

Certis USA LLC warrants that the material contained herein conforms to the description on the label and is reasonably fit for the purposes referred to in the directions for use. Timing and method of application, weather, watering practices, nature of soil, the disease problem, condition of the crop, incompatibility with other chemicals not specifically recommended and other influencing factors in the use of this product are beyond the control of the seller. To the extent consistent with applicable law, buyer assumes all risks of use, storage or handling of this material not in strict accordance with directions given herein. NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR MERCHANTABILITY IS MADE.

CHEMIGATION INSTRUCTIONS

Precautions:

Apply this product only through overhead sprinkler irrigation systems (including impact or microsprinklers, overhead boom, or solid set, including mist-type systems) or with hand-held calibrated irrigation equipment (such as a hand-held wand with injector). Do not apply this product through any other type of irrigation system.

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.

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

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

A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

Public water system chemigation:

“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.

1. 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.
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 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 or, in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
5. 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.
6. Do not apply when wind speed favors drift beyond the area intended for treatment.
7. Remove scale, pesticide residues, and other foreign matter from the chemical supply tank and injector system and flush with clean water before use. Failure to provide a clean tank, free of scale or residues may reduce effectiveness of this product.
8. Dilute the product in water following the label mixing directions. It may be premixed in a supply tank with water, fertilizer or other appropriate tank-mixed agricultural chemicals.

Agitation is necessary. Application should be continuous in sufficient water to apply the specified rate evenly to the entire treated area.

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 that 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 (i.e., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
7. Dilute the product in water following the label mixing directions. It may be premixed in a supply tank with water, fertilizer or other appropriate tank-mixed agricultural chemicals. Agitation is necessary. Application should be continuous in sufficient water to apply the specified rate evenly to the entire treated area.
8. Do not apply when wind speed favors drift beyond the area intended for treatment.

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