CEASE®

AN AQUEOUS SUSPENSION BIOFUNGICIDE

FOR USE ON ORNAMENTALS, TREES, SHRUBS, SEEDLINGS, CONIFERS, AND GREENHOUSE VEGETABLES
USE IN FIELD APPLICATIONS, GREENHOUSES, GLASSHOUSES, NURSERIES, SHADE HOUSES, INTERIORSCAPES, SEEDLING PRODUCTION SITES, AND FOREST SEEDLING PRODUCTION SITES

Can be Used for Organic Production

ACTIVE INGREDIENT:
QST 713 strain of ***Bacillus subtilis**** ……..1.34%
OTHER INGREDIENTS……98.66%
TOTAL…….....100.00%
*Contains a minimum of 1x 10^9 cfu/g

KEEP OUT OF REACH OF CHILDREN
CAUTION

EPA Reg. No. 264-1155-68539 EPA Est. No. 264-MEX-001

U.S. Patent Nos. 6,060,051; 6,103,228; 6,291,426; 6,417,163 on QST 713 strain of ***Bacillus subtilis***

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS & DOMESTIC ANIMALS
CAUTION

Harmful if inhaled. Avoid breathing spray mist. Remove contaminated clothing and wash before reuse.

FIRST AID	
IF INHALED:	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. • Call a poison control center or doctor for further treatment advice.
Have the product label with you when calling a poison control center or doctor or going for treatment.	

PERSONAL PROTECTIVE EQUIPMENT (PPE)

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

Mixers/loaders and applicators must wear a dust/mist filtering respirator meeting NIOSH standards of at least N-95, R-95, or P-95. Repeated exposure to high concentrations of microbial proteins can cause allergic sensitization.

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

ENGINEERING CONTROLS

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides, 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 break-down.

USER SAFETY RECOMMENDATIONS

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

ENVIRONMENTAL HAZARDS

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. Do not apply when weather conditions favor drift or runoff from treated areas.

EMERGENCY INFORMATION

For MEDICAL And TRANSPORTATION Emergencies ONLY Call 24 Hours A Day 1-800-334-7577

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 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.

Exception: if the product is soil injected or soil incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.
PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil or water is:
- coveralls
- waterproof gloves
- shoes plus socks

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or green houses.

Post harvest treatment of harvested agricultural plants does not fall within the scope of the WPS. An agricultural plant is considered harvested when 1) a desirable portion of the agricultural plant (seed, fruit, flower, stem, foliage or roots) is detached from its parent or 2) a whole agricultural plant is separated from its growth media (soil, water, or other media).

PPE for applicators treating portions of harvested agricultural plants or handlers exposed to treated portions of harvested agricultural plants is waterproof gloves.

Keep unprotected persons from handling portions of harvested agricultural plants that have been treated until sprays have dried.

Commercial Treatment of plants that are in ornamental gardens, parks, golf courses, and public or residential turf and grounds, and that are intended only for aesthetic purposes or climatic modification:

Keep unprotected persons out of treated areas until sprays have dried.

GENERAL USE INFORMATION

CEASE is a broad spectrum, preventative product for the control or suppression of many important plant diseases. Apply CEASE as a foliar spray alone, in alternating spray programs or in tank mixes with other registered crop protection products. Apply CEASE as a soil drench alone, in alternating spray programs or tank mixes with other registered crop protection products. When conditions are conducive to heavy disease pressure, use CEASE in a rotational program with other registered fungicides. Apply CEASE with spray equipment commonly used for making ground or aerial applications and sprinkler/irrigation systems commonly used for chemigation. Heavy rainfall or irrigation shortly after application may require retreatment. CEASE can be used for organic production.

CEASE is most effectively used in a preventive disease management program. For improved performance, use CEASE in a tank–mix or rotational program with other registered fungicides. When using CEASE alone for the first time, use a rate of 4 qt. CEASE per acre. Increase the application rate and/or decrease spray intervals of CEASE depending on disease pressure. To enhance performance, consider adding a surfactant, known to be safe to the target crop, to the spray tank to improve penetration and coverage of above-ground portions of the plant.

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INTEGRATED PEST MANAGEMENT (IPM)

Integrate CEASE into an overall disease and pest management strategy whenever fungicide use is necessary. Follow practices known to reduce disease development. Consult local agricultural authorities for specific IPM strategies developed for your crop(s) and location.

Be sure use of this product conforms to resistance management strategies, which may include rotating and/or tank-mixing with other products with different modes of action.

USE RATE DETERMINATION

Carefully read and follow all label directions, use rates and restrictions. Application of CEASE prior to or in the early stages of disease development provides the best control or suppression of the targeted plant disease. Use maximum label rates and shortened spray intervals for conditions conducive to threatening or rapid disease development. For proper application, determine the number of acres to be treated, the label use rate and select appropriate gallonage to give good canopy penetration and coverage of plant parts to be protected. Prepare only the amount of spray solution required to treat the measured acreage. Accurate spray equipment calibration is essential prior to use.

PREHARVEST INTERVAL

CEASE can be applied up to and including the day of harvest.

APPLICATION INSTRUCTIONS

GENERAL: Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment- and weather–related factors determine the potential for spray drift. The applicator and the grower/treatment coordinator are responsible for considering all of these factors when making decisions. Where states have more stringent regulations, they should be observed. Note: This section is advisory in nature and does not supersede the mandatory label requirements.

GROUND: Be sure to maintain agitation during mixing and application to assure uniform product suspension. Thorough coverage of all foliage is essential for effective disease control. CEASE can be applied in commonly used ground equipment, hose-end, pressurized, greenhouse, and hand-held sprayers. To achieve good coverage use proper spray pressure, gallonage per acre, nozzles, nozzle spacing and ground speed. Consult spray nozzle and accessory catalogues for specific information on proper equipment calibration.

AERIAL: This product can be applied by aerial application. Refer to the Aerial Drift Reduction Advisory Information section of this label for general directions and precautions. Use the application rate indicated for the appropriate crop in sufficient water to achieve thorough coverage, typically between 3 – 20 gallons of water per acre depending upon the crop. Three gallons of water per acre is the minimum.

CHEMIGATION: This product can be applied through sprinkler (center pivot, lateral move, end tow, side (wheel) roll, traveler, solid set, and hand move) or drip type irrigation systems. Refer to the Chemigation Directions for Use section of this label for general directions and precautions. Use the application rate indicated for the appropriate crop as specified in the Application Rate tables of this label.

MIXING INSTRUCTIONS

MIXING: CEASE must be diluted with water. Partially fill the spray tank with clean water and begin agitation. Add the specified amount of CEASE to the tank. Finish filling the tank to the desired volume to obtain the proper spray concentration. It is critical that the spray solution be agitated during mixing and application to assure a uniform suspension. Do not allow spray mixture to stand overnight or for prolonged periods. Maintain a spray solution pH between 4.5 and 8.5.

CEASE may be tank-mixed with other registered pesticides to enhance plant disease control. This product cannot be mixed with any product with prohibition against such mixing. When tank-mixing CEASE with other registered pesticides, always read and follow all use directions, restrictions, and precautions of both CEASE and the tank-mix partner(s). Use of the resulting tank mix must be in accordance with the more restrictive label limitations and precautions. Do not exceed label dosage rates.

COMPATIBILITY: Do not combine CEASE in the spray tank with pesticides, surfactants 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.

CEASE is compatible with many commonly used pesticides, fertilizers, adjuvants and surfactants but has <u>not</u> been fully evaluated with all of these. To ensure compatibility of tank-mix combinations, evaluate them prior to use, as follows: Using a suitable container add proportional amounts of product to water. Add wettable powders first, followed by water dispersible granules, then by 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 combination on a small portion of the crop to be treated to ensure that a phytotoxic response will not occur as a

result of application.

ADDITIVES: CEASE is compatible with a wide range of additives. Since the product is primarily a protectant, thorough coverage of all above-ground plant parts is required for effective product performance. To improve plant surface coverage, add a non-phytotoxic surfactant to spray tank.

CHEMIGATION DIRECTIONS FOR USE

General Requirements:

1) Apply this product only through sprinkler (including center pivot, lateral move, end tow, side (wheel) roll, traveler, solid set or hand move) or drip type irrigation systems. Do not apply this product through any other type of irrigation system.
2) Crop injury or lack of effectiveness can result from non-uniform distribution of treated water.
3) Ensure that the irrigation system used is properly calibrated and if you have questions, call the State Extension Service specialists, the equipment manufacturer 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 any necessary adjustments should the need arise.

Requirements for Chemigation Systems connected to Public Water Systems

1) Public water supply 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 25 individuals daily at least 60 days throughout the year.
2) Chemigation systems connected to the public water systems must contain a functional, reduced-pressure zone (RPZ), backflow preventer or the functional equivalent in the water supply 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 of the 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 towards 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.
8) 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.
9) Do not combine CEASE with pesticides, surfactants or fertilizers for application through chemigation equipment unless prior experience has shown the combination physically compatible, effective and non-injurious under conditions of use. CEASE has not been fully evaluated for compatibility with all adjuvants or surfactants. Conduct a spray compatibility test if mixture with adjuvants or surfactants is planned.
10) Maintain agitation in the pesticide supply tank.
11) Apply CEASE during the last half of the water application.
12) Dilute CEASE in enough water to be able to draw through system for the last half of the water application.

Sprinkler Chemigation Requirements:

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 back flow.
2) The pesticide injection pipeline must contain a functional, automatic, quick closing check valve to prevent the flow of fluid back towards 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.
7) Do not apply when wind speed favors drift beyond the area intended for treatment.
8) 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.
9) Do not combine CEASE with pesticides, surfactants or fertilizers for application through chemigation equipment unless prior experience has shown the combination physically compatible, effective and non-injurious under conditions of use. CEASE has not been fully evaluated for compatibility with all adjuvants or surfactants. Conduct a spray compatibility test if mixture with adjuvants or surfactants is planned.

Center-pivot, Lateral Move, End Tow, and Traveler Irrigation Equipment (Use only with electric or oil hydraulic drive systems which provide a uniform water distribution):

- Determine size of area to be treated.
- Determine the time required to apply no more than 1/4 inch of water (6,750 gallons water per acre) over the area to be treated when the system and injection equipment are operated at normal pressures recommended by the equipment manufacturer. Run system at 80 to 95% of manufacturer's rated capacity.
- Using only water, determine the injection pump output when operated at normal line pressure.
- Determine the amount of CEASE fungicide required to treat area.
- Add required amount of CEASE fungicide and sufficient water to meet the injection time requirements of the solution tank.
- Maintain constant solution tank agitation during the injection period.
- Stop injection equipment after treatment is completed. Continue to operate the system until CEASE fungicide solution has cleared the sprinkler head.

Solid-set, Side (wheel) Roll, and Hand Move Irrigation Equipment:

- Determine acreage covered by sprinkler.
- Fill injector solution tank with water and adjust flow rate to use contents over a 10- to 30-minute interval.
- Determine the amount of CEASE fungicide required to treat area.
- Add the required amount of CEASE fungicide into the same quantity of water used to calibrate the injection equipment.
- Maintain constant solution tank agitation during the injection period.

- Operate system at normal pressures recommended by the manufacturer of the injection equipment and used for the time interval established during calibration.
- Inject CEASE fungicide at the end of the irrigation cycle or as a separate application to maximize foliar fungicide retention.
- Stop injection equipment after treatment is completed. Continue to operate the system until CEASE fungicide solution has cleared the last sprinkler head.

Drip Chemigation Requirements

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 back flow.
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 inter-locking 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.
7) 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.
8) Do not combine CEASE with pesticides, surfactants or fertilizers for application through chemigation equipment unless prior experience has shown the combination physically compatible, effective and non-injurious under conditions of use. CEASE has not been fully evaluated for compatibility with all adjuvants or surfactants. Conduct a spray compatibility test if mixture with adjuvants or surfactants is planned.
9) Maintain agitation in the pesticide supply tank.
10) Apply CEASE during the last half of the water application.
11) Dilute CEASE in enough water to be able to draw through system for the last half of the water application.

AERIAL DRIFT REDUCTION ADVISORY INFORMATION

General: Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment- and weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions. Where states have more stringent regulations, they should be observed. Note: This section is advisory in nature and does not supersede the mandatory label requirements.

INFORMATION ON DROPLET SIZE: The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see Wind, Temperature and Humidity, and Temperature Inversions).

CONTROLLING DROPLET SIZE: Volume - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets. Pressure - Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower pressure produces larger droplets. When high flow rates are needed, use higher flow rate nozzles instead of increasing pressure. # of Nozzles - Use the minimum number of nozzles that provide uniform coverage. Nozzle Orientation - Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential. Nozzle Type - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

BOOM WIDTH: For aerial applications, the boom width must not exceed 75% of the wingspan or 90% of the rotary blade. Use upwind swath displacement and apply only when wind speed is 3 -- 10 mph as measured by an anemometer. Use medium or coarser spray according to ASAE 572 definition for standard nozzles or VMD for spinning atomizer nozzles. If application includes a no-spray zone, do not release spray at a height greater than 10 feet above the ground or the crop canopy.

APPLICATION HEIGHT: Do not make application at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

SWATH ADJUSTMENT: When applications are made with a crosswind, the swath will be displaced downward. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller drops, etc.).

WIND: Drift potential is lowest between wind speeds of 2 - 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. NOTE: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

TEMPERATURE AND HUMIDITY: When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

TEMPERATURE INVERSIONS: Do not apply during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small, suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

SENSITIVE AREAS: The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g. when wind is blowing away from the sensitive areas). Do not allow spray to drift from the application site and contact people, structures people occupy at any time and the associated property, parks and recreation areas, non-target crops, aquatic and wetland areas, woodlands, pastures, rangelands, or animals.

FOR USE AS A FOLIAR SPRAY ON SELECT AGRICULTURAL GREENHOUSE CROPS

CEASE has a 0-Day PreHarvest Interval for all crops contained on this label. Under moderate to severe disease pressure, for improved performance, increase rates and reduce spray intervals or use CEASE in a tank mix or rotational program with other registered fungicides.

Application Rates of CEASE for Selected Greenhouse Crops

Greenhouse Crops	Disease	Rate qt/100 gallons spray mix	Application Instructions
Brassica Broccoli Cabbage Cauliflower Brussels Sprouts Collards Kale Mustard Greens Kohlrabi and other brassica crops	**Pin Rot Complex** *Alternaria/Xanthomonas* **Bacterial Leaf Spot** *Pseudomonas syringae* **Bacterial Soft Rot** *Erwinia / Pseudomonas* **Black Rot** *Xanthomonas campestris* **Xanthomonas Leaf Spot** *Xanthomonas campestris* **Alternaria Leaf Spot** *Alternaria* spp. **Anthracnose** *Colletotrichum higginsianum* **Cercospora Leaf Spot** *Cercospora brassicicola* **Downy Mildew** *Peronospora parasitica* *Peronospora* spp. **Powdery Mildew** *Erysiphe polygoni* **Southern Blight** *Sclerotium rolfsii*	3-6	**Pin Rot** - For suppression, begin application when environmental conditions in the greenhouse are conducive to rapid disease development and repeat on a 7 to 10 day interval or as needed. For improved performance, use CEASE in a tank mix or rotational program with other registered fungicides for Pin Rot control. For all other diseases - Begin application soon after emergence or transplant and when conditions in the greenhouse are conducive to disease development. Repeat on a 7 to 10 day interval or as needed.
Bulb Vegetables Onion Garlic Shallots and other bulb vegetables	**Botrytis neck rot** *Botrytis* spp. **Botrytis Leaf Blight** *Botrytis squamosa* **Onion Purple Blotch** *Alternaria porri* **Onion Downy Mildew** *Peronospora destructor* **Downy Mildew** *Peronospora* spp. **Powdery Mildew** *Erysiphe* spp.	3-6	Begin application when environmental conditions in the greenhouse are conducive to disease development and repeat on a 7 to 10 day interval or as needed. When conditions in the greenhouse are conducive to rapid disease development, use CEASE in a rotational program with other registered fungicides. Thorough coverage is essential.
	Rust *Puccinia porri*	3-6	For suppression, begin application when conditions are conducive to disease development and repeat on a 7 to 10 day interval or as needed. For improved performance, use CEASE in a tank mix or rotational program with other registered fungicides for Rust control
Cucurbits Cucumber Cantaloupe Melon Muskmelon Squash Watermelon and other cucurbits	**Angular Leaf Spot** *Pseudomonas syringae* **Anthracnose** *Colletotrichum lagenarium* **Bacterial Fruit Blotch** *Acidovorax avenae* **Downy Mildew** *Pseudoperonospora cubensis* **Gummy Stem Blight** *Phoma cucurbitacearum* *Didymella bryoniae* **Powdery Mildew** *Erysiphe* spp. *Sphaerotheca* spp.	3-6	Begin applications soon after emergence or transplant and when environmental conditions in the greenhouse and plant stage are conducive to disease development. Repeat on 7 to 10 day intervals or as needed. Thorough coverage is essential. For improved performance, use CEASE in a rotational program with other registered fungicides.

Greenhouse Crops	Disease	Rate qt/100 gallons spray mix	Application Instructions
Fruiting Vegetables Pepper Tomato Eggplant and other fruiting vegetables	**Gray mold** *Botrytis cinerea*	3-6	For suppression, begin applications soon after emergence or transplant and continue on a 7 to 10 day interval or as needed. When environmental conditions in the greenhouse are conducive to rapid disease development, use CEASE in a rotational program with other registered fungicides. Thorough coverage is essential.
	Downy Mildew *Pseudoperonospora cubensis* **Powdery mildew** *Leveillula taurica* *Oidiopsis taurica*	3-6	For suppression, begin applications soon after emergence or transplant and continue on a 7 to 10 day interval or as needed. Thorough coverage is essential. Use maximum label rates under conditions conducive to rapid disease development. For improved performance, use CEASE in a tank mix or in a rotational program with other registered fungicides.
	Bacterial Spot *Xanthomonas* spp. **Target Spot** *Corynespora cassiicola*	3-6	Begin applications soon after emergence or transplant and when environmental conditions are conducive to disease development. Continue applications on a 5 to 7 day interval or as needed. When conditions are conducive to rapid disease development, for improved control, use CEASE in a tank mix program with copper-based bactericides registered for control of Bacterial and Target Spot at labeled rates.
	Bacterial Speck *Pseudomonas syringae* pv. *tomato*	3-6	Begin application soon after emergence or transplant and when environmental conditions are conducive to disease development. Continue applications on a 5 to 7 day interval or as needed. Use higher rates when conditions are conducive to rapid disease development. For improved performance, use CEASE in a tank mix or in a rotational program with other registered fungicides.
	Early Blight *Alternaria solani* **Late Blight** *Phytophthora infestans*	3-6	For suppression, begin application when plants are 4 to 6 inches high. Repeat applications on a 5 to 7 day interval or as needed. For improved performance, use CEASE in a tank mix or rotational program with other registered fungicides for Early and Late blight control. Use shorter spray intervals under conditions conducive to rapid disease development.
Herbs/ Spices	**Alternaria Leaf Blight** *Alternaria* spp. **Anthracnose** *Colletotrichum* spp. **Bacterial Blight** *Pseudomonas syringae*	3-6	Begin application when environmental conditions in the greenhouse are conducive to disease development. Repeat on a 7 to 10 day interval or as needed.
Leafy Vegetables Lettuce Celery Spinach Parsley Radicchio and other leafy vegetables	**Downy Mildew** *Bremia lactucae* *Peronospora* spp. **Pink Rot** *Sclerotinia sclerotiorum* **Powdery Mildew** *Erysiphe cichoracearum* *Erysiphe* spp.	3-6	**Downy Mildew / Powdery Mildew** - For suppression, begin application when conditions are conducive to disease development and repeat on a 7 to 10 day interval or as needed. Apply in sufficient water to ensure complete coverage of entire plant. For improved performance, use CEASE in a tank mix or rotational program with other registered fungicides for Downy and Powdery Mildew control. **Pink Rot** – Begin application approximately 8 weeks before harvest and repeat on a 14-day interval. Apply CEASE as a directed spray in sufficient water to ensure thorough coverage of the base of the plants and the surrounding soil surface. Light irrigation following application to incorporate CEASE may improve disease control.

Greenhouse Crops	Diseases	Rate qt/100 gallons spray mix	Application Instructions
Leafy Vegetables Lettuce Celery Spinach Parsley Radicchio and other leafy vegetables	**Sclerotinia Head and Leaf Drop** *Sclerotinia* spp.	3-6	**For control of early Sclerotinia Head and Leaf Drop**: Apply at planting or immediately following planting but prior to crop emergence as a 4- to 6-inch seed line treatment. Make a second application as a directed spray with multiple nozzles per each seed line in sufficient water to ensure thorough coverage of lower plant leaves and surrounding soil surface within 7 days of thinning. Repeat applications on 10 to 14 day intervals if conditions for disease development persist. Use higher rates under conditions conducive to moderate to severe disease pressure. Light irrigation after application to incorporate the product may improve disease control. OR **For control of Sclerotinia Head and Leaf Drop**: Apply as a directed spray with multiple nozzles per each seed line in sufficient water to ensure thorough coverage of lower plant leaves and surrounding soil surface within 7 days of thinning or transplanting. Repeat applications on 10 to 14 day intervals if conditions for disease development persist. Use higher rates under conditions conducive to moderate to severe disease pressure. Light irrigation after application to incorporate the product may improve disease control.
Root / Tuber Carrot Potato Sweet Potato Beets Ginger Horseradish Radish Ginseng Turnip and other root/tuber crops	**Black Root Rot/ Black Crown Rot** *Alternaria* spp.	3-6	Begin application soon after emergence or transplant and when environmental conditions are conducive to disease development. Repeat on a 7 to 10 day interval or as needed. Thorough coverage is essential.
	Bacterial Leaf Blight *Xanthomonas campestris*	3-6	Begin application soon after emergence or transplant and when conditions are conducive to disease development. Repeat on a 7 to 10 day interval or as needed. Use high rates and shorter intervals when conditions are conducive to rapid disease development. Thorough coverage is essential.
	Early Blight *Alternaria solani* **Late Blight** *Phytophthora infestans*	3-6	For suppression, begin application soon after emergence and when conditions are conducive to disease development. Repeat on a 5 to 7 day interval or as needed. For improved performance, use CEASE in a tank mix or rotational program with other registered fungicides for Early and Late Blight control.
Strawberry	**Anthracnose** *Colletotrichum acutatum* **Angular Leaf Spot** *Xanthomonas fragariae* **Botrytis** *Botrytis cinerea* ***Gray Mold*** *Botrytis* spp. **Powdery Mildew** *Sphaerotheca macularis* *Erysiphe* spp.	3-6	**Anthracnose** – Begin application prior to disease development and repeat on a 7 to 10 day interval or as needed. **Angular Leaf Spot** - Begin application when conditions are conducive to disease development. Continue sprays at 7 to 10 day intervals or as needed. Use high rates and shorter intervals when conditions are conducive to rapid disease development. **Botrytis/Powdery Mildew** - For suppression, begin application at or before flowering and repeat on a 7 to 10 day interval or as needed through harvest. **For all diseases** – For improved performance, use CEASE in a tank mix or rotational program with other registered fungicides. Thorough coverage is essential. CEASE may be applied up to and including the day of harvest.

FOR USE ON ORNAMENTALS, TREES, SHRUBS, FLOWERS, BEDDING PLANTS, TROPICAL PLANTS (ORNAMENTALS - Poinsettia, Orchids, Dieffenbachia, Palms, Spathiphyllum, Rhaphiolepis, Aglaonema and FRUIT – Bananas, Mangos, Papaya), SEEDLINGS, CONIFERS - Agricultural, Commercial, and Reforestation.

CEASE has a 0-Day PreHarvest Interval for all crops contained on this label. Under moderate to severe disease pressure, for improved performance, increase rates and reduce spray intervals or use CEASE in a tank mix or rotational program with other registered fungicides.

CEASE is a protectant fungicide for use indoors and outdoors for control of certain foliar diseases in the field, greenhouses (open or enclosed), interiorscape, and commercial landscapes, nurseries (open or enclosed), shade house environments, glasshouses, seedling production sites, forests, and forestry seedling production sites.

CEASE can be applied to ornamentals, trees, shrubs, flowers, annual and perennial bedding plants, potted flowers, cut flowers, tropical foliage, container grown trees and shrubs, forestry seedlings, and conifer production for reforestation purposes (greenhouses, shade houses, nurseries, indoors, outdoors, containers or field).

PLANTS EVALUATED FOR PHYTOTOXICITY

CEASE has been tested for phytotoxicity on the ornamental species listed below. Since it is impossible to test all of the species and cultivars listed on this label under all conditions, it is recommended that a small-scale preliminary trial be conducted to check for sensitivity before using this product on a large number of plants, using the product in accordance with all label use directions.

TABLE OF PLANTS EVALUATED FOR PHYTOTOXICITY

Annual and Perennial Flowering Plants:

Alyssum	Asters	Azalea
Begonia	Calla lily	Chrysanthemum
Cyclamen	Dianthus	Dwarf Bee-Balm
Easter lily	Garden phlox	Geraniums
Gerbera	Golden star	Hydrangea
Impatiens	Kalanchoe	Linaria
Lisianthus	Lobelia	Marigolds
Orchids	Pansies	Petunia
Poinsettia	Portulaca	Ranunculus
Roses	*Salvia* spp.	Snapdragons
Stock	*Verbena* spp.	Vinca
Violas	Zinnias	

Tropical foliage:

Aglaonema	Dieffenbachia
Dracaena spp.	English Ivy
Hibiscus	Leatherleaf Fern
Spathiphyllum	

Trees and Shrubs:

Azalea	Boxwood
Crape myrtle	Dogwood
Gumbo azalea	Indian (India) Hawthorn
Japanese maple	Ligustrum japonicum
Lilac	Loropetalum
Photinia	Rhododendron
Rosaceae spp.	Soft Touch Holly
Spirea	

Foliar Application Use on Ornamentals, Trees, Shrubs, Flowers, Bedding Plants, Tropical Plants, Seedlings, Conifers:

APPLICATION INSTRUCTIONS: Apply CEASE at rates ranging from 2 to 8 quarts of product in 100-300 gallons of water per acre. Make applications on a 3 to 10 day schedule. Begin applications when conditions favor disease development prior to the onset of disease. Begin applications prior to or in the early stages of disease development.

Under normal conditions apply CEASE at a rate of 4 quarts of product per 100-300 gallons of spray solution per acre on a 7-day schedule. When conditions favor severe disease development shorten the spray interval or use a higher rate. Thorough coverage is essential for effective disease control. When more diluted or concentrated spray solutions are needed for the type of equipment being used, follow the "Use Rate Determination" section of this label. See application rate tables for more detailed application instructions.

Application Rates for CEASE When Used as a Foliar Spray on Ornamentals, Trees, Shrubs, and Flowering Plants

Crops	Disease	Rate qts/100 gallons spray mix	Application Instructions
Ornamentals **Trees, Shrubs, Flowering Plants, and Tropical Plants** **Fields, Outdoors, Indoors, Greenhouses, Nurseries** **Annuals** **Perennials** **Bedding plants** **Potted flowers** **Cut flowers** **Foliage plants** **Deciduous trees** **Deciduous shrubs** **Tropical foliage** **Container grown plants** **Conifer production for reforestation purposes**	**Anthracnose** *Colletotrichum* spp. **Bacteria** *Erwinia* spp. *Pseudomonas* spp. *Xanthomonas* spp. **Black spot of rose** *Diplocarpon rosea* **Botrytis** *Botrytis cinerea* **Downy Mildew** *Peronospora* spp. **Leaf spots** *Alternaria* spp. *Cercospora* spp. *Entomosporium* spp. *Helminthsporium* spp. *Myrothecium* spp. *Septoria* spp. **Powdery mildew** *Erysiphe* spp. *Oidium* spp. *Podosphaera* spp. *Sphaerotheca* spp. ***Phytophthora* spp.** **Rust** *Puccinia* spp. **Scab** *Venturia* spp.	2-8	Indoors, Outdoors, Field, Greenhouse, Nursery Grown Plants: Apply CEASE at rates ranging from 2-8 quarts of product in 100-300 gallons of water per acre. Make applications on a 3- to 10-day schedule. Begin applications when conditions favor disease development prior to the onset of disease. Under normal conditions apply CEASE at a rate of 4 qt of product per 100 gallons of spray solution per acre on a 7-day schedule. When conditions favor severe disease development shorten the spray interval or use a higher rate. Thorough coverage is essential for effective disease control. When more diluted or concentrated spray solutions are needed for the type of equipment being used, follow the "Use Rate Determination" section of this label.

Post Harvest Dip Use on Cut Flowers/Buds:

APPLICATION INSTRUCTIONS: For post-harvest dip applications on cut flower crops, dip cut flowers/buds in a solution containing 6 to 25 fl oz of CEASE in 10 gallons of water soon after cutting. Immerse flowers for a period sufficient to provide thorough contact between cut flower/bud and the treatment solution. Use higher rates under conditions of heavy disease pressure.
See application rates tables for rates and application instructions.

Application Rates for CEASE for Post-Harvest Dip on Cut Flowers/Buds

Crops	Disease	Rate fl oz/10 gallons	Application Instructions
Cut Flowers	**Black spot of rose** *Diplocarpon rosea* **Botrytis** *Botrytis cinerea* **Downy Mildew** *Peronospora* spp. **Powdery mildew** *Erysiphe* spp. *Oidium* spp. *Podosphaera* spp. *Sphaerotheca* spp.	6 - 25	Dip cut flowers/buds in a solution containing 6 to 25 fl oz of CEASE in 10 gallons of water soon after cutting. Immerse flowers for a period sufficient to provide thorough contact between cut flower/bud and the treatment solution. Use higher rates under conditions of heavy disease pressure.

Soil Drench Applications on Ornamentals, Trees, Shrubs, Flowers, Bedding Plants, Tropical Plants, Seedlings, Conifers, Fruits and Vegetables: Agricultural, Commercial, Residential Use, Interiorscapes, Indoors and Outdoors, Greenhouses, Glasshouses, Nuseries, (Open and Enclosed)

CEASE is a broad spectrum biofungicide for the prevention, suppression and control of soil borne diseases on a wide range of annual and perennial bedding plants, potted flowers, foliage plants, deciduous trees and shrubs, fruits and vegetables and in conifer production. CEASE enhances germination and plant growth by suppressing diseases caused by *Rhizoctonia*, *Pythium*, *Fusarium,* and *Phytophthora.*

APPLICATION INSTRUCTIONS: Mix 4 qt to 8 qt of CEASE with 100 gallons of water. Use higher application rates under conditions of heavy disease pressure. Apply finished mixture at a rate to thoroughly soak the growing media through the root zone (1 pint finished mixture/sq ft for each 3 inches of soil depth) as a drench or directed spray using hand held, mechanical or motorized spray equipment, or as a chemigation drench or directed spray using applicable sprinkler irrigation systems. Begin applications during or after seeding, sticking of cuttings or after transplanting to propagation beds, containers, pots or trays. Optimal performance is obtained with preventative treatments repeated every 21 – 28 days throughout the growing cycle. CEASE can be mixed with chemical fungicides registered for soil applications.
See application rate tables for more detailed application instructions.

Application Rates for CEASE When Used as a Soil Drench in Field, Interiorscape, Greenhouses, Glasshouses, Shadehouses, or Nurseries (Outdoors and Indoors), Open or Enclosed

Crops	Disease	Rate qt/100 gallons spray mix	Application Instructions
Ornamentals **Trees** **Shrubs** **Annuals** **Perennials** **Flowering plants** **Tropical plants** **Bedding plants** **Container plants** **Potted plants** **Foliage plants** **Deciduous trees** **Deciduous shrubs** **Forestry Seedlings** **Fruits,Vegetables and other crops grown in greenhouses and open and enclosed nurseries**	***Rhizoctonia* spp.** ***Pythium* spp.** ***Fusarium* spp.** ***Phytophthora* spp.**	4 - 8	Soil Drench Uses: Field, Interiorscape, Greenhouses, Glasshouses, Shadehouses, Indoors/Outdoors, Open And Enclosed Nurseries Mix 4 qt (128 fl oz) to 8 qt (256 fl oz) of CEASE with 100 gallons of water. Use higher application rates under conditions of heavy disease pressure. Apply finished mixture at a rate to thoroughly soak the growing media through the root zone (1 pint / sq. ft. for each 3 inches of soil depth) as a drench or directed spray using hand held, mechanical or motorized spray equipment, or as a chemigation drench or directed spray using applicable sprinkler irrigation systems. Begin applications during or after seeding, sticking of cuttings or after transplanting to propagation beds, containers, pots or trays. Optimal performance is obtained with preventative treatments repeated every 21 – 28 days throughout the growing cycle. CEASE can be mixed with chemical fungicides registered for soil applications.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store in a dry area inaccessible to children. Store in original containers only. Keep container closed when not in use.

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 disposal program (often such programs are run by state or local governments or by industry).

CONTAINER DISPOSAL: **For 1.0-gallon, 2.5-gallon, 3-gallon, or 5-gallon plastic containers –**
Nonrefillable 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 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. If burned, stay out of smoke.
For 30-gallon plastic containers - Nonrefillable 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 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. Empty 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. If burned, stay out of smoke.
For 110-gallon or larger returnable mini-bulk containers – Return empty container for reuse. Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing 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. If burned, stay out of smoke.

CONDITIONS FOR SALE AND WARRANTY

BioWorks warrants to those persons lawfully purchasing this product that at the time of the first sale of this product by Seller that this product conformed to its description and was reasonably fit for the purposes stated on the label when used in accordance with Seller's directions. Buyers and users of this product assume the risk of any use contrary to such directions. EXCEPT AS PROVIDED ELSEWHERE IN WRITING CONTAINING AN EXPRESS REFERENCE TO THIS WARRANTY AND LIMITATION OF DAMAGES, SELLER MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OR GUARANTY, INCLUDING ANY OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR OF MERCHANTABILITY AND NO AGENT OF SELLER IS AUTHORIZED TO DO SO. Except to the extent prohibited by applicable law, BioWorks offers this product with the following conditions: 1) buyers and users of this product assume the risk of any storage, handling or use contrary to BioWorks' label and directions and 2) BioWorks' liability shall in no case exceed the purchase price of the applicable BioWorks product.

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100 Rawson Rd, Suite 205
Victor, NY 14564
800-877-9443
www.bioworksinc.com

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