



ACTIVE INGREDIENT:

QST 713 strain of <i>Bacillus subtilis</i> *	 	1.34%
OTHER INGREDIENTS:	 	98.66%
*Contains a minimum of 1 x 109 cfu/g.	TOTAL	100.00%

FOR AGRICULTURAL USE

EPA Reg. No. 264-1152

KEEP OUT OF REACH OF CHILDREN **CAUTION**

FOR ADDITIONAL PRECAUTIONARY STATEMENTS and DIRECTIONS FOR USE: See Inside Booklet.

For **MEDICAL** And **TRANSPORTATION** Emergencies **ONLY** Call 24 Hours A Day 1-800-334-7577 For PRODUCT USE Information Call 1-866-99BAYER (1-866-992-2937)

LUS0157-002 USE OF PRODUCT INDICATES ACCEPTANCE OF "CONDITIONS FOR SALE AND WARRANTY"

AQ1334-003

Produced for:
Bayer CropScience LP
P.O. Box 12014, 2 T.W. Alexander Drive
Research Triangle Park, North Carolina 27709
SERENADE is a registered trademark of Bayer. ©2013 Bayer CropScience

Product of Mexico

Can be Used for Organic Production

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 container or label with you when calling a poison control center or doctor, or going for treatment. In case of emergency call toll free the Bayer CropScience Emergency Response Telephone No. 1-800-334-7577.

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS & DOMESTIC ANIMALS CAUTION

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

PERSONAL PROTECTIVE EQUIPMENT (PPE)

The PPE requirements below apply to both <u>Worker Protection Standard (WPS)</u> uses (in general, agricultural-plant uses are covered by the Worker Protection Standard (40 CFR Part 170)) and <u>Non-WPS</u> uses.

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 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 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 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 run-off from treated areas.

EMERGENCY INFORMATION

For emergencies such as leaks or spills, call 24-hour, toll-free BAYER hotline at 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. For use only as described on this label. Not for isolation or deformulation. Do not culture.

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

BASIC USE INFORMATION

Serenade Soil® is a broad spectrum, preventative product for the control or suppression of many important plant diseases. Apply Serenade Soil as a soil drench alone or in tank mixes with other registered crop protection products. When conditions are conducive to heavy disease pressure, use Serenade Soil in a rotational program with other registered fungicides. Apply Serenade Soil with spray equipment commonly used for making ground applications and irrigation systems commonly used for chemiqation.

INTEGRATED PEST MANAGEMENT (IPM)

Integrate Serenade Soil 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.

(continued)

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 Serenade Soil prior to or in the early stages of disease development provides the best control or suppression of the targeted plant disease. Use the stated maximum label rates and shorter 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. Prepare only the amount of spray solution required to treat the measured acreage. Accurate spray equipment calibration is essential prior to use.

PREHARVEST INTERVAL

Serenade Soil can be applied up to and on the day of harvest.

APPLICATION INSTRUCTIONS

SPRAY DRIFT: Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment- and weather-related factors determines 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.

GROUND: This product can be applied by commonly used ground equipment, such as hose-end, pressurized, greenhouse and hand-held sprayers. Consult spray nozzle and accessory catalogues for specific information on proper equipment calibration. Maintain agitation during mixing and application to assure uniform product suspension. Thorough coverage of soil surface is essential for effective disease control or suppression. Use the application rate, indicated for the appropriate crop in the Application Rate tables of this label, in sufficient water to achieve thorough coverage. Overall, to achieve good coverage, use proper spray pressure, gallonage per acre, nozzles, nozzle spacing and ground speed.

CHEMIGATION: This product can be applied through sprinkler (center pivot, lateral move, end tow, side (wheel) roll, traveler, solid set, or hand move) or drip-type irrigation systems. Refer to the Chemigation Directions for Use section of this label for additional directions and precautions. Maintain agitation during mixing and application to assure uniform product suspension. Use the application rate, indicated for the appropriate crop in the Application Rate tables of this label, in sufficient water to achieve through coverage.

MIXING INSTRUCTIONS

MIXING: Serenade Soil must be diluted with water. Partially fill the spray tank with clean water and begin agitation. Add the specified amount of Serenade Soil to the tank. Finish filling the tank to the necessary 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

Serenade Soil may be tank mixed with other registered pesticides to enhance plant disease control or suppression. This product cannot be mixed with any product with a prohibition against such mixing. When tank mixing Serenade Soil with other registered pesticides, always read and follow all use directions, restrictions, and precautions of both Serenade Soil 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 Serenade Soil 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.

Serenade Soil 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**: Serenade Soil is compatible with a wide range of additives.

CHEMIGATION DIRECTIONS FOR USE

Basic Requirements:

- 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.
- 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. 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 any necessary adjustments should the need arise.

Requirements for Chemigation Systems Connected to Public Water Systems:

- 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 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 (RPZ), backflow preventer 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 flow outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection 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.
- 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 Serenade Soil to lose effectiveness or strength.
- 9) Do not combine Serenade Soil 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. Serenade Soil has <u>not</u> been fully evaluated for compatibility with all of these. Conduct a spray compatibility test if mixture with other pesticides, surfactants or fertilizers is planned.
- 10) Maintain agitation in the pesticide supply tank.
- 11) Apply Serenade Soil during the last half of the water application.
- 12) Dilute Serenade Soil in enough water to be able to draw through system for the last half of the water application.

Sprinkler Chemigation Requirements:

- 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.
- 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.
- 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 Serenade Soil to lose effectiveness or strength.
- 9) Do not combine Serenade Soil 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. Serenade Soil has <u>not</u> been fully evaluated for compatibility with all of these. Conduct a spray compatibility test if mixture with other pesticides, surfactants or fertilizers is planned.

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

· Determine size of area to be treated.

6.125"

- 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 specified 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 Serenade Soil fungicide required to treat area.
- Add required amount of Serenade Soil 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 Serenade Soil 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 Serenade Soil fungicide required to treat area.
- · Add the required amount of Serenade Soil 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 specified by the manufacturer of the injection equipment and used for the time interval established during calibration.
- Inject Serenade Soil 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 Serenade Soil 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 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) 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 Serenade Soil to lose effectiveness or strength.

- B) Do not combine Serenade Soil 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. Serenade Soil has not been fully evaluated for compatibility with all of these. Conduct a spray compatibility test if mixture with other pesticides, surfactants or fertilizers is planned.
- 9) Maintain agitation in the pesticide supply tank.
- 10) Apply Serenade Soil during the last half of the water application.
- 11) Dilute Serenade Soil in enough water to be able to draw through system for the last half of the water application.

IMPORTANT: READ CONDITIONS FOR SALE AND WARRANTY BEFORE USE

FOR USE AS A SOIL TREATMENT ON SELECT AGRICULTURAL FIELD CROPS

Serenade Soil 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 as stated or use Serenade Soil in a tank-mix or rotational program with other registered fungicides.

Serenade Soil is a broad spectrum biofungicide for the prevention, suppression and control of soil borne diseases on a wide range of fruits and vegetables as well as cotton. Serenade Soil enhances germination and plant growth by suppressing soil diseases, such as those caused by *Rhizoctonia, Pythium, Fusarium, Verticillium* and *Phytophthora*. See the application tables for specific information.

APPLICATION INSTRUCTIONS:

All Soil Surface (Drench), Shanked-In, Injected and In-Furrow Applications:

Mix 2 qt (64 fl oz) to 6 qt (192 fl oz) of Serenade Soil in the appropriate amount of water per acre. Use the stated higher rates when the weather conditions are expected to be conducive for disease development, if the field has a history of disease problems, or if minimum/low till programs are in place. Serenade Soil can be mixed with chemical fungicides registered for soil applications.

Soil Surface (Drench) Applications at Planting: Use at planting, seeding, or transplant. Apply finished spray mixture, at a rate to thoroughly soak the growing media through the root zone, 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 or drip irrigation systems.

Shanked-In or Injected Applications: Serenade Soil can be shanked-in or injected into the soil prior to-, at-, or post-planting/ transplanting of crops alone or with most types of liquid nutrients.

In-Furrow Applications

For in-furrow applications, apply Serenade Soil as an in-furrow spray in the required amount of water per acre for the crop at planting. Mount the spray nozzle so the spray is directed in the furrow just before the seeds are covered.

Soil Surface (Drench) Applications at Any Stage of Growth: Apply the finished spray mixture to the surface of the soil 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 or drip irrigation systems. When applying as a spray (e.g., via hydraulic nozzles at low volumes), it is important to irrigate to move the material into the seed, root or transplant zone. Normal operation of overhead sprinklers and drip irrigation systems are sufficient for effective applications. Optimal performance is obtained with preventative treatments repeated every 21 to 28 days throughout the growing cycle.

Application Rates of Serenade Soil for Soil Uses in Field for Soil Borne/Seedling Disease Control Crops Disease **Application Instructions** Rate (qt/acre) **Brassica Leafy** All Soil Surface (Drench), Shanked-In, Injected and In-Vegetables **Furrow Applications:** Rhizoctonia spp. Mix 2 qt (64 fl oz) to 6 qt (192 fl oz) of Serenade Soil in (Cole Crops) Verticillium spp.* the appropriate amount of water per acre. Use the stated Broccoli higher application rates when the weather conditions are Cabbage expected to be conducive to disease development, if the Clubroot* field has a history of disease problems, or if minimum/ Cauliflower Plasmodiophora brassicae low till programs are in place. Serenade Soil can be mixed Brussels with chemical fungicides registered for soil applications. Sprouts Soil Surface (Drench) Applications At Planting: Use *NOT FOR USE IN CALIFORNIA Collards at planting, seeding or transplant. Apply finished spray mixture, at a rate to thoroughly soak the growing media Kale through the root zone, as a drench or directed spray using Mustard Greens hand-held, mechanical or motorized spray equipment, Kohlrabi or as a chemigation drench or directed spray using and other applicable sprinkler or drip irrigation systems. brassica leafy Shanked-In and Injected Applications: vegetables Serenade Soil can be shanked-in or injected into the soil prior to-, at-, or post-planting/transplanting of crops Bulb 2 - 6Vegetables* alone or with most types of liquid nutrients. Pink Root * **In-Furrow Applications:** Onion Phoma spp. -For in-furrow applications, apply Serenade Soil as an in-(Suppression) Garlic furrow spray in the appropriate amount of water per acre for Shallots and the crop at planting. Mount the spray nozzle so the spray other bulb *NOT FOR USE IN CALIFORNIA is directed in the furrow just before the seeds are covered. vegetables Soil Surface (Drench) Applications At Any Stage of (including those Growth: grown for seed Apply the finished spray mixture to the surface of the production) soil 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 or drip irrigation systems. When applying as a spray (e.g., via hydraulic nozzles at low volumes), it is important to irrigate to move the material into the seed, root or transplant zone. Normal operation of overhead sprinklers and drip irrigation systems are sufficient for effective applications. Optimal performance is obtained with preventative treatments repeated every 21 to 28 days

3 (continued)

throughout the growing cycle.

Crops	Disease	Rate (qt/acre)	Application Instructions
Citrus Fruit* Orange Grapefruit Lemon Tangerine Tangelo Pummelo and other citrus crops	Pythium spp.* *Not for use in California	4 - 6	All Soil Surface (Drench), Shanked-In, Injected and In-Furrow Applications: Mix 4 qt (128 fl oz) to 6 qt (192 fl oz) of Serenade Soil in the appropriate amount of water per acre. Use the stated higher application rates when the weather conditions are expected to be conducive to disease development, if the field has a history of disease problems, or if minimum/ low till programs are in place. Serenade Soil can be mixed with chemical fungicides registered for soil applications. Soil Surface (Drench) Applications At Planting: Use at planting, seeding or transplant. Apply finished spray mixture, at a rate to thoroughly soak the growing media through the root zone, 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 or drip irrigation systems. Shanked-In and Injected Applications: Serenade Soil can be shanked-in or injected into the soil prior to-, at-, or post-planting/transplanting of crops alone or with most types of liquid nutrients. In-Furrow Applications: For in-furrow applications, apply Serenade Soil as an in-furrow spray in the appropriate amount of water per acre for the crop at planting. Mount the spray nozzle so the spray is directed in the furrow just before the seeds are covered. Soil Surface (Drench) Applications At Any Stage of Growth: Apply the finished spray mixture to the surface of the soil 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 or drip irrigation systems. When applying as a spray (e.g., via hydraulic nozzles at low volumes), it is important to irrigate to move the material into the seed, root or transplant zone. Normal operation of overhead sprinklers and drip irrigation systems are sufficient for effective applications. Optimal performance is obtained with preventative treatments repeated every 21 to 28 days throughout the growing cycle.

Crops	Disease	Rate (qt/acre)	Application Instructions
Continued Citrus Fruit* Orange Grapefruit Lemon Tangerine Tangelo Pummelo and other citrus crops	*NOT FOR USE IN CALIFORNIA	4 - 6	Soil Surface (Drench) Applications At Root Flush: Apply 1 fl oz of the finished spray mixture per plant to the surface of the soil at root flush (just prior to foliar (vegetative) flush) 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 or drip irrigation systems. When applying as a spray (e.g., via hydraulic nozzles at low volumes), it is important to irrigate to move the material into the root or transplant zone. Normal operation of overhead sprinklers and drip irrigation systems are sufficient for effective applications.
Corn* Sweet Corn Popcorn Seed Corn Silage Corn Field Corn	Rhizoctonia spp.* Pythium spp.* Fusarium spp.* *NOT FOR USE IN CALIFORNIA		All Soil Surface (Drench), Shanked-In, Injected and In-Furrow Applications: Mix 2 qt (64 fl oz) to 6 qt (192 fl oz) of Serenade Soil in the appropriate amount of water per acre. Use the stated higher application rates when the weather conditions are expected to be conducive to disease development, if the field has a history of disease problems, or if minimum/low till programs are in place. Serenade Soil can be mixed with chemical
Cucurbit Vegetables Cucumber Cantaloupe Melon Muskmelon Squash Watermelon and other cucurbit vegetables	Rhizoctonia spp. Pythium spp. Fusarium spp. Verticillium spp.* Phytophthora spp. *NOT FOR USE IN CALIFORNIA	2-6	fungicides registered for soil applications. Soil Surface (Drench) Applications At Planting: Use at planting, seeding or transplant. Apply finished spray mixture, at a rate to thoroughly soak the growing media through the root zone, 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 or drip irrigation systems. Shanked-In and Injected Applications: Serenade Soil can be shanked-in or injected into the soil prior to-, at-, or post-planting/transplanting of crops alone or with most types of liquid nutrients. In-Furrow Applications: For in-furrow applications, apply Serenade Soil as an in-furrow spray in the appropriate amount of water per acre for the crop at planting. Mount the spray nozzle so the spray is directed in the furrow just before the seeds are covered. (continued on next page)

10

Crops	Disease	Rate (qt/acre)	Application Instructions
Pepper Tomato Eggplant Ground Cherry Tomatillo Okra and other fruiting vegetables	Rhizoctonia spp. Pythium spp. Fusarium spp. Verticillium spp.* Phytophthora spp. *NOT FOR USE IN CALIFORNIA		(continued from previous page) Soil Surface (Drench) Applications At Any Stage of Growth: Apply the finished spray mixture to the surface of the soil 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 or drip irrigation systems. When applying as a spray (e.g., via hydraulic nozzles at low volumes), it is important to irrigate to move the material into the seed, root or transplant zone. Normal operation of overhead sprinklers and drip irrigation systems
Lettuce Celery Spinach Parsley Radicchio and other leafy vegetables	Rhizoctonia spp. Verticillium spp.		are sufficient for effective applications. Optimal performance is obtained with preventative treatments repeated every 21 to 28 days throughout the growing cycle.

Crops	Disease	Rate (qt/acre)	Application Instructions
Continued Leafy Vegetables Lettuce Celery Spinach Parsley Radicchio and other leafy vegetables	Sclerotinia Head and Leaf Drop - Sclerotinia spp.	2 - 6	All Soil Surface (Drench), Shanked-In, Injected and In-Furrow Applications: Mix 2 qt (64 fl oz) to 6 qt (192 fl oz) of Serenade Soil in the appropriate amount of water per acre. Use the stated higher application rates when the weather conditions are expected to be conducive to disease development, if the field has a history of disease problems, or if minimum/low till programs are in place. Serenade Soil can be mixed with chemical fungicides registered for soil applications. Soil Surface (Drench) Applications At Planting: Use at planting, seeding or transplant. Apply finished spray mixture, at a rate to thoroughly soak the growing media through the root zone, 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 or drip irrigation systems. Repeat applications on 10- to 14-day intervals if conditions for disease development persist. Use the stated higher rates under conditions conducive to moderate to severe disease pressure. Light irrigation after application to incorporate the product may improve disease control. Shanked-In and Injected Applications: Serenade Soil can be shanked-in or injected into the soil prior to-, at-, or post-planting/transplanting of crops alone or with most types of liquid nutrients. Repeat applications on 10- to 14-day intervals if conditions for disease development persist. Use the stated higher rates under conditions conducive to moderate to severe disease pressure. Light irrigation after application to incorporate the product may improve disease control. (continued on next page)

Crops	Disease	Rate (qt/acre)	Application Instructions
Continued Leafy Vegetables Lettuce Celery Spinach Parsley Radicchio and other leafy vegetables	Sclerotinia Head and Leaf Drop - Sclerotinia spp.	2 - 6	In-Furrow Applications: For in-furrow applications, apply Serenade Soil as an in-furrow spray in the appropriate amount of water per acre for the crop at planting. Mount the spray nozzle so the spray is directed in the furrow just before the seeds are covered. Repeat applications on 10- to 14-day intervals if conditions for disease development persist. Use the stated higher rates under conditions conducive to moderate to severe disease pressure. Light irrigation after application to incorporate the product may improve disease control. Soil Surface (Drench) Applications At Any Stage of Growth: Apply the finished spray mixture to the surface of the soil 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 or drip irrigation systems. When applying as a spray (e.g., via hydraulic nozzles at low volumes), it is important to irrigate to move the material into the seed, root or transplant zone. Normal operation of overhead sprinklers and drip irrigation systems are sufficient for effective applications. Optimal performance is obtained with preventative treatments repeated on 10- to 14-days intervals if conditions for disease development persist. Use the stated higher rates under conditions conducive to moderate to severe disease pressure.

Crops	Disease	Rate (qt/acre)	Application Instructions
Legumes Vegetables (Succulent or Dried) Beans Green Beans Snap Beans Shell Beans Soybeans Dry Beans Garbanzo Beans Lima Beans Peas Chick Peas Split Peas Lentils and other legume (including those grown for seed or oil production)	Rhizoctonia spp. Pythium spp.* Fusarium spp.* Verticillium spp.* Phytophthora spp.* *NOT FOR USE IN CALIFORNIA	2-6	All Soil Surface (Drench), Shanked-In, Injected and In-Furrow Applications: Mix 2 qt (64 fl oz) to 6 qt (192 fl oz) of Serenade Soil in the appropriate amount of water per acre. Use the stated higher application rates when the weather conditions are expected to be conducive to disease development, if the field has a history of disease problems, or if minimum/low till programs are in place. Serenade Soil can be mixed with chemical fungicides registered for soil applications. Soil Surface (Drench) Applications At Planting: Use at planting, seeding or transplant. Apply finished spray mixture, at a rate to thoroughly soak the growing media through the root zone, 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 or drip irrigation systems. Shanked-In and Injected Applications: Serenade Soil can be shanked-in or injected into the soil prior to-, at-, or post-planting/transplanting of crops alone or with most types of liquid nutrients. In-Furrow Applications: For in-furrow applications, apply Serenade Soil as an in-furrow spray in the appropriate amount of water per acre for the crop at planting. Mount the spray nozzle so the spray is directed in the furrow just before the seeds are covered. Soil Surface (Drench) Applications At Any Stage of Growth: Apply the finished spray mixture to the surface of the soil 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 or drip irrigation systems. When applying as a spray (e.g., via hydraulic nozzles at low volumes), it is important to irrigate to move the material into the seed, root or transplant zone. Normal operation of overhead sprinklers and drip irrigation systems are sufficient for effective applications. Optimal performance is obtained with preventative treatments repeated every 21 to 28 days throughout the growing cycle.

14

Crops	Disease	Rate (qt/acre)	Application Instructions
Peanut* (including those grown for oil production)	Rhizoctonia spp. * Pythium spp. * Fusarium spp. * Verticillium spp. * Phytophthora spp. * Cylindrocladium Black Rot* *NOT FOR USE IN CALIFORNIA		All Soil Surface (Drench), Shanked-In, Injected and In-Furrow Applications: Mix 2 qt (64 fl oz) to 6 qt (192 fl oz) of Serenade Soil in the appropriate amount of water per acre. Use the stated higher application rates when the weather conditions are expected to be conducive to disease development, if the field has a history of disease problems, or if minimum/low till programs are in place. Serenade Soil can be mixed with chemical fungicides registered for soil applications.
	Sclerotium rolfsii*		Soil Surface (Drench) Applications At Planting: Use at planting, seeding or transplant. Apply finished spray mixture, at a rate to thoroughly soak the growing media through the root zone, as a drench or directed spray using hand-held, mechanical or motorized spray equipment, or as a chemigation drench or directed spray
	*NOT FOR USE IN CALIFORNIA	2 - 6	using applicable sprinkler or drip irrigation systems. Shanked-In and Injected Applications: Serenade Soil can be shanked-in or injected into the soil prior to-, at-, or post-planting/transplanting of crops alone or with most types of liquid nutrients.
			In-Furrow Applications: For in-furrow applications, apply Serenade Soil as an in-furrow spray in the appropriate amount of water per acre for the crop at planting. Mount the spray nozzle so the spray is directed in the furrow just before the seeds are covered.
			Soil Surface (Drench) Applications At Any Stage of Growth: Apply the finished spray mixture to the surface of the soil 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 or drip irrigation systems. When applying as a spray (e.g., via hydraulic nozzles at low volumes), it is important to irrigate to move the material into the seed, root or transplant zone. Normal operation of overhead sprinklers and drip irrigation systems are sufficient for effective applications. Optimal performance is obtained with preventative treatments repeated every 21 to 28 days throughout the growing cycle.

15

Crops	Disease	Rate (qt/acre)	Application Instructions
Root and Tuber Vegetables Carrot Potato Sweet Potato Cassava Beets Ginger Horseradish Radish Ginseng Turnip and other root and tuber vegetables (including those grown for seed production) Strawberry	Rhizoctonia spp. Pythium spp. Fusarium spp. Verticillium spp.* Phytophthora spp. Erwinia spp.* *NOT FOR USE IN CALIFORNIA Verticillium Wilt Verticillium dahlia	2-6	All Soil Surface (Drench), Shanked-In, Injected and In- Furrow Applications: Mix 2 qt (64 fl oz) to 6 qt (192 fl oz) of Serenade Soil in the appropriate amount of water per acre. Use the stated higher application rates when the weather conditions are expected to be conducive to disease development, if the field has a history of disease problems, or if minimum/low till programs are in place. Serenade Soil can be mixed with chemical fungicides registered for soil applications. Soil Surface (Drench) Applications At Planting: Use at planting, seeding or transplant. Apply finished spray mixture, at a rate to thoroughly soak the growing media through the root zone, 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 or drip irrigation systems. Shanked-In and Injected Applications: Serenade Soil can be shanked-in or injected into the soil prior to-, at-, or post-planting/transplanting of crops alone or with most types of liquid nutrients. In-Furrow Applications: For in-furrow applications, apply Serenade Soil as an in- furrow spray in the appropriate amount of water per acre for the crop at planting. Mount the spray nozzle so the spray is directed in the furrow just before the seeds are covered. Soil Surface (Drench) Applications At Any Stage of Growth: Apply the finished spray mixture to the surface of the soil 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 or drip irrigation systems. When applying as a spray (e.g., via hydraulic nozzles at low volumes), it is important to irrigate to move the material into the seed, root or transplant zone. Normal operation of overhead sprinklers and drip irrigation systems are sufficient for effective applications. Optimal performance is obtained with preventative treatments repeated every 21 to 28 days throughout the growing cycle.

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

CONTAINER HANDLING: For 2.5-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 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. 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 IMPORTANT: READ BEFORE USE

Read the entire Directions for Use, Conditions, Disclaimer of Warranties and Limitations of Liability before using this product. If the terms are not acceptable, return the unopened product at once for a refund of the purchase price.

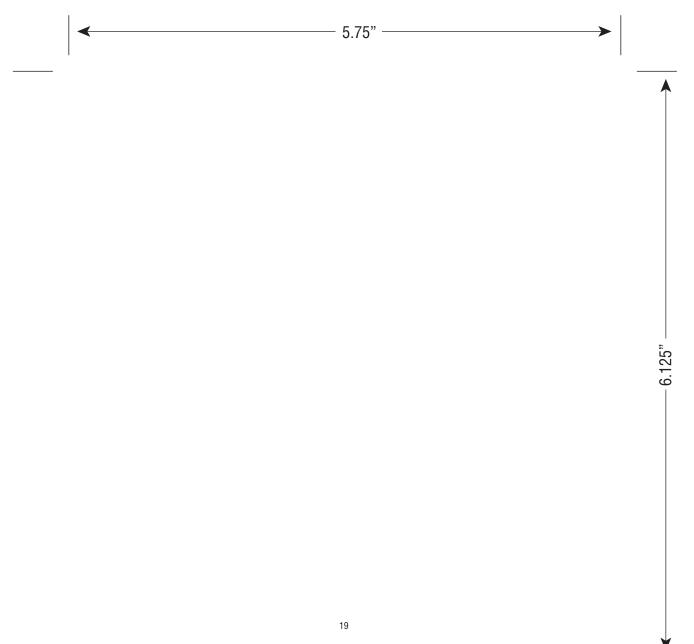
By using this product, user or buyer accepts the following Conditions, Disclaimer of Warranties, and Limitations of Liability. These terms may only be modified by a written document signed by a duly authorized representative of Bayer CropScience LP.

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. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Bayer CropScience LP. All such risks shall be assumed by the user or buyer.

DISCLAIMER OF WARRANTIES: TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BAYER CROPSCIENCE LP 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. No agent of Bayer CropScience LP is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BAYER CROPSCIENCE LP DISCLAIMS ANY LIABILITY WHATSOEVER FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.

LIMITATION 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 BAYER CROPSCIENCE LP'S ELECTION, THE REPLACEMENT OF PRODUCT.

Bayer



EPA Est. No.: 69592-MEX-001 **Net Contents:** 2.5 GAL

Lot No.:



ACTIVE INGREDIENT:

OTHER INGREDIENTS:98.66%

Contains a minimum of 1 x 109 cfu/g. TOTAL 100.00%

FOR AGRICULTURAL USE

EPA Reg. No. 264-1152

KEEP OUT OF REACH OF CHILDREN CAUTION

FOR ADDITIONAL PRECAUTIONARY STATEMENTS: See Attached Booklet.

For MEDICAL And TRANSPORTATION Emergencies ONLY Call 24 Hours A Day 1-800-334-7577 For PRODUCT USE Information Call 1-866-99BAYER (1-866-992-2937)

FIRST AID

IF INHALED:

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

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

In case of emergency call toll free the Bayer CropScience Emergency Response Telephone No. 1-800-334-7577.

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS & DOMESTIC ANIMALS CAUTION

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

FOR ADDITIONAL PRECAUTIONARY STATEMENTS:

See attached label booklet: Personal Protective Equipment (PPE), User Safety Recommendations, and Environmental Hazards

EMERGENCY INFORMATION

For emergencies such as leaks or spills, call 24-hour, toll-free BAYER hotline at 1-800-334-7577.

DIRECTIONS FOR USEE: See attached booklet.

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

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

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: For 2.5-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 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 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 complete CONTAINER DISPOSAL instructions. see attached booklet.

Bayer CropScience LP P.O. Box 12014, 2 T.W. Alexander Drive Research Triangle Park, North Carolina 27709 SERENADE is a registered trademark of Bayer. ©2013 Bayer CropScience

LUS0157-002 AQ1334-003

Can be Used for Organic Production





SERENADE



Net Contents:

2 x 2.5 Gal. (2 x 9.46 L)

ACTIVE INGREDIENT:

 QST 713 strain of Bacillus subtilis*
 1.34%

 OTHER INGREDIENTS:
 98.66%

*Contains a minimum of 1 x 10° cfu/g.

U.S. Patent Nos. 6,060,051, 6,291,426, and 6,638,910 on QST 713 strain of *Bacillus subtilis*

FOR AGRICULTURAL USE

EPA Reg. No. 264-1152

KEEP OUT OF REACH OF CHILDREN CALITION

FOR ADDITIONAL PRECAUTIONARY STATEMENTS: See Label On Inside Container.

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

For **PRODUCT USE** Information Call 1-866-99BAYER (1-866-992-2937)

See label on container for Conditions for Sale and Warranty.
USE OF PRODUCT INDICATES ACCEPTANCE OF
"CONDITIONS FOR SALE AND WARRANTY"

LUS0044-003

AQ1334-003

TOTAL 100.00%

Produced for:
Bayer CropScience LP
P.O. Box 12014, 2 T.W. Alexander Drive
Research Triangle Park, North Carolina 27709
SERENADE is a registered trademark of Bayer.
©2013 Bayer CropScience
Product of Mexico

60072033

For Organic Use

Can be Used for Organic Production

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.

In case of emergency call toll free the Bayer CropScience Emergency Response Telephone No. 1-800-334-7577. Have a product container or label with you when calling a poison control center or doctor, or going for treatment.

DIRECTIONS FOR USE: See label on inside container.

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

STORAGE

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

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

For complete STORAGE AND DISPOSAL instructions, see label on inside container.

Lot No.

EPA Est. No.

0000000A

02/13

Bayer

6.75