69592-11 6/19/2012 1/63

Please read instructions on reverse before completing form

Form Approved OMB No 2070 0060

United States
Environmental Protection Agency
Washington DC 20460

[ ] Registration
[ ] Amendment
[x] Other

OPP Identifier Number

Application for Pesticide - Section I

1 Company/Product Number	2 EPA Product Manager	3 Proposed Classification
069592 00011	Sheryl Reilly	[X] None [ ] Restricted
4 Company/Product (Name) (R) AgraQuest Inc / SERENADE MAX	**PM#** BPPD # 92	

5 Name and Address of Applicant *(Include ZIP Code)*
AgraQuest Inc
1540 Drew Avenue
Davis CA 95618
[ ] *Check if this is a new address*

6 Expedited Review In accordance with FIFRA Section 3(c)(3)(b)(i) my product is similar or identical in composition and labeling to
EPA Reg No NA
Product Name NA

Section II

[ ] Amendment Explain below
[ ] Resubmission in response to Agency letter dated
[x] Notification Explain below
[ ] Final printed labels in repsonse to Agency letter dated
[ ] "Me Too Application
[ ] Other Explain below

Explanation Use additional page(s) if necessary (For section I and Section II)

Notification of Alternate Brand Name per PR Notice 98 10 This notification is consistent with the provisions of PR Notice 98 10 and EPA regulations at 40 CFR 152 46 and no other changes have been made to the labeling or the confidential statement of formula of this product I understand that it is a violation of 18 U S C Sec 1001 to willfully make any false statement to EPA I further understand that if this notification is not consistent with the terms of PR Notice 98 10 and 40 CFR 152 46 this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA

Section - III

1 Material This Product Will Be Packaged In

Child Resistant Packaging	Unit Packaging	Water Soluble Packaging	2 Type of Container
[ ] Yes [X] No	[ ] Yes [X] No	[ ] Yes [X] No	[ ] Metal [ ] Plastic [ ] Glass [ ] Paper [xx] Other (Specify) polybag with poly liner
* *Certification must be submitted*	If Yes Unit Packaging wgt ____ No per container ____	If Yes Package wgt ____ No per container ____	

3 Location of Net Contents Information panel on container
[X] Label [ ] Container

4 Size(s) Retail Container
1 2 4 6 12 24 1000 lbs 1 5 10 500 kg

5 Location of Label Directions
[booklet] booklet is affixed to container

6 Manner in Which Label is Affixed to Product
[xxx] Lithograph Paper glued Stenciled (product logo only) [X] Other peal back

Section - IV

1 Contact Point *(Complete items directly below for identification of individual to be contacted if necessary to process this application)*

Name	Title	Telephone No (Include Area Code)
Sherry D Heins	Product Registration Manager	530 746 3307

Certification

I certify that the statements I have made on this form and all attachments thereto are true accurate and complete I acknowledge that any knowlingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law

6 Date Application Received (Stamped)

2 Signature Sherry D Heins

3 Title Product Registration Manager

4 Typed Name Sherry D Heins

5 Date May 22, 2012

EPA Form 8570 1 (Rev 3 94) Previous editions are obsolete — White EPA File Copy (original) — Yellow Applicant Copy

AGRAQUEST®
better food better world

May 22, 2012

Ms Sheryl Reilly, Branch Chief
Biopesticides and Pollution Prevention Division (BPPD)

Document Processing Desk (NOTIF) (E-Sub)
Office of Pesticide Programs (7504P)
U S Environmental Protection Agency
Room S-4900, One Potomac Yard
2777 South Crystal Drive
Arlington, VA 22202-4501

Subject Amended Labeling for SERENADE® MAX EPA Reg No 69592-11 via Notification Process

AgraQuest, Inc submits herein the amended subject product label which complies with the notification requirements of PR Notice 98-10 section II Labeling Notifications A Brand Names The alternate brand name Serenade MAX Garden Disease Control Wettable Powder has been altered to Serenade Garden Wettable Powder Fungicide

Two additional changes are as follows, the copy right date for the label has been updated to 2012 and the optional statement has been updated to read '[This label modified May 2012]"

To facilitate review of the subject product label, the label is being submitted on CD-Rom and hard copy

The following documents are provided to complete this amendment

1 Signed EPA Form 8570-1,
2 1-paper copy of the label with track changes,
3 1-paper copy of the label in clean format (as instructed by Tom Harris for a notification),
4 1-PDF file with the label in clean format on CD-ROM,
5 Signed Certificate with Respect to Label Integrity

I can be reached at the numbers below should you have questions regarding this submission

Sincerely,

Sherry D Heins
Product Registration Manager

Direct +1 (530) 746-3307
Office +1 (530) 750-0150
FAX +1 (530) 750-0153
Email sheins@agraquest com

 1540 Drew Avenue Davis CA 95618 U S A
+1 (530) 750-0150 • fax +1 (530) 750-0153 • www agraquest com

Certification with Respect to Label Integrity

version 9/11/02

I certify that the information (including, but not limited to, text, tables and graphics) contained in the electronic file identified below by file name and submitted with this certification is the same information as that on the paper copies of these documents included with this submission

PROPOSED LABEL

EPA Registration #	Date Submitted to EPA	Electronic file name
069592-00011	May 22 2012	069592-00011 20120522 SerenadeMAX NOTIF pdf

I certify that the statements that I have made on this form are true, accurate, and complete I acknowledge that any knowingly false or misleading statements may be punishable by fine or imprisonment or both under applicable law

Signature

05/22/2012
Date

Sherry D Heins
Name (typed)

Product Registration Manager
Title

SERENADE® MAX

[Alternate Brand Names JAZZ® Serenade® MAX Garden Disease Control Serenade® Garden Wettable Powder Fungicide]

MASTER LABEL

Sub-label A Agricultural/Commercial Use

Sub-label B Agricultural Use – Mushroom Production

Sub-label C Residential Use (Home and Garden Use)

Notification Accepted
Date 6/19/2012
Reviewer M Gilkes

ACTIVE INGREDIENT	
QST 713 strain of *Bacillus subtilis**	14 60%
OTHER INGREDIENTS	85 40%
TOTAL	100 00%

Contains a minimum of 7 3 x 10^9 cfu/g

KEEP OUT OF REACH OF CHILDREN

CAUTION

EPA Registration No 69592 11
EPA Est No

01	02	03	04	05	06	07	09
69592 MEX 1	67545 AZ 1	66728 GA 2	37429 GA 2	69592 CA 1	34704 MS 2	42625 NJ 1	61933 FL 10
10	14						
47857 CA 1	84961 PA 1						

[Superscript corresponds to last two digits of container lot number]

AgraQuest Inc
1540 Drew Avenue
Davis CA 95618
www agraquest com

[Note to Reviewer All text in brackets is optional language for the final printed container label]

SERENADE® MAX
A WETTABLE POWDER BIOFUNGICIDE
SUB-LABEL A

For Agricultural/Commercial Use

SERENADE® MAX

[A Wettable Powder Biofungicide]

[Optional/Alternate Statement NOP Logo For Organic Production]
[Optional/Alternate Statement NOP Logo Can be Used for Organic Production]
[USE INDOORS AND OUTDOORS]
[USE IN FIELD APPLICATIONS GREENHOUSES GLASSHOUSES NURSERIES SHADEHOUSES LANDSCAPES INTERIORSCAPES SEEDLING PRODUCTION SITES AND FOREST SEEDLING PRODUCTION SITES]
[USE IN TANK MIXES OR ROTATIONAL ALTERNATING SPRAY PROGRAMS WITH OTHER CROP PROTECTION PRODUCTS]
[USE IN RESISTANCE MANAGEMENT PROGRAMS]
[USE GROUND AERIAL CHEMIGATION AND HAND APPLICATION EQUIPMENT]
[FOR AGRICULTURAL USE]
[FOR USE ON ORNAMENTALS TREES SHRUBS TURF LAWNS SOD GOLF COURSES (GREENS TEES FAIRWAYS AND ROUGHS) SEEDLINGS AND CONIFERS]
[USE IN PRODUCTION OF CONIFERS FOR REFORESTATION]

ACTIVE INGREDIENT	
QST 713 strain of *Bacillus subtilis**	14 60%
OTHER INGREDIENTS	85 40%
TOTAL	100 00%

*Contains a minimum of 7 3 x 10^9 cfu/g

KEEP OUT OF REACH OF CHILDREN

CAUTION

[See attached label booklet for First Aid Precautionary Statements Storage and Disposal Instructions and Directions for Use]
[Peel back tab for First Aid Precautionary Statements Storage and Disposal Instructions and Directions for Use]

EPA Registration No 69592 11
EPA Est No

01	02	03	04	05	06	07	09
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[Superscript corresponds to last two digits of container lot number]

AgraQuest Inc
1540 Drew Avenue
Davis CA 95618
www agraquest com

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

Net Weight

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS & DOMESTIC ANIMALS

CAUTION

Causes moderate eye irritation Harmful if absorbed through skin or inhaled Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals Avoid contact with skin eyes or clothing Avoid breathing dust or spray mist Wash thoroughly with soap and water after handling and before eating drinking chewing gum using tobacco or using the toilet Remove and wash contaminated clothing before reuse

FIRST AID	
IF IN EYES	• Hold eye open and rinse slowly and gently with water for 15 20 minutes • Remove contact lenses if present after the first 5 minutes then continue rinsing • Call a poison control center or doctor for treatment advice
IF ON SKIN OR CLOTHING	• Take off contaminated clothing • Rinse skin immediately with plenty of water for 15 20 minutes • Call a poison control center or doctor for treatment advice
IF INHALED	• Move person to fresh air • If person is not breathing call 911 or an ambulance then give artificial respiration preferably 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	

PERSONAL PROTECTIVE EQUIPMENT (PPE)

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

[OPTIONAL ENGINEERING CONTROLS]

[OPTIONAL STATEMENT 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 5)] 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
- Remove clothing/PPE immediately if pesticides get 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 CHEMTREC hotline at 1 800 424 9300

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 greenhouses

[Post harvest applications]
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)

Keep unprotected persons from handling portions of harvested agricultural plants that have been treated un i' 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

BASIC USE INFORMATION

Serenade MAX is a broad spectrum preventative product for the control or suppression of many important plant diseases Apply Serenade MAX as a foliar spray alone in alternating spray programs or in tank mixes with other registered crop protection products [Apply Serenade MAX 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 MAX in a rotational program with other registered fungicides Apply Serenade MAX with spray equipment commonly used for making ground or aerial applications and irrigation systems commonly used for chemigation Heavy rainfall or irrigation shortly after application may require retreatment

[OPTIONAL STATEMENTS Serenade MAX is most effectively used in a preventive disease management program For improved performance use Serenade MAX in a tank mix or rotational program with other registered fungicides When using Serenade MAX alone for the first time use a rate of 2 lb Serenade MAX per acre Increase the application rate and/or decrease spray intervals of Serenade MAX depending upon 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]

INTEGRATED PEST MANAGEMENT (IPM)

Integrate Serenade MAX 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 Serenade MAX 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

Serenade MAX 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 all foliage 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

AERIAL This product can be applied by aerial application Refer to the Aerial Drift Reduction Information section of this label for additional directions and precautions Use the application rate indicated for the appropriate crop in the Application Rate tables of this label 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 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 thorough coverage

MIXING INSTRUCTIONS

MIXING Serenade MAX must be diluted with water Partially fill the spray tank with clean water and begin agitation Add the specified amount of Serenade MAX 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 [Optional Statement Maintain a spray solution pH between 4 5 and 8 5]

Serenade MAX may be tank mixed with other registered pesticides to enhance plant disease control or suppression This product cannot be mixed with any product with prohibition against such mixing When tank mixing Serenade MAX with other registered pesticides always read and follow all use directions restrictions and precautions of both Serenade MAX 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 MAX 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 MAX is compatible with many commonly used pesticides fertilizers adjuvants and surfactants but has not 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 [OPTIONAL STATEMENT Do not use with penetrant type adjuvants]

ADDITIVES Serenade MAX 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 nonphytotoxic [adjuvant][surfactant] to spray tank

CHEMIGATION DIRECTIONS FOR USE

Basic 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 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

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 at least 25 individuals daily at least 60 days out of 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 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
3) The pesticide injection pipeline must contain a functional automatic quick closing check valve to prevent the flow of fluid back toward the injection pump
4) The pesticide injection pipeline must contain a functional normally closed solenoid operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down
5) The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops or in cases where there is no water pump when the water pressure decreases to the point where pesticide distribution is adversely affected
6) Systems must use a metering pump such as a positive displacement injection pump (e g diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock
7) Do not apply when wind speed favors drift beyond the area intended for treatment

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 MAX to lose effectiveness or strength
9) Do not combine Serenade MAX 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 MAX 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
10) Maintain agitation in the pesticide supply tank
11) Apply Serenade MAX during the last half of the water application
12) Dilute Serenade MAX 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 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 MAX to lose effectiveness or strength
9) Do not combine Serenade MAX 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 MAX 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

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
- 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 MAX fungicide required to treat area
- Add required amount of Serenade MAX 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 MAX 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 MAX fungicide required to treat area
- Add the required amount of Serenade MAX 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 MAX 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 MAX 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 MAX to lose effectiveness or strength
8) Do not combine Serenade MAX 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 MAX 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 MAX during the last half of the water application
11) Dilute Serenade MAX in enough water to be able to draw through system for the last half of the water application

AERIAL DRIFT REDUCTION INFORMATION

BASIC 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 these factors when making decisions Where states have more stringent regulations they should be observed

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 will reduce 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 specified 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 Number 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 that are oriented straight back produce the largest droplets and the lowest drift Use medium or coarser spray according to the ASAE 572 definition for standard nozzles or VMD for spinning atomizer nozzles

BOOM WIDTH For aerial applications the boom width must not exceed 75% of the wingspan or 90% of the rotary blade

APPLICATION HEIGHT Do not release spray at a height greater than 10 feet above the top of the ground or the crop canopy 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 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

SWATH ADJUSTMENT *Use upwind swath displacement When applications are made with a crosswind the swath will* be displaced downward Therefore on the upwind 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 Apply only when wind speed is 3 – 10 miles per hour (mph) as measured by an anemometer Drift potential is lowest between wind speeds of 3 10 mph Many factors however including droplet size and equipment type determine drift potential at any given speed 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 and land planted with nontarget 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 nontarget crops aquatic and wetland areas woodlands pastures rangelands or animals

FOR USE AS A FOLIAR SPRAY ON SELECT AGRICULTURAL FIELD CROPS AND SELECT AGRICULTURAL GREENHOUSE CROPS

Serenade MAX 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 Serenade MAX in a tank mix or rotational program with other registered fungicides

Application Rates of Serenade MAX for Selected Field Crops

Crops	Disease	Rate (lb/acre)	Application Instructions
Artichoke	**Powdery Mildew** *Leveillula taurica* *Erysiphe cichoracearum* **Gray Mold** *Botrytis* spp **Bacterial Crown Rot** *Erwinia chrysanthemi*	1 3	Begin applications when conditions are conducive to disease development Repeat on 7 to 10 day intervals or as needed Serenade MAX may be applied up to and on the day of harvest
Asparagus	**Rust** *Puccinia asparagi* **Botrytis Blight** *Botrytis cinerea*	1 3	Begin applications soon after emergence and when conditions are conducive to disease development Repeat on 7 to 10 day intervals or as needed Serenade MAX may be applied up to and on the day of harvest
Bananas Plantains	**Sigatoka** *Mycosphaerella* spp	1 3	Begin applications when leaves first appear and repeat on 7 to 21 day intervals or as needed Apply in sufficient water to obtain thorough coverage of foliage For improved disease control Serenade MAX may be tank mixed with oil or other fungicides registered for control of Sigatoka at labeled rates When conditions are conducive to rapid disease development and/or heavy disease pressure use higher application rates and rotational spray programs with other fungicides registered for control of Sigatoka
Berries Blueberry Blackberry Raspberry Loganberry Huckleberry Cranberry Gooseberry Elderberry Currant and other berry crops	**Mummy Berry** *Monilinia vaccinii-corymbosi* **Anthracnose Fruit Rot** *Colletotrichum gloeosporiodes* *Colletotrichum acutatum* **Botrytis Blight** *Botrytis cinerea* **Leaf Rust** *Pucciniastrum vaccinii* **Powdery Mildew** *Microsphaera alni* **Sooty Mold** Misc fungi **Alternaria Fruit Rot** *Alternaria tenuissima* **Bacterial Canker** *Pseudomonas* spp **Downy Mildew** *Peronospora sparsa* **Phomopsis** *Phomopsis vaccinii*	1 3	Mummy Berry For control begin applications at the bud break stage of development and repeat on 7 to 10 day intervals or as needed Bacterial Canker – Apply before fall rains and again during dormancy before spring growth Apply throughout the growing season prior to disease development and repeat on 2 to 10 day intervals or as needed Alternaria and Anthracnose Fruit Rot Begin applications at the first sign of disease or when conditions become conducive for disease development Repeat on 7 to 10 day intervals or as needed For all other diseases – Begin applications prior to disease development and repeat on 2 to 10 day intervals or as needed For improved performance of Serenade MAX add a surfactant to the spray tank to enhance coverage Cranberries – Make applications to non flooded fields only Serenade MAX may be applied up to and on the day of harvest

Crops	Disease	Rate (lb/acre)	Application Instructions
Brassica Leafy Vegetables (Cole Crops) Broccoli Cabbage Cauliflower Brussels Sprouts Collards Kale Mustard Greens Kohlrabi and other brassica leafy vegetables	**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*	1 3	Pin Rot For suppression begin applications when environmental conditions are conducive to disease development and repeat on 2 to 10 day intervals or as needed For improved performance use Serenade MAX in a tank mix or rotational program with other registered fungicides for Pin Rot control For all other diseases Begin applications soon after emergence or transplant and when conditions are conducive to disease development Repeat on 3 to 10-day intervals or as needed
Bulb Vegetables Onion Garlic Shallots and other bulb vegetables (including those grown for seed production)	**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 **White Rot** *Sclerotium cepivorum*	1 3	Begin applications when environmental conditions are conducive to disease development and repeat on 7 to 10 day intervals or as needed Apply sufficient water to provide complete coverage of plants When conditions are conducive to rapid disease development use Serenade MAX in a rotational program with other registered fungicides
	Rust *Puccinia porri*	1 3	For suppression begin applications when conditions are conducive to disease development and repeat on 7 to 10 day intervals or as needed For improved performance use Serenade MAX in a tank mix or rotational program with other registered fungicides for Rust control

Crops	Disease	Rate (lb/acre)	Application Instructions
Cereal Grains Barley Corn Millets Oat Rice Rye Sorghum Triticale Wheat and other cereal grain crops	**Powdery Mildew** *Erysiphe graminis* **Rust** *Puccinia* spp **Blast** *Pyricularia oryzae* **Sheath Spot** *Rhizoctonia oryzae* **Sheath Blight** *Thanatephorus cucumeris* (Anamorph *Rhizoctonia solani*) *Thanatephorus kernel* **Smut** *Tilletia barclayana* **Bacterial Blight and Streak** *Xanthomonas* spp **Stem Rot** *Sclerotium oryzae* *Magnaporthe* spp **Brown Rot Leaf Spots and Smuts** *Cercospora* spp *Entyloma* spp *Dreschlera* spp *Cochliobolus* spp *Ceratobasidium* spp	1 3	Begin applications when environmental conditions and plant stage are conducive to disease development Repeat on 7 to 10 day intervals or as needed Use higher rates and shorter application intervals under heavy disease pressure

Crops	Disease	Rate (lb/acre)	Application Instructions
Citrus Fruit Orange Grapefruit Lemon Tangerine Tangelo Pummelo and other citrus fruit	**Greasy Spot** *Mycosphaerella citri* **Post Bloom Fruit Drop** *Colletotrichum acutatum* **Scab** *Elsinoe fawcetti* **Melanose** *Diaporthe citri* **Alternaria Leaf Spot** *Alternaria alternate* **Bacterial Blast** *Pseudomonas syringae*	1 3	Greasy Spot - For suppression begin applications at first new foliar flush and repeat with subsequent new flushes When conditions are conducive to rapid disease development Serenade MAX must be used in a tank mix program with other products registered for Greasy Spot such as spray oil or copper based fungicides at labeled rates Post Bloom Fruit Drop – For suppression begin applications at early bloom and when conditions are conducive to disease development Repeat on 7 to 10 day intervals or as needed Utilize the shorter spray interval between applications if warm wet conditions persist Citrus Scab – For suppression begin applications at first new foliar flush and repeat at petal fall and at ½ inch diameter fruit Melanose – For suppression begin applications at petal fall and repeat on 14 to 21 day intervals until fruit becomes resistant Alternaria Leaf Spot – Begin applications when environmental conditions and plant stage are conducive to disease development Repeat on 7 to 10 day intervals or as needed Bacterial Blast Begin applications when environmental conditions are conducive to disease development Repeat on 3 to 10 day intervals or as needed For improved performance on Post Bloom Fruit Drop Scab and Melanose use Serenade MAX in a tank mix or rotational program with other registered fungicides
Coffee	**Coffee Berry Disease** *Colletotrichum coffeanum* **Bacterial Blight** *Pseudomonas syringae*	1 3	Begin applications when environmental conditions are conducive to disease development Continue applications on 7- to 10 day intervals or as needed Use higher rates and shorter application intervals under heavy disease pressure For improved performance use Serenade MAX in a tank mix or rotational program with other registered fungicides
Corn Sweet Corn Popcorn Seed Corn Silage Corn Field Corn	**Common Rust** *Puccinia sorghi* **Northern Leaf Blight** *Exserohilum turcicum* *Helminthosporium turcicum* **Southern Leaf Blight** *Bipolaris maydis* *Helminthosporium maydi* *Cochliobolus heterostrophus*	1 3	Begin applications when environmental conditions are conducive to disease development Continue applications on 7 to 10 day intervals or as needed Use higher rates and shorter application intervals under heavy disease pressure

Crops	Disease	Rate (lb/acre)	Application Instructions
Nongrass Animal Feeds (Forage, Fodder, Straw, and Hay) Clover Alfalfa and other nongrass animal feed crops (including those grown for seed production)	**White Mold (Sclerotinia Stem Rot)** *Sclerotinia sclerotiorum*	1 3	For suppression of White Mold begin applications soon after emergence or transplant and when conditions are conducive to disease development Repeat on 7 to 10-day intervals or as needed
Cucurbit Vegetables Cucumber Cantaloupe Melon Muskmelon Squash Watermelon and other cucurbit vegetables	**Powdery Mildew** *Erysiphe* spp *Sphaerotheca* spp **Gummy Stem Blight** *Didymella bryoniae* *Phoma cucurbitacearum* **Angular Leaf Spot** *Pseudomonas syringae* **Anthracnose** *Colletotrichum lagenarium* **Downy Mildew** *Pseudoperonospora cubensis* **Bacterial Fruit Blotch** *Acidovorax avenae*	1 3	Begin applications soon after emergence or transplant and when conditions are conducive to disease development Repeat on 7 to 10 day intervals or as needed When environmental conditions and plant stage are conducive to rapid disease development use Serenade MAX in a rotational program with other registered fungicides

Crops	Disease	Rate (lb/acre)	Application Instructions
Fruiting Vegetables Pepper Tomato Eggplant Ground Cherry Tomatillo Okra and other fruiting vegetables	**Bacterial Spot** *Xanthomonas* spp **Target Spot** *Corynespora cassiicola*	1 3	Begin applications soon after emergence or transplant and when environmental conditions are conducive to disease development Continue applications on 2 to 7 day intervals or as needed When conditions are conducive to rapid disease development for improved control use Serenade MAX in a tank mix program with copper based bactericides registered for control of Bacterial Spot and Target Spot at labeled rates
	Bacterial Speck *Pseudomonas syringae* pv *tomato*	1 3	Begin applications soon after emergence or transplant and when environmental conditions are conducive to disease development Continue applications on 2 to 7 day intervals or as needed Use higher rates when conditions are conducive to rapid disease development
	Early Blight *Alternaria solani* **Late Blight** *Phytophthora infestans*	1 3	For suppression begin applications when plants are 4 to 6 inches high Repeat applications on 5 to 7 day intervals or as needed For improved performance use Serenade MAX in a tank mix or rotational program with other registered fungicides Use shorter spray intervals under conditions conducive to rapid disease development
	Powdery Mildew *Leveillula taurica* *Oidiopsis taurica* *Erysiphe* spp *Sphaerotheca* spp **Downy Mildew** *Pseudoperonospora cubensis*	1 3	For suppression begin applications soon after emergence or transplant and continue on 7- to 10 day intervals or as needed For improved performance use Serenade MAX in a tank mix or rotational program with other registered fungicides
	Buck-Eye Rot *Phytophthora parasitica* **Anthracnose** *Colletotrichum candidum*	1 3	Begin applications soon after emergence or transplant and continue on 7 to 10 day intervals or as needed For improved performance of Serenade MAX add a surfactant to the spray tank to enhance coverage
	Bacterial Canker *Clavibacter michiganensis*	1 3	Begin applications when environmental conditions are conducive to disease development Repeat on 7 to 10 day intervals or as needed
	Gray Mold *Botrytis cinerea*	1 3	Begin applications soon after emergence or transplant and repeat on 7 to 10 day intervals or as needed

Crops	Disease	Rate (lb/acre)	Application Instructions
Grape	**Gray Mold** *Botrytis cinerea* **Sour Rot** [a complex of pathogens *Aspergillus niger* *Alternaria tenuis* *Botrytis cinerea* *Cladosporium herbarum* *Rhizopus arrhizus* *Penicillium* spp and others]	1 3	Begin applications at bloom before bunch closure at verasion and preharvest Apply in sufficient water to provide full coverage Serenade MAX may be applied up to and on the day of harvest For Table Grapes After initiation of Berry set it is encouraged to switch from Serenade MAX to Serenade ASO to avoid the potential for white deposits on fruit
	Powdery Mildew *Uncinula necator*	1 3	Begin applications when new shoots are ½ to 1½ inches long Repeat when shoots are 3 to 5 inches long when shoots are 8 to 10 inches long and then at 7 to 10 day intervals until disease conditions no longer exist Use high rates and shorter intervals when conditions are conducive to rapid disease development Apply in sufficient water to provide thorough coverage For Table Grapes After initiation of Berry set it is encouraged to switch from Serenade MAX to Serenade ASO to avoid the potential for white deposits on fruit
	Downy Mildew *Plasmopara viticola*	1 3	For suppression apply at 10 inch shoot then at 7 to 10 day intervals until bunch closure (berry touch) For improved performance use Serenade MAX in a tank mix or rotational program with other registered fungicides for Downy Mildew control For Table Grapes After initiation of Berry set it is encouraged to switch from Serenade MAX to Serenade ASO to avoid the potential for white deposits on fruit
	Phomopsis *Phomopsis viticola*	1 3	Begin applications when shoots are ½ to 1 inch long and repeat when shoots are 6 to 8 inches long
	Black Rot *Guignardia bidwelli*	1 3	Begin applications when shoots are 4 to 6 inches in length and repeat on 7 to 10 day intervals throughout the season until the berries start to change color For Table Grapes After initiation of Berry set it is encouraged to switch from Serenade MAX to Serenade ASO to avoid the potential for white deposits on fruit
	Eutypa *Eutypa lata*	2 – 5% w/v*	Apply solution to pruning wounds Sanitation is critical All wood from infected plants must be removed from the vineyard and destroyed (either buried or burned)

*2 5% w/v rate (Serenade MAX to water) for this use only

Crops	Disease	Rate (lb/acre)	Application Instructions
Herbs/ Spices	**Bacterial Blight** *Pseudomonas syringae* **Anthracnose** *Colletotrichum* spp **Alternaria Leaf Blight** *Alternaria* spp **Botrytis** *Botrytis* spp	1 3	Begin applications when environmental conditions are conducive to disease development Repeat on 7 to 10 day intervals or as needed
Hop	**Powdery Mildew** *Sphaerotheca macularis* **Downy Mildew** *Peronospora* spp	2 4 (lb/100 gal spray volume)	Mix 2 – 4 lb of Serenade MAX per 100 gallons of water Use the higher rates when moderate to high disease pressure is present or expected Begin applications when environmental conditions are conducive to rapid disease development Continue sprays at 7 day intervals or as needed Coverage will vary with the size of the vines and the type of spray equipment Apply adequate spray volume to achieve complete coverage Maximum spray volume is 400 gallons per acre Minimum spray volume for hop growth stages are as follows Emergence to training Apply by ground equipment using a minimum spray volume of 20 gallons per acre Training to wire Apply by ground equipment using a minimum spray volume of 50 gallons per acre Wire touch through harvest Apply by ground equipment using a minimum spray volume of 100 gallons per acre Consider higher water volumes to achieve thorough coverage after side arms develop

Crops	Disease	Rate (lb/acre)	Application Instructions
Leafy Vegetables Lettuce Celery Spinach Parsley Radicchio and other leafy vegetables (including those grown for seed production)	**Downy Mildew** *Bremia lactucae* *Peronospora* spp **Powdery Mildew** *Erysiphe cichoracearum* **White Rust** *Albugo occidentalis* **Pink Rot** *Sclerotinia sclerotiorum* **Anthracnose** *Colletotrichum* spp **Bacterial Leaf Spot** *Xanthomonas campestris* pv *vitians* **Bacterial Blight** *Xanthomonas campestris*	1 - 3	Pink Rot – Begin applications approximately 8 weeks before harvest and repeat on 14 day intervals Apply Serenade MAX as a directed spray in sufficient water to ensure thorough coverage of the base of the plants and the surrounding soil surface After applications light irrigation will better incorporate Serenade MAX into the soil and may improve disease control Downy Mildew / Powdery Mildew / White Rust For suppression begin applications when conditions are conducive to disease development Repeat on 2 to 10-day intervals or as needed For improved performance use Serenade MAX in a tank mix or rotational program with other registered fungicides for Downy Mildew Powdery Mildew and White Rust control Anthracnose – For suppression begin applications prior to disease development when environmental conditions and plant stage are conducive to rapid disease development Repeat on 7 to 10 day intervals or as needed Use higher rates and shorter application intervals under heavy disease pressure Bacterial Blight / Bacterial Leaf Spot Begin applications when environmental conditions are conducive to disease development Repeat on 2 to 10 day intervals or as needed
Leafy Vegetables Lettuce Celery Spinach Parsley Radicchio and other leafy vegetables (including those grown for seed production)	**Sclerotinia Head and Leaf Drop** *Sclerotinia* spp	1 3	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 Within 7 days of thinning 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 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 After applications light irrigation will better incorporate Serenade MAX into the soil and may improve disease control OR For control of Sclerotinia Head and Leaf Drop Within 7 days of thinning or transplanting 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 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 After applications light irrigation will better incorporate Serenade MAX into the soil and may improve disease control

Crops	Disease	Rate (lb/acre)	Application Instructions
Legume Vegetables (Succulent and Dried) Beans Green Beans Snap Beans Shell Beans Soybeans Dry Beans Garbanzo Beans Lima Beans Peas Chick Peas Split Peas Lentils and other legume vegetables (including those grown for seed or oil production)	**Rust** *Uromyces appendiculatus*	1 3	For suppression begin applications soon after emergence or transplant and when conditions are conducive to disease development Repeat on 7 to 10-day intervals or as needed For improved performance use Serenade MAX in a tank mix or rotational program with other registered fungicides for Rust control
	Rust *Puccinia* spp **Bacterial Pustule** *Xanthomonas* spp **Powdery Mildew** *Erysiphe* spp **Downy Mildew** *Peronospora manshurica*	1 3	Begin applications when environmental conditions and plant stage are conducive to disease development Repeat on 7 to 10 day intervals or as needed Use higher rates and shorter application intervals under heavy disease pressure
	Asian Soybean Rust *Phakospora pachyrhizi*	1 3	Use as part of a program with other fungicides that are labeled for Asian Soybean Rust Begin applications when environmental conditions are conducive to disease development Continue at 7 to 14 day intervals or as needed Use higher rates and shorter application intervals under heavy disease pressure
	Damping Off *Aphonomyces* spp	1 3	Begin applications soon after emergence or transplant and when conditions are conducive to disease development Repeat on 7 to 10-day intervals or as needed
	White Mold (Sclerotinia Stem Rot) *Sclerotinia sclerotiorum* **Gray Mold (Botrytis Blight)** *Botrytis* spp	1 3	Begin applications soon after emergence or transplant and when conditions are conducive to disease development Repeat on 7 to 10 day intervals or as needed When conditions are conducive to rapid disease development use Serenade MAX in a rotational program with other registered fungicides
Mint and other herbs/spices	**Rust** *Puccinia menthae* **Powdery Mildew** *Erysiphe* spp **Downy Mildew** *Peronospora* spp	1 3	Begin applications soon after emergence and when conditions are conducive to disease development Repeat on 7 to 10 day intervals or as needed Use higher rates and shorter application intervals under heavy disease pressure

Crops	Disease	Rate (lb/acre)	Application Instructions
Oilseed Crops Canola Castor Cotton Flax Rapeseed Safflower Sesame Sunflower and other oilseed crops (including those grown for seed or oil production)	**Bacterial Speck** *Pseudomonas syringe* pv *glycinea* **Brown Spot** *Septoria glycines* **Pod and Stem Blight** *Diaporthe phaseolorum* var *sojae* *Phomopsis longicola* **Downy Mildew** *Peronospora manshurica* **Rust** *Albugo* spp *Puccinia* spp **White Mold** (**Sclerotinia Stem Rot**) *Sclerotinia sclerotiorum* **Bacterial Pustule** *Xanthomonas* spp	1 - 3	Begin applications soon after emergence and when conditions are conducive to disease development Repeat on 7 to 10 day intervals or as needed Use higher rates and shorter application intervals under heavy disease pressure For suppression of White Mold begin applications at the first sign of disease or when conditions become conducive for disease development Repeat on 7 to 10 day intervals or as needed
Olive (including those grown for oil production)	**Olive Knot** *Pseudomonas savastanoi* **Leaf Spot** *Cercospora cladosporioides*	1 3	Apply before fall rains and again during dormancy before spring growth Under conditions conducive to heavy disease pressure for improved control use Serenade MAX in a tank mix or rotational program with a copper based bactericide registered for control of Olive Knot and Leaf Spot In cool wet areas apply preventive treatments to olive trees after harvest but before winter rains begin and again in spring if wet rainy weather persists
Peanut (including those grown for oil production)	**Early Leaf Spot** *Cercospora spp* *Cercospora arachidicola* **Late Leaf Spot** *Cercosporidium personatum* **Rust** *Puccinia arachidis* **White Mold** *Sclerotinia sclerotiorum* **Web Blotch** *Phoma arachidicola*	1 3	Begin applications when environmental conditions are conducive to disease development Repeat applications on 14 day intervals or as needed For improved control of Leaf Spot diseases use Serenade MAX in a tank mix program with copper based fungicides registered for control of Peanut Leaf Spot diseases Peanut hay may be fed to livestock

Crops	Disease	Rate (lb/acre)	Application Instructions
Pome Fruit Apple Crabapple Pear Quince Mayhaw and other pome fruit	**Fire Blight** *Erwinia amylovora*	1 3	For suppression begin applications at 1 – 5% bloom and repeat as needed to protect open untreated blossoms when conditions favoring disease development are likely to occur For maximum control use Serenade MAX prior to and as close as possible to Fire Blight infection events During periods of rapid bloom development and frequent infection periods use 2 to 7 day spray intervals After petal fall continue applications on 7 day intervals while environmental conditions favor disease development Apply in sufficient water to provide full coverage For improved performance use Serenade MAX in a rotational program with antibiotics registered for Fire Blight control such as oxytetracycline or streptomycin Proper orchard cultural practices are essential to eliminate Fire Blight infected tissue from the orchard to assure good performance of any crop protection product Care must be taken to remove and destroy dead and diseased wood from the orchard prior to and during the growing season Use of Serenade MAX alone has not been shown to affect fruit finish Use caution when selecting spray adjuvants Select only those adjuvants which through prior experience do not affect fruit finish when combined with Serenade MAX
	Scab *Venturia spp*	1 3	For suppression begin applications at green tip or when environmental conditions become favorable for primary Scab development and repeat on 7 to 10 day intervals or as needed For improved performance use Serenade MAX in a tank mix or rotational program with other registered fungicides for Scab control
	Brooks Spot *Mycosphaerella pomi* **Cedar Apple Rust** *Gymnosporangium juniperi-virginianae* **Flyspeck** *Schizothyrium pomi* **Sooty Blotch** *Gloeodes pomigena* **Bot Rot** *Botryosphaeria dothidea* **Bitter Rot** *Colletotrichum* spp **Bull's Eye Rot** *Neofabraea* spp	1 3	For control of Brooks Spot Cedar Apple Rust Flyspeck Sooty Blotch Bot Rot Bitter Rot and Bull s Eye Rot Begin applications pre bloom when environmental conditions are conducive to disease development Repeat applications at 7 to 14 day intervals or as needed Apply in sufficient spray volume to ensure thorough coverage Use higher application rates and shorter spray intervals when conditions are conducive to rapid disease development or heavy disease pressure For improved performance of Serenade MAX add a surfactant known to be safe to the target crop to the spray tank to enhance coverage and wetting of plant surfaces Serenade MAX may be applied up to and on the day of harvest (0 day PHI)
	Powdery Mildew *Podosphaera leucotricha*	1 3	Begin applications at tight cluster or sooner if conditions are conducive to disease development Repeat applications through the second cover spray on 7 to 10 day intervals Additional sprays beyond second cover may be needed on susceptible varieties or when environmental conditions are conducive to rapid disease development Use high label rate and shorter spray intervals when conditions are conducive to rapid disease development

Crops	Disease	Rate (lb/acre)	Application Instructions
Pomegranate	**Heart Rot** *Alternaria* spp	1 – 3	Begin applications at first sign of infection or when conditions are conducive for infection Repeat applications at 7 to 14-day intervals or as needed Use short spray intervals and high rates once infections become established Tank mix or alternate with other fungicides for control and disease resistance management
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)	**Black Rot/ Black Crown Rot** *Alternaria* spp **Alternaria Leaf Blight** *Alternaria dauci* **Bacterial Leaf Spot** *Xanthomonas campestris* pv *carotae*	1 3	Begin applications soon after emergence or transplant and when conditions are conducive to disease development Repeat on 7 to 10 day intervals or as needed Use high rates and shorter intervals when conditions are conducive to rapid disease development Apply in sufficient water to provide thorough coverage
	Bacterial Leaf Blight *Xanthomonas campestris* **Downy Mildew** *Peronospora* spp **Powdery Mildew** *Erysiphe* spp **White Mold** *Sclerotinia sclerotiorum* **Gray Mold** *Botrytis* spp	1 3	Begin applications soon after emergence or transplant and when conditions are conducive to disease development Repeat on 7 to 10 day intervals or as needed For suppression of White Mold begin applications soon after emergence or transplant and when conditions are conducive to disease development Repeat on 7 to 10 day intervals or as needed
	Aerial Stem Rot *Erwinia carotovora*	1 3	For suppression begin applications at the first sign of disease or when conditions become conducive for disease development Repeat on 7 to 10 day intervals or as needed
	Early Blight *Alternaria solani* **Late Blight** *Phytophthora infestans*	1 3	For suppression begin applications soon after emergence and when conditions are conducive to disease development Repeat on 5 to 7 day intervals or as needed For improved performance use Serenade MAX in a tank mix or rotational program with other registered fungicides for Early and Late Blight control
Roses Field	**Powdery Mildew** *Sphaerotheca* spp **Rust** *Puccinia* spp	1 3	Begin applications when environmental conditions and plant stage are conducive to disease development Continue applications on 7- to 14 day intervals or as needed Use higher rates and shorter application intervals under heavy disease pressure

Crops	Disease	Rate (lb/acre)	Application Instructions
Stone Fruit Apricot Cherry Nectarine Peach Plum Prune and other stone fruit	**Anthracnose** *Colletotrichum* spp **Powdery Mildew** *Sphaerotheca parnnosa* *Podosphaera clandestine* *Podosphaera* spp **Rusty Spot** *Podosphaera leucotricha* **Bacterial Canker** *Pseudomonas* spp **Alternaria Spot / Fruit Rot** *Alternaria alternata* **Scab** *Cladosporium carpophilum* **Brown Rot Blossom Blight** *Monilinia laxa* **Fruit Brown Rot** *Monilinia fruticola* **Gray Mold** *Botrytis cinerea* **Shot Hole** *Wilsonomyces carpophilus* *Xanthomonas pruni* *Bhumeriella gaapi* *Cercospora* spp **Bacterial Leaf Spot/ Bacterial Spot** *Xanthomonas arboricola*	1 3	Brown Rot Blossom Blight – Begin applications at early bloom and repeat through petal fall on 7 day intervals or as needed Scab – Begin applications at petal fall and repeat on 7 to 10 day intervals or as needed Bacterial Canker – Apply post harvest before fall rains and again during dormancy before spring growth Powdery Mildew For suppression begin applications at popcorn stage and repeat on 7-day intervals or as needed Bacterial Leaf Spot / Bacterial Spot Begin applications at bud break and continue on 7 to 14 day schedule or as needed until harvest During periods of rapid disease development and frequent infection periods use Serenade MAX in a program with other registered antibiotics and/or copper bactericides For improved performance of Serenade MAX add a surfactant to the spray tank to enhance coverage Anthracnose and Fruit Brown Rot – For suppression begin applications prior to disease development when environmental conditions and plant stage are conducive to rapid disease development Repeat on 7 to 10 day intervals or as needed For all other diseases – Begin applications prior to disease development when environmental conditions and plant stage are conducive to rapid disease development Repeat on 7 to 10 day intervals or as needed For all diseases Use higher rates and shorter application intervals under heavy disease pressure For improved performance use Serenade MAX in a tank mix or rotational program with other registered fungicides Post harvest disease protection – To aid in the control of post harvest infections of *Botrytis* and *Monilinia* apply Serenade MAX prior to harvest with sufficient water to thoroughly cover fruit Apply on a 7 day schedule or as needed up until the time of harvest Serenade MAX may be applied up to and on the day of harvest

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Strawberry	**Powdery Mildew** *Sphaerotheca macularis* *Erysiphe* spp **Anthracnose** *Colletotrichum acutatum* **Botrytis** *Botrytis cinerea* **Gray Mold** *Botrytis* spp **Angular Leaf Spot** *Xanthomonas fragariae*	1 3	Botrytis / Powdery Mildew For suppression begin applications at or before flowering and repeat on 7 to 10 day intervals or as needed through harvest Use higher rates and shorter application intervals under heavy disease pressure For improved performance use Serenade MAX in a tank mix or rotational program with other registered fungicides for Powdery Mildew and Botrytis control Anthracnose – Begin applications prior to disease development and repeat on 7 to 10 day intervals or as needed Use higher rates and shorter application intervals under heavy disease pressure For improved performance use Serenade MAX in a tank mix or rotational program with other registered fungicides Thorough coverage is essential Angular Leaf Spot Begin applications when environmental conditions are conducive to disease development Continue applications on 3 to 10 day intervals or as needed Use higher rates and shorter application intervals under heavy disease pressure For improved performance use Serenade MAX in a tank mix or rotational program with other registered fungicides Thorough coverage is essential Serenade MAX may be applied up to and on the day of harvest
Sugar Beets	**Powdery Mildew** *Erysiphe betae* *Erysiphe polygoni* **Leaf Spot** *Cercospora beticola* **Ramularia** *Ramularia* spp **Rust** *Uromyces betae*	1 3	Begin applications when environmental conditions are conducive to disease development Continue applications on 7 to 10 day intervals or as needed Use higher rates and shorter application intervals under heavy disease pressure
Tobacco	**Blue Mold** *Peronospora hyoscyami*	1 3	Begin applications when conditions are conducive to disease development Continue applications on 7 to 10 day intervals or as needed

Crops	Disease	Rate (lb/acre)	Application Instructions
Tree Nuts Almond Pistachio Pecan Walnut Filberts Chestnut Cashew Beechnut Butternut Macadamia and other tree nuts	**Walnut Blight** *Xanthomonas campestris* **Alternaria Leaf Spot** *Alternaria alternata* **Anthracnose** *Colletotrichum acutatum* **Bacterial Canker** *Pseudomonas syringae* **Scab** *Cladosporium carpophilum* **Botryosphaeria Blight** *Botryosphaeria dothidea* **Shot Hole** *Wilsonomyces carpophilus* *Xanthomonas pruni* *Blumeriella gaapi* *Cercospora* spp **Brown Rot** *Monilinia* spp **Pecan Scab** *Cladosporium caryigenum*	1 – 3	Walnut Blight – Begin applications no later than pistillate bloom and repeat on 3 to 10 day intervals or as needed Apply in advance of rain for maximum protection Under conditions conducive to heavy disease pressure for improved control use Serenade MAX in a tank mix or rotational program with a copper based bactericide registered for control of Walnut Blight Anthracnose Shot Hole and Brown Rot – For suppression begin applications prior to disease development and repeat on 7 to 10 day intervals or as needed For all other diseases – Begin applications prior to disease development and repeat on 7 to 10 day intervals or as needed Use higher rates and shorter application intervals under heavy disease pressure For improved performance use Serenade MAX in a tank mix or rotational program with other registered fungicides
Avocado **Mango**	**Anthracnose** *Colletotrichum gloeosporioides* *Colletotrichum ananas* **Scab** *Sphaceloma perseae* *Sphaceloma mangiferae* *Sphaceloma* spp **Bacterial Canker** *Xanthomonas campestris*	1 3	Anthracnose and Scab Begin applications at budbreak and repeat on 14 to 21 day intervals or as needed through harvest Bacterial Canker – Begin applications when environmental conditions are conducive to disease development Repeat on 7 to 10 day intervals or as needed Serenade MAX may be applied up to and on the day of harvest
Papaya	**Anthracnose** *Colletotrichum gloeosporioides* *Colletotrichum ananas* **Bacterial Canker** *Erwinia* spp	1 3	Begin applications at flowering and repeat on 14 to 21 day intervals or as needed through harvest

Crops	Disease	Rate (lb/acre)	Application Instructions
Pineapple	**Anthracnose** *Colletotrichum gloeosporioides* *Colletotrichum ananas*	1 3	Begin applications at flowering and repeat on 14 to 21-day intervals or as needed through harvest
Kiwi	**Botrytis Fruit Rot** *Botrytis cinerea* **Bacterial Blight** *Pseudomonas viridiflava* *Pseudomonas syringae* **Sclerotinia** *Sclerotinia sclerotiorum*	1 3	Begin applications at early bloom and repeat on 7 to 10 day intervals or as needed Serenade MAX may be applied up to and on the day of harvest
Watercress	**Cercospora Leaf Spot** *Cercospora* spp	1 – 3	Begin applications when conditions are conducive to disease development Continue applications on 7 to 10-day intervals or as needed
Grass Seed Production Crops Bluegrass Ryegrass Fescue Orchardgrass and other grass grown for seed production	**Powdery Mildew** *Erysiphe* spp **Rust** *Puccinia* spp	1 - 3	Begin applications when environmental conditions and plant stage are conducive to disease development Repeat on 7 to 10 day intervals or as needed Use higher rates and shorter application intervals under heavy disease pressure

Foliar Application Use on Selected Greenhouse Crops

APPLICATION INSTRUCTIONS FOR ALL GREENHOUSE CROPS

Mix 1 – 3 lb of Serenade MAX in 100 gallons of water Apply dilute spray mix as a foliar treatment to the point of run off For each treatment apply no more than 3 lb of Serenade MAX per acre equivalent to 1 oz of Serenade MAX per 1000 ft^2

Application Rates of Serenade MAX for Selected Greenhouse Crops			
Greenhouse Crops	**Disease**	**Rate (lb/100 gal spray mix)**	**Application Instructions**
Brassica Leafy Vegetables (Cole Crops) Broccoli Cabbage Cauliflower Brussels Sprouts Collards Kale Mustard Greens Kohlrabi and other brassica leafy vegetables	**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*	1 3	Pin Rot – For suppression begin applications when environmental conditions in the greenhouse are conducive to disease development and repeat on 3 to 10 day intervals or as needed For improved performance use Serenade MAX in a tank mix or rotational program with other registered fungicides for Pin Rot control For all other diseases – Begin applications soon after emergence or transplant and when conditions in the greenhouse are conducive to disease development Repeat on 7 to 10 day intervals 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 **White Rot** *Sclerotium cepivorum*	1 3	Begin applications when environmental conditions in the greenhouse are conducive to disease development and repeat on 7 to 10 day intervals or as needed When conditions in the greenhouse are conducive to rapid disease development use Serenade MAX in a rotational program with other registered fungicides Thorough coverage is essential
	Rust *Puccinia porri*	1 – 3	For suppression begin applications when conditions are conducive to disease development and repeat on 7 to 10 day intervals or as needed For improved performance use Serenade MAX in a tank mix or rotational program with other registered fungicides for Rust control

Greenhouse Crops	Disease	Rate (lb/100 gal spray mix)	Application Instructions
Cucurbit Vegetables Cucumber Cantaloupe Melon Muskmelon Squash Watermelon and other cucurbit vegetables	**Powdery Mildew** *Erysiphe* spp *Sphaerotheca* spp **Gummy Stem Blight** *Phoma cucurbitacearum* *Didymella bryoniae* **Angular Leaf Spot** *Pseudomonas syringae* **Anthracnose** *Colletotrichum lagenarium* **Downy Mildew** *Pseudoperonospora cubensis* **Bacterial Fruit Blotch** *Acidovorax avenae*	1 3	Begin applications soon after emergence or transplant and when environmental conditions in the greenhouse are conducive to disease development Repeat on 7 to 10 day intervals or as needed Thorough coverage is essential For improved performance use Serenade MAX in a tank mix or rotational program with other registered fungicides
Fruiting Vegetables Pepper Tomato Eggplant and other fruiting vegetables	**Gray Mold** *Botrytis cinerea*	1 3	For suppression begin applications soon after emergence or transplant and continue on 7 to 10 day intervals or as needed When environmental conditions in the greenhouse are conducive to rapid disease development use Serenade MAX in a rotational program with other registered fungicides Thorough coverage is essential
	Powdery mildew *Leveillula taurica* *Oidiopsis taurica* *Erysiphe* spp *Sphaerotheca* spp **Downy Mildew** *Pseudoperonospora cubensis*	1 – 3	For suppression begin applications soon after emergence or transplant and continue on 7 to 10 day intervals or as needed Thorough coverage is essential Use maximum label rates under conditions conducive to rapid disease development For improved performance use Serenade MAX in a tank mix or rotational program with other registered fungicides
	Bacterial Speck *Pseudomonas syringae* pv *tomato*	1 - 3	Begin applications soon after emergence or transplant and when environmental conditions are conducive to disease development Continue applications on 2 to 7 day intervals or as needed Use higher rates when conditions are conducive to rapid disease development For improved performance use Serenade MAX in a tank mix or rotational program with other registered fungicides
	Bacterial Spot *Xanthomonas* spp **Target Spot** *Corynespora cassiicola*	1 – 3	Begin applications soon after emergence or transplant and when environmental conditions are conducive to disease development Continue applications on 2 to 7 day intervals or as needed When conditions are conducive to rapid disease development for improved control use Serenade MAX in a tank mix program with copper based bactericides registered for control of Bacterial and Target Spot at labeled rates

Greenhouse Crops	Disease	Rate (lb/100 gal spray mix)	Application Instructions
Fruiting Vegetables Pepper Tomato Eggplant and other fruiting vegetables	**Buck-Eye Rot** *Phytophthora parasitica* **Anthracnose** *Colletotrichum candidum*	1 3	Begin applications soon after emergence or transplant and continue on 7- to 10 day intervals or as needed For improved performance of Serenade MAX add a surfactant to the spray tank to enhance coverage
	Bacterial Canker *Clavibacter michiganensis*	1 3	Begin applications when environmental conditions are conducive to disease development Repeat on 7 to 10 day intervals or as needed
	Early Blight *Alternaria solani* **Late Blight** *Phytophthora infestans*	1 – 3	For suppression begin applications when plants are 4 to 6 inches high Repeat applications on 5 to 7 day intervals or as needed For improved performance use Serenade MAX 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	**Bacterial Blight** *Pseudomonas syringae* **Anthracnose** *Colletotrichum* spp **Alternaria Leaf Blight** *Alternaria* spp **Botrytis** *Botrytis* spp	1 – 3	Begin applications when environmental conditions in the greenhouse are conducive to disease development Repeat on 7 to 10 day intervals or as needed

Greenhouse Crops	Disease	Rate (lb/100 gal spray mix)	Application Instructions
Leafy Vegetables Lettuce Celery Spinach Parsley Radicchio and other leafy vegetables	**Downy Mildew** *Bremia lactucae* *Peronospora* spp **Powdery Mildew** *Erysiphe cichoracearum* *Erysiphe* spp **White Rust** *Albugo occidentalis* **Pink Rot** *Sclerotinia sclerotiorum* **Anthracnose** *Colletotrichum* spp **Bacterial Blight** *Xanthomonas campestris* **Bacterial Leaf Spot** *Xanthomonas campestris* pv *vitians*	1 – 3	Pink Rot – Begin applications approximately 8 weeks before harvest and repeat on 14 day intervals Apply Serenade MAX as a directed spray in sufficient water to ensure thorough coverage of the base of the plants and the surrounding soil surface After applications light irrigation will better incorporate Serenade MAX into the soil and may improve disease control Downy Mildew / Powdery Mildew / White Rust – For suppression begin applications when conditions are conducive to disease development and repeat on 3 to 10-day intervals or as needed For improved performance use Serenade MAX in a tank mix or rotational program with other registered fungicides for Downy Mildew Powdery Mildew and White Rust control Anthracnose – For suppression begin applications prior to disease development when environmental conditions and plant stage are conducive to rapid disease development Repeat on 7 to 10 day intervals or as needed Use higher rates and shorter application intervals under heavy disease pressure Bacterial Blight / Bacterial Leaf Spot Begin applications when environmental conditions are conducive to disease development Repeat on 3 to 10 day intervals or as needed
	Sclerotinia Head and Leaf Drop *Sclerotinia* spp	1 – 3	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 Within 7 days of thinning 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 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 After applications light irrigation will better incorporate Serenade MAX into the soil and may improve disease control OR For control of Sclerotinia Head and Leaf Drop Within 7 days of thinning or transplanting 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 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 After applications light irrigation will better incorporate Serenade MAX into the soil and may improve disease control

Greenhouse Crops	Disease	Rate (lb/100 gal spray mix)	Application Instructions
Root and Tuber Vegetables Carrot Potato Sweet Potato Cassava Beets Ginger Horseradish Radish Ginseng Turnip and other root and tuber vegetables	**Black Rot/Black Crown Rot** *Alternaria* spp **Alternaria Leaf Blight** *Alternaria dauci* **Bacterial Leaf Spot** *Xanthomonas campestris* pv *carotae*	1 3	Begin applications soon after emergence or transplant and when conditions are conducive to disease development Repeat on 7- to 10-day intervals or as needed Use high rates and shorter intervals when conditions are conducive to rapid disease development Apply in sufficient water to provide thorough coverage
	Bacterial Leaf Blight *Xanthomonas campestris* **Downy Mildew** *Peronospora* spp **Powdery Mildew** *Erysiphe* spp **Gray Mold** *Botrytis* spp **White Mold** *Sclerotinia sclerotiorum*	1 3	Begin applications soon after emergence or transplant and when conditions are conducive to disease development Repeat on 7 to 10 day intervals 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*	1 3	For suppression begin applications soon after emergence and when conditions are conducive to disease development Repeat on 5 to 7 day intervals or as needed For improved performance use Serenade MAX in a tank mix or rotational program with other registered fungicides for Early and Late Blight control
Strawberry	**Powdery Mildew** *Sphaerotheca macularis* *Erysiphe* spp **Anthracnose** *Colletotrichum acutatum* **Botrytis** *Botrytis cinerea* **Gray Mold** *Botrytis* spp **Angular Leaf Spot** *Xanthomonas fragariae*	1 3	Botrytis / Powdery Mildew For suppression begin applications at or before flowering and repeat on 7 to 10 day intervals or as needed through harvest Anthracnose – Begin applications prior to disease development and repeat on 7 to 10 day intervals or as needed Angular Leaf Spot Begin applications when conditions are conducive to disease development Continue applications at 7 to 10 day intervals or as needed Use high rates and shorter intervals when conditions are conducive to rapid disease development For all diseases For improved performance use Serenade MAX in a tank mix or rotational program with other registered fungicides Thorough coverage is essential *Serenade MAX may be applied up to and on the day of harvest*

FOR USE AS A SOIL TREATMENT ON SELECT AGRICULTURAL FIELD CROPS

Serenade MAX 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 Serenade MAX in a tank mix or rotational program with other registered fungicides

Serenade MAX 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 MAX 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 0 5 lb to 3 lb of Serenade MAX in the appropriate amount of water per acre Use the higher application 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 MAX 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 MAX 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 MAX 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

Application Rates of Serenade MAX for Soil Uses in Field for Soil Borne/Seedling Disease Control

Crops	Disease	Rate (lb/acre)	Application Instructions
Brassica Leafy Vegetables (Cole Crops) Broccoli Cabbage Cauliflower Brussels Sprouts Collards Kale Mustard Greens Kohlrabi and other brassica leafy vegetables	***Rhizoctonia* spp** ***Pythium* spp** ***Fusarium* spp** ***Verticillium* spp** ***Phytophthora* spp** **Clubroot** *Plasmodiophora brassicae*	0 5 3	**<u>All Soil Surface (Drench), Shanked In, Injected and In-Furrow Applications</u>** Mix 0 5 lb to 3 lb of Serenade MAX in the appropriate amount of water per acre Use 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 MAX 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 MAX 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 MAX 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
Bulb Vegetables Onion Garlic Shallots and other bulb vegetables (including those grown for seed production)	***Rhizoctonia* spp** ***Pythium* spp** ***Fusarium* spp** ***Verticillium* spp** ***Phytophthora* spp**		
Cereal Grains Barley Corn Millets Oat Rice Rye Sorghum Triticale Wheat and other cereal grain crops			
Citrus Fruit Orange Grapefruit Lemon Tangerine Tangelo Pummelo and other citrus fruit			

Crops	Disease	Rate (lb/acre)	Application Instructions
Corn Sweet Corn Popcorn Seed Corn Silage Corn Field Corn **Cotton** **Cucurbit Vegetables** Cucumber Cantaloupe Melon Muskmelon Squash Watermelon and other cucurbit vegetables **Fruiting Vegetables** Pepper Tomato Eggplant Ground Cherry Tomatillo Okra and other fruiting vegetables **Leafy Vegetables** Lettuce Celery Spinach Parsley Radicchio and other leafy vegetables **Legume 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 vegetables (including those grown for seed or oil production)	***Rhizoctonia* spp** ***Pythium* spp** ***Fusarium* spp** ***Verticillium* spp** ***Phytophthora* spp**	0 5 3	**<u>All Soil Surface (Drench), Shanked-In, Injected and In-Furrow Applications</u>** Mix 0 5 lb to 3 lb of Serenade MAX in the appropriate amount of water per acre Use 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 MAX 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 MAX 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 MAX 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 (lb/acre)	Application Instructions
Oilseed Crops Canola Castor Cotton Flax Rapeseed Safflower Sesame Sunflower and other oilseed crops (including those grown for seed or oil production)	***Rhizoctonia* spp** ***Pythium* spp** ***Fusarium* spp** ***Verticillium* spp** ***Phytophthora* spp** **Clubroot** *Plasmodiophora brassicae*	0 5 3	**All Soil Surface (Drench), Shanked In, Injected and In Furrow Applications** Mix 0 5 lb to 3 lb of Serenade MAX in the appropriate amount of water per acre Use 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 MAX 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 MAX 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 MAX 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
Olive (including those grown for oil production)	***Rhizoctonia* spp** ***Pythium* spp** ***Fusarium* spp** ***Verticillium* spp** ***Phytophthora* spp**		
Peanut (including those grown for oil production)			
Pome Fruit Apple Crabapple Pear Quince Mayhaw and other pome fruit			
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)	***Rhizoctonia* spp** ***Pythium* spp** ***Fusarium* spp** ***Verticillium* spp** ***Phytophthora* spp** **Clubfoot** *Plasmodiophora brassicae*		
	Common Scab *Streptomyces scabies* **(Suppression Only)**		
Stone Fruit Apricot Cherry Nectarine Peach Plum Prune and other stone fruit	***Rhizoctonia* spp** ***Pythium* spp** ***Fusarium* spp** ***Verticillium* spp** ***Phytophthora* spp**		
Tobacco			

Crops	Disease	Rate (lb/acre)	Application Instructions
Strawberry	**Angular Leaf Spot** *Xanthomonas fragariae* **Black Root Rot (complex)** **Common Leaf Spot** *Ramularia tulasnei* **Leather Rot** *Phytophthora cactorum* **Phytophthora Crown Rot** *Phytophthora* spp **Red Stele** *Phytophthora fragariae* **Verticillium Wilt** *Verticillium dahlia*	0 5 3	**All Soil Surface (Drench), Shanked In, Injected and In Furrow Applications** Mix 0 5 lb to 3 lb of Serenade MAX in the appropriate amount of water per acre Use 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 MAX 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 MAX 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 MAX 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 (lb/acre)	Application Instructions
Berries Blueberry Blackberry Raspberry Loganberry Huckleberry Cranberry Gooseberry Elderberry Currant and other berry crops	**Armillaria Root Rot** *Armillaria* spp **Verticillium Wilt** *Verticillium dahlia* **Phytophthora Root Rot** *Phytophthora* spp	0 5 3	**All Soil Surface (Drench) Applications** Mix 0 5 lb to 3 lb of Serenade MAX in the appropriate amount of water per acre Use 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 MAX 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 **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
Grape	**Oak Root Fungus** **Armillaria Root Rot** *Armillaria mellea*		

FOR USE ON ORNAMENTALS TREES, SHRUBS FLOWERS BEDDING PLANTS, TROPICAL PLANTS (ORNAMENTALS - Poinsettia, Orchids, Dieffenbachia, Palms Spathiphyllum, Rhaphiolepis Aglaonema and FRUIT – Bananas, Mangos Papaya) TURF, LAWNS, SOD GOLF COURSES (GREENS, TEES, FAIRWAYS AND ROUGHS) SEEDLINGS CONIFERS - [Agricultural Use], [Commercial], [Residential Use] [Reforestation]

Serenade MAX 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 Serenade MAX in a tank mix or rotational program with other registered fungicides

[As appropriate for uses]
Serenade MAX is a protectant fungicide for use indoors and outdoors for control of certain foliar diseases in the field greenhouses [open or enclosed] interiorscapes residential and commercial landscapes nurseries [open or enclosed] shadehouse environments glasshouses seedling production sites golf courses (greens tees fairways and roughs) forests and forestry seedling production sites

Serenade MAX 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 turf lawns sod golf courses (greens tees fairways and roughs) and conifers for reforestation purposes (greenhouses shadehouses nurseries indoors outdoors containers or field)

[PLANTS EVALUATED FOR PHYTOTOXICITY]

Serenade MAX has been tested for phytotoxicity on [a number of] [the] ornamental species [listed below] Since it is *impossible to test all of the species and cultivars listed on this label under all conditions conduct a small scale* preliminary trial to check for sensitivity before using this product on a large number of plants

[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	Gumpo 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 Mix 1 to 3 lb of Serenade MAX in 100 – 300 gallons of water Apply dilute spray mix as a foliar treatment to the point of run off For each treatment apply no more than 3 lb of Serenade MAX per acre equivalent to 1 oz of Serenade MAX per 1000 square feet 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 2 lb of Serenade MAX per 100 – 300 gallons of water 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 See application rate tables for more detailed application instructions

Application Rates of Serenade MAX When Used as a Foliar Spray on Ornamentals, Trees, Shrubs, Flowering Plants and Tropical Plants

Crops	Disease	Rate (lb/100 – 300 gal spray mix)	Application Instructions
Ornamentals **Trees** **Shrubs** **Flowering Plants** **Tropical Plants** Including **Annuals** **Perennials** **Bedding Plants** **Potted Flowers** **Cut Flowers** **Foliage Plants** **Deciduous Trees** **Deciduous Shrubs** **Tropical Foliage** **Container Grown Plants**	**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 *Helminthosporium* spp *Myrothecium* spp ***Septoria* spp** **Powdery Mildew** *Erysiphe* spp *Oidium* spp *Podosphaera* spp *Sphaerotheca* spp ***Phytophthora* spp** **Rust** *Puccinia* spp **Scab** *Venturia* spp	1 3	Plants in Fields Greenhouses Glasshouses Shadehouses and Nurseries (Indoors and Outdoors) Mix 1 - 3 lb of Serenade MAX in 100 – 300 gallons of water Apply dilute spray mix as a foliar treatment to the point of run off For each treatment apply no more than 3 lb of Serenade MAX per acre equivalent to 1 oz of Serenade MAX per 1000 ft^2 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 2 lb of Serenade MAX per 100 – 300 gallons of water 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

Post Harvest Dip Use on Cut Flowers/Buds

APPLICATION INSTRUCTIONS For post harvest dip applications on cut flower crops dip flowers/buds in a solution containing 3 to 12 ounces of Serenade MAX in 10 gallons of water soon after cutting Immerse flowers to completely cover with the treatment solution Use higher rates under conditions of heavy disease pressure
See application rates tables for rates and application instructions

Application Rates of Serenade MAX for Post Harvest Dip on Cut Flowers/Buds

Crops	Disease	Rate (oz/10 gal water)	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	3 12	Dip flowers/buds in a solution containing 3 to 12 ounces of Serenade MAX in 10 gallons of water soon after cutting Immerse flowers to completely cover with 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], [Indoors and Outdoors], [Greenhouses, Glasshouses, Shadehouses, Nurseries], [Open and Enclosed]

Serenade MAX 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 and fruits and vegetables grown in protected and outdoor environments Serenade MAX enhances germination and plant growth by suppressing diseases caused by *Rhizoctonia Pythium Fusarium Verticillium* and *Phytophthora*

APPLICATION INSTRUCTIONS Mix 1 lb to 3 lb of Serenade MAX with 100 300 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 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 to 28 days throughout the growing cycle Serenade MAX can be mixed with chemical fungicides registered for soil applications
See application rate tables for more detailed application instructions

Application Rates of Serenade MAX When Used as a Soil Drench in Field Greenhouses Glasshouses Shadehouses, or Nurseries [Outdoors and Indoors] [Open or Enclosed]

Crops	Disease	Rate (lb/100 -300 gal spray mix)	Application Instructions
Ornamentals **Trees** **Shrubs** **Annuals** **Perennials** Including **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 glasshouses shadehouses indoors/outdoors open and enclosed nurseries	***Rhizoctonia* spp** ***Pythium* spp** ***Fusarium* spp** ***Verticillium* spp** ***Phytophthora* spp**	1 3	**Soil Drench Uses Field Greenhouses Glasshouses, Shadehouses, Indoors/Outdoors Open And Enclosed Nurseries** Mix 1 lb to 3 lb of Serenade MAX with 100 300 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 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 to 28 days throughout the growing cycle Serenade MAX can be mixed with chemical fungicides registered for soil applications

Turf, Lawns, Sod, Golf Courses (Greens, Tees, Fairways, and Roughs), and Ornamental Turf Use [Agricultural], [Commercial], [Residential Use]

Serenade MAX is a broad spectrum biofungicide for use in the prevention suppression and aiding in control of turf and lawn diseases [(Anthracnose Brown Patch Dollar Spot Fairy Ring Gray Leaf Spot Gray Snow Mold Typhula Blight Pink Snow Mold Fusarium Patch Powdery Mildew Pythium Blight and Rust)]

APPLICATION INSTRUCTIONS Apply 0 5 2 5 oz of Serenade MAX per 1000 sq ft of surface area Apply in sufficient water to provide thorough coverage depending on the application equipment Two gallons of water per 1000 sq ft of surface area is commonly used

See application rate tables for more detailed application instructions

Application Rates of Serenade MAX for Turf Lawns Sod Golf Courses (Greens Tees Fairways and Roughs) and Ornamental Turf

Crops	Disease	Rate (oz/1000 sq ft of surface area)	Application Instructions
Turf **Sod** **Lawns** **Golf Courses (Fairways Roughs, Greens, Tees)** **Seed Production Grasses** Bluegrass Bentgrass Bermudagrass Dichondra Fescue Orchardgrass Poa Annua St Augustine Ryegrass Zoysia Mixtures and other grasses or ornamental turf	**Anthracnose** *Colletotrichum graminicola* **Brown Patch** *Rhizoctonia solani* **Dollar Spot** *Lanzia* spp *Moellerodiscus* spp *Sclerotinia homeocarpa* **Fairy Ring** Various *Basidiomycetes* **Gray Leaf Spot** *Pyricularia grisea* **Gray Snow Mold** **Typhula Blight** *Typhula* spp **Pink Snow Mold** **Fusarium Patch** *Microdochium nivale* **Powdery Mildew** *Erysiphe graminis* **Pythium Blight** *Pythium aphanidermatum* *Pythium* spp **Rust** *Puccinia* spp	0 5 2 5	Apply 0 5 to 2 5 oz of Serenade MAX per 1000 sq ft of surface area Apply in sufficient water to provide thorough coverage depending on the application equipment Two gallons of water per 1000 sq ft of surface is commonly used Begin applications when conditions are conducive to disease development Continue applications on 7 to 10 day intervals or as needed Under moderate to severe disease pressure for improved performance increase rates and reduce spray intervals or use Serenade MAX in a tank mix or rotational program with other registered fungicides Aids in control of Anthracnose Brown Patch Dollar Spot Fairy Ring Gray Leaf Spot Gray Snow Mold Typhula Blight Pink Snow Mold Fusarium Patch Powdery Mildew Pythium Blight and Rust [Optional/Alternate Statements / Examples of Mixing/Application Instructions are in brackets below] [Mix at the rate of 0 25 to 1 25 oz of Serenade MAX per gallon of water and apply spray solution at the rate of 2 gallons per 1000 sq ft of turf (equivalent to 0 5 to 2 5 oz of Serenade MAX per 1000 sq ft of turf)] [Mix at the rate of 0 5 to 2 5 oz of Serenade MAX per gallon of water and apply spray solution at the rate of 1 gallon per 1000 sq ft of turf (equivalent to 0 5 to 2 5 oz of Serenade MAX per 1000 sq ft of turf)] [Mix at the rate of 0 75 oz of Serenade MAX per gallon of water when included in a tank mix with other registered fungicides]

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 1000 lb bulk bag with liner and intended for repackaging]
Nonrefillable container Do not reuse or refill this container Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles Empty residue into packaging equipment hopper Then offer for recycling if available or dispose of liner in a sanitary landfill or by incineration Do not burn unless allowed by state and local ordinances If burned stay out of smoke If bulk bag is contaminated dispose of it in the manner required for its liner

[For all nonrefillable plastic bags, except for 1000 lb bulk bags with liner]
Nonrefillable container Do not reuse or refill this container Completely empty bag into application equipment Then offer for recycling if available or dispose of empty bag in a sanitary landfill or by incineration Do not burn unless allowed by state and local ordinances If burned stay out of smoke

[batch codes are sticker applied to the front panel of every label on every product container]

CONDITIONS FOR SALE AND WARRANTY

AgraQuest warrants to those persons lawfully purchasing this product that at the time of the first sale of this product by Seller 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 AgraQuest 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 AgraQuest s label and directions and 2) AgraQuest s liability shall in no case exceed the purchase price of the applicable AgraQuest product

[This label modified May 2012]

Made in Mexico

AgraQuest Inc
1540 Drew Avenue
Davis California 95618
www agraquest com

AGRAQUEST
better food better world
OMRI
Listed

SERENADE® MAX
A WETTABLE POWDER BIOFUNGICIDE
SUB-LABEL B

Agricultural Use – Mushroom Production

SERENADE® MAX

[Alternate Brand Name JAZZ®]

[A Wettable Powder Biofungicide]

[Optional/Alternate Statement NOP Logo For Organic Production]
[Optional/Alternate Statement NOP Logo Can be Used for Organic Production]
[FOR MUSHROOM PRODUCTION USE]
[FOR AGRICULTURAL USE]

ACTIVE INGREDIENT	
QST 713 strain of *Bacillus subtilis**	14 60%
OTHER INGREDIENTS	85 40%
TOTAL	100 00%

*Contains a minimum of 7 3 x 10^9 cfu/g

KEEP OUT OF REACH OF CHILDREN

CAUTION

[See attached label booklet for First Aid Precautionary Statements Storage and Disposal Instructions and Directions for Use]
[Peel back tab for First Aid Precautionary Statements Storage and Disposal Instructions and Directions for Use]

EPA Registration No 69592-11
EPA Est No

[Superscript corresponds to last two digits of container lot number]

01	02	03	04	05	06	07	09
69592 MEX 1	67545 AZ 1	66728-GA 2	37429-GA 2	69592 CA 1	34704 MS 2	42625 NJ 1	61933 FL 10

10	14
47857 CA 1	84961 PA 1

AgraQuest Inc
1540 Drew Avenue
Davis CA 95618
www agraquest com

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

Net Weight

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS & DOMESTIC ANIMALS

CAUTION

Causes moderate eye irritation Harmful if absorbed through skin or inhaled Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals Avoid contact with skin eyes or clothing Avoid breathing dust or spray mist Wash thoroughly with soap and water after handling and before eating drinking chewing gum using tobacco or using the toilet Remove and wash contaminated clothing before reuse

FIRST AID	
IF IN EYES	• Hold eye open and rinse slowly and gently with water for 15 20 minutes • Remove contact lenses if present after the first 5 minutes then continue rinsing • Call a poison control center or doctor for treatment advice
IF ON SKIN OR CLOTHING	• Take off contaminated clothing • Rinse skin immediately with plenty of water for 15 20 minutes • Call a poison control center or doctor for treatment advice
IF INHALED	• Move person to fresh air • If person is not breathing call 911 or an ambulance then give artificial respiration preferably 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	

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 instructions are available use detergent and hot water for washables Keep and wash PPE separately from other laundry

[OPTIONAL ENGINEERING CONTROLS]

[OPTIONAL STATEMENT When handlers use enclosed systems or enclosed cabs in a manner that meets requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170 240(d)(4 5)] 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

- Remove clothing/PPE immediately if pesticides get 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 CHEMTREC hotline at 1 800 424 9300

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

BASIC USE INFORMATION

Serenade MAX is a preventative product for the suppression of Green Mold in mushroom production Mix Serenade MAX with mushroom spawn grains or mushroom growing supplement or apply Serenade MAX as a drench alone to the surface of mushroom beds in alternating drench programs or in tank mixes with other registered mushroom production protection products When used as a drench apply Serenade MAX with spray equipment commonly used for making ground applications and irrigation systems commonly used for chemigation in mushroom production

INTEGRATED PEST MANAGEMENT (IPM)

Integrate Serenade MAX 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

For all treatments carefully read and follow all label directions use rates and restrictions For treatment of mushroom spawn grains and growing supplement use maximum label rates when heavy disease development is anticipated For drench applications application of Serenade MAX prior to or in the early stages of disease development provides the best suppression of Green Mold Use maximum label rates for conditions conducive to rapid disease development or when disease development is anticipated For proper application determine the number of square feet of bed surface to be treated and the label use rate For drench applications prepare only the amount of spray solution required to treat the measured square feet of bed surface Accurate spray equipment calibration is essential prior to use

PREHARVEST INTERVAL

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

APPLICATION INSTRUCTIONS

GROUND For treatment of mushroom spawn grains and growing supplement be sure to completely mix Serenade MAX with gypsum limestone or chalk (see Application Instructions and Dosages Table) prior to mixing with mushroom spawn grains or growing supplement Thorough mixture of the treated mushroom growing substrate is essential for effective disease suppression

For drench applications be sure to maintain agitation during mixing and application to assure uniform product suspension Thorough coverage of beds is essential for effective disease suppression Serenade MAX can be applied with commonly used ground equipment hose end pressurized greenhouse and hand held sprayers To achieve good coverage use proper spray pressure gallonage per square feet of bed surface nozzles nozzle spacing and ground speed Consult spray nozzle and accessory catalogues for specific information on proper equipment calibration

CHEMIGATION This product can be applied through sprinkler (solid set and hand move) or drip type irrigation systems Refer to the Chemigation Directions for Use section of this label for additional directions and precautions Use the drench application rate as specified in the Application Instructions and Dosages Table of this label

MIXING INSTRUCTIONS

MIXING For treatment of mushroom spawn grains and growing supplement be sure to completely mix Serenade MAX with gypsum limestone or chalk (see Application Instructions and Dosages Table) prior to mixing with mushroom spawn grains or growing supplement Thorough mixture of the treated mushroom growing substrate is essential for effective disease suppression

For drench applications Serenade MAX must be diluted with water Partially fill the spray tank with clean water and begin agitation Add the specified amount of Serenade MAX 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

Serenade MAX may be tank mixed with other registered pesticides to enhance mushroom disease control This product cannot be mixed with any product containing a prohibition against such mixing When tank mixing Serenade MAX with any other registered pesticides always read and follow all use directions restrictions and precautions of both Serenade MAX 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 MAX 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 MAX is compatible with many commonly used pesticides fertilizers adjuvants and surfactants but has not 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 MAX is compatible with a wide range of additives Since the product is primarily a protectant thorough coverage of the mushroom bed surface is required for effective product performance when used as a drench When used to treat mushroom spawn grains and growing supplement thorough mixing of the mushroom growing substrate is required for effective product performance

CHEMIGATION DIRECTIONS FOR USE

Basic Requirements

1) Apply this product only through sprinkler (solid set and 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 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

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 at least 25 individuals daily at least 60 days out of 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 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
3) The pesticide injection pipeline must contain a functional automatic quick closing check valve to prevent the flow of fluid back toward the injection pump
4) The pesticide injection pipeline must contain a functional normally closed solenoid operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down
5) The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops or in cases where there is no water pump when the water pressure decreases to the point where pesticide distribution is adversely affected
6) Systems must use a metering pump such as a positive displacement injection pump (e g diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock
7) Do not apply when wind speed favors drift beyond the area intended for treatment
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 MAX to lose effectiveness or strength
9) Do not combine Serenade MAX 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 MAX 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
10) Maintain agitation in the pesticide supply tank
11) Apply Serenade MAX during the last half of the water application
12) Dilute Serenade MAX 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 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 MAX to lose effectiveness or strength
9) Do not combine Serenade MAX 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 MAX 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

Solid Set and Hand Move Irrigation Equipment

- Determine acreage (square footage) 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 MAX fungicide required to treat area
- Add the required amount of Serenade MAX 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 MAX fungicide at the end of the irrigation cycle or as a separate application to maximize fungicide retention
- Stop injection equipment after treatment is completed Continue to operate the system until Serenade MAX 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 MAX to lose effectiveness or strength
8) Do not combine Serenade MAX 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 MAX 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 MAX during the last half of the water application
11) Dilute Serenade MAX in enough water to be able to draw through system for the last half of the water application

FOR USE AS A MIX WITH MUSHROOM SPAWN GRAINS OR MUSHROOM GROWING SUPPLEMENT AND AS A DRENCH FOR MUSHROOM GROWING BEDS

Serenade MAX has a 0 Day PreHarvest Interval for all crops contained on this label
If higher disease pressure is anticipated use higher dosage

Application Instructions and Dosages of Serenade MAX for Mushroom Production		
Crop	**Disease**	**Application Instructions and Dosage**
Mushroom Spawn Grains	**Green Mold** *Trichoderma harzianum*	For suppression of Green Mold in mushroom spawning media Thoroughly mix 5 to 10 lb of Serenade MAX with 80 to 100 lb of gypsum limestone or chalk Use this mixture to coat spawn grains (approximately 1 600 units) before mixing the spawn into the mushroom growing substrate Apply treated spawn to 8 000 square feet of bed surface at spawning
Mushroom Growing Supplement	**Green Mold** *Trichoderma harzianum*	For suppression of Green Mold in mushroom growing supplement Thoroughly mix 5 to 10 lb of Serenade MAX with 80 to 100 lb of gypsum limestone or chalk Use this mixture to coat supplement (approximately 2 000 lb) before mixing the supplement into the mushroom growing substrate Apply treated supplement to 8 000 square feet of bed surface at spawning
Mushroom Growing Beds	**Green Mold** *Trichoderma harzianum*	For suppression of Green Mold on the surface of mushroom beds Apply 5 to 10 lb Serenade MAX in 150 gallons of irrigation water as a drench to 8 000 square feet of bed surface at casing before 1st flush between 1st and 2nd flush and/or between 2nd and 3rd flush according to disease pressure Maintain adequate circulation in the irrigation tank

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 1000 lb bulk bag with liner and intended for repackaging]

Nonrefillable container Do not reuse or refill this container Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles Empty residue into packaging equipment hopper Then offer for recycling if available or dispose of liner in a sanitary landfill or by incineration Do not burn unless allowed by state and local ordinances If burned stay out of smoke If bulk bag is contaminated dispose of it in the manner required for its liner

[For all nonrefillable plastic bags, except for 1000 lb bulk bags with liner]

Nonrefillable container Do not reuse or refill this container Completely empty bag into application equipment Then offer for recycling if available or dispose of empty bag in a sanitary landfill or by incineration Do not burn unless allowed by state and local ordinances If burned stay out of smoke

[batch codes are sticker applied to the front panel of every label on every product container]

CONDITIONS FOR SALE AND WARRANTY

AgraQuest warrants to those persons lawfully purchasing this product that at the time of the first sale of this product by Seller 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 AgraQuest 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 AgraQuest s label and directions and 2) AgraQuest s liability shall in no case exceed the purchase price of the applicable AgraQuest product

[This label modified May 2012]

Made in Mexico

OMRI® Listed

AgraQuest Inc
1540 Drew Avenue
Davis California 95618
www agraquest com

AGRAQUEST®
better food better world

SERENADE® MAX
A WETTABLE POWDER BIOFUNGICIDE
SUB-LABEL C

For Home and Garden Use

SERENADE® MAX

[Alternate Name Serenade® MAX Garden Disease Control]
[Alternate Name Serenade® Garden Wettable Powder Fungicide]

[A Wettable Powder Biofungicide]

[Alternate/Optional Statements as follows]
[For Home and Garden Use] [For Home Garden [and Lawn] [(Turf)] [Sod] Use]
[Optional/Alternate Statement NOP Logo For Organic Gardening]
[Optional/Alternate Statement NOP Logo Can be Used for Organic Gardening]
[Optional Claims]
[Attacks over 40 diseases][Attacks both fungal & bacterial diseases]
[Apply any time of day][Will not burn or injure [leaves] [lawns] [(turf)]]
[Fungicide (or Biofungicide) that attacks harmful garden [and lawn] [(turf)] [sod] diseases]
[Use on Roses Vegetables Fruits Flowering Plants Trees Shrubs [and Lawns] [(Turf)]]
[Controls Powdery Mildew Rust Gray Mold [and other listed diseases]]
[Suppresses Black Spot Late Blight Scab [and other listed diseases]]
[Same active ingredient used by farmers]
[Optional Claims for Lawn and Turf Label]
[Prevents and controls harmful (major) lawn [turf] [sod] diseases (including Brown Patch Dollar Spot Red Thread)]
[Controls Brown Patch Dollar Spot and other common lawn [turf] [sod] diseases]
[Use anytime on all lawns to prevent and control major lawn [turf] [sod] diseases]
[Promotes healthy disease free lawns] [Easy!] [Attach Hose and Spray!]
[Same active ingredient used on golf courses][Promotes Greener Healthier Lawns]

ACTIVE INGREDIENT	
QST 713 strain of *Bacillus subtilis**	14 60%
OTHER INGREDIENTS	85 40%
TOTAL	100 00%

*Contains a minimum of 7 3 x 10^9 cfu/g

KEEP OUT OF REACH OF CHILDREN

CAUTION

[See attached label booklet for First Aid Precautionary Statements Storage and Disposal Instructions and Directions for Use] [Peel back tab for First Aid Precautionary Statements Storage and Disposal Instructions and Directions for Use]

EPA Registration No 69592 11
EPA Est No

[Superscript corresponds to last two digits of container lot number]

01	02	03	04	05	06	07	09
69592 MEX 1	67545 AZ 1	66728 GA 2	37429 GA 2	69592 CA 1	34704 MS 2	42625 NJ 1	61933 FL 10
10	14						
47857 CA 1	84961 PA 1						

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

Net Weight

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS & DOMESTIC ANIMALS

CAUTION

Causes moderate eye irritation Harmful if absorbed through skin or inhaled Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals Avoid contact with skin eyes or clothing Avoid breathing dust or spray mist Wash thoroughly with soap and water after handling and before eating drinking chewing gum using tobacco or using the toilet Remove and wash contaminated clothing before reuse

FIRST AID	
IF IN EYES	• Hold eye open and rinse slowly and gently with water for 15 20 minutes • Remove contact lenses if present after the first 5 minutes then continue rinsing • Call a poison control center or doctor for treatment advice
IF ON SKIN OR CLOTHING	• Take off contaminated clothing • Rinse skin immediately with plenty of water for 15 20 minutes • Call a poison control center or doctor for treatment advice
IF INHALED	• Move person to fresh air • If person is not breathing call 911 or an ambulance then give artificial respiration preferably 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	

ENVIRONMENTAL HAZARDS

To protect the environment do not allow pesticide to enter or run off into storm drains drainage ditches gutters or surface waters Applying this product in calm weather when rain is not predicted for the next 24 hours will help to ensure that wind or rain does not blow or wash pesticide off the treatment area Rinsing application equipment over the treated area will help avoid run off to water bodies or drainage systems

DIRECTIONS FOR USE

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

BASIC USE INFORMATION

Serenade MAX [Alternate Statement is a broad spectrum preventative biofungicide recommended for the control or suppression of many important plant diseases and] [Alternate Statement effectively controls or prevents a wide range of important fungal and bacterial plant diseases and] [Serenade MAX] may be used on roses vegetables fruits nuts flowers houseplants foliage trees shrubs [lawns] [turf] [sod] [and ornamental turf] [[located in residential landscapes] [interiorscapes] [greenhouses]] [[located in commercial landscapes] [interiorscapes]] Serenade MAX can be applied in commonly used pressurized hand held sprayers and spray trigger bottles

[Serenade MAX may be applied any time of day in full sun and high temperatures without stressing or burning foliage]

[Serenade MAX can be used on the day of harvest [and on all fruits and vegetables used in canning]]

WHEN TO USE

- For best results treat prior to foliar disease development or at the first sign of foliar disease infection
- Repeat at 3- to 10 day intervals or as needed
- [Under conditions of high disease pressure] [Alternate When environmental conditions favor rapid disease development (high humidity excessive rain extreme moisture condition etc)] spray more often [Alternate shorten the spray interval]

BEFORE YOU USE

Read and follow these directions when using

- Do not allow spray to drift from application site
- Do not allow spray mixture to stand overnight or for prolonged periods

[Pressurized Hand Held Sprayer and Spray Trigger Bottle Applications Instructions]

HOW TO USE [alternate statement Mixing and Application Instructions]

- Fill the sprayer or bottle with appropriate amounts of wettable powder and water (use water only)
- Mix the spray solution thoroughly
- Keep spray solution agitated during application

HOW MUCH TO USE

[For] Fruits, Vegetables, Nuts [(e g , Apples/Pears, Broccoli, Carrot, Cherries, Cucurbits, Grapes, Leafy Vegetables, Onions/Garlic, Pepper, Tomato, and Walnuts)]

- Mix ⅛ cup [(2 TBSP)] to ½ cup [(8 TBSP)] of Serenade MAX per gallon of water
- Spray plants to run off covering both top and bottom surface of foliage to ensure thorough coverage

[For] Annual and Perennial Ornamental Plants, Flowering Plants, Tropical Foliage, Trees and Shrubs

- Mix ⅛ cup [(2 TBSP)] to ½ cup [(8 TBSP)] of Serenade MAX per gallon of water
- Spray plants to run off covering both top and bottom surface of foliage to ensure thorough coverage

[For] Lawns[, Turf] [, Sod][and Ornamental Turf]

- Mix 3 TBSP of Serenade MAX per gallon of water
- Apply at a rate of 1 gallon of spray solution per 500 square feet of lawn [turf] [sod] [and ornamental turf]

[Optional/Alternate [For] Lawns[, Turf] [, Sod] [and Ornamental Turf]

- Mix 1½ TBSP of Serenade MAX per gallon of water
- Apply at a rate of 2 gallons of spray solution per 500 square feet of lawn [turf] [sod] [and ornamental turf]]

[SERENADE MAX MAY BE USED ON [THE FOLLOWING] [Alternate VEGETABLES FRUITS, NUTS AND ORNAMENTAL PLANTS] [Alternate [PLANTS] [SITES]]
[ALTERNATE STATEMENT WHERE TO USE VEGETABLES, FRUITS NUTS [AND ORNAMENTAL PLANTS] [FLOWERS, FOLIAGE, TREES, AND SHRUBS]
[ALTERNATE STATEMENT USE SITES VEGETABLES FRUITS NUTS [AND ORNAMENTAL PLANTS] [FLOWERS, FOLIAGE TREES, AND SHRUBS]

[HOME and GARDEN] [VEGETABLE[S], FRUIT[S] AND NUT[S]]

[Artichoke Asparagus
Berries (Blueberry Blackberry Raspberry Loganberry Huckleberry Cranberry Gooseberry Elderberry Currant and other berries)
Brassica Leafy Vegetables (Broccoli Cabbage Cauliflower Brussels Sprouts Collards Kale Mustard Greens Kohlrabi and other brassica leafy vegetables)
Bulb Vegetables (Onion Garlic Shallots and other bulb vegetables)
Citrus Fruit (Orange Grapefruit Lemon Tangerine Tangelo Pummelo and other citrus fruit)
Cucurbit Vegetables (Cucumber Cantaloupe Melon Muskmelon Squash Watermelon and other cucurbit vegetables)
Fruiting Vegetables (Pepper Tomato Eggplant and other fruiting vegetables)
Grape Herbs and Spices Hop
Leafy Vegetables (Lettuce Celery Spinach Parsley Radicchio and other leafy vegetables)

Legume Vegetables (Beans Green Beans Snap Beans Shell Beans Dry Beans Garbanzo Beans Lima Beans Peas Chick Peas Split Peas Lentils and other legume vegetables)
Mango Mint Olive Papaya Peanuts
Pome Fruit (Apple Crabapple Pear Quince Mayhaw and other pome fruit)
Root and Tuber Vegetables (Carrot Potato Sweet Potato Beets Ginger Horseradish Radish Ginseng Turnip and other root and tuber vegetables)
Stone Fruit (Apricot Cherry Nectarine Peach Plum Prune and other stone fruit)
Strawberry Sweet Corn Tobacco Watercress
Tree Nuts (Almond Pistachio Pecan Walnut Filberts Chestnut Cashew Beechnut Butternut and other tree nuts)]

[RESIDENTIAL GREENHOUSE PLANTS]

[**Brassica Leafy Vegetables** (Broccoli Cabbage Cauliflower Brussels Sprouts Collards Kale Mustard Greens Kohlrabi and other brassica leafy vegetables)
Bulb Vegetables (Onion Garlic Shallots and other bulb vegetables)
Cucurbit Vegetables (Cucumber Cantaloupe Melon Muskmelon Squash Watermelon and other cucurbit vegetables)
Fruiting Vegetables (Pepper Tomato Eggplant and other fruiting vegetables)
Herbs and Spices
Leafy Vegetables (Lettuce Celery Spinach Parsley Radicchio and other leafy vegetables)
Root and Tuber Vegetables (Carrot Potato Sweet Potato Beets Ginger Horseradish Radish Ginseng Turnip and other root and tuber vegetables)
Strawberry]

[ORNAMENTALS, TREES, SHRUBS, FOLIAGE, FLOWERS, FLOWERING PLANTS, TROPICAL PLANTS]
[Roses]

[Other Ornamentals, Trees, Shrubs, Foliage, Flowers, Flowering Plants, Tropical Plants, including any or all of the plants listed as evaluated for phytotoxicity as shown below]

[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
Gumpo Azalea		Indian Hawthorn	Japanese Maple
Ligustrum japonicum		Lilac	Loropetalum
Photinia		Rhododendron	*Rosaceae* spp Soft Touch Holly
Spirea]			

[ORNAMENTALS, TREES, SHRUBS, FOLIAGE, FLOWERS, FLOWERING PLANTS, TROPICAL PLANTS]
[Optional Statement Some pesticides can cause phytotoxic effects ranging from slight burning or browning of leaves to distorted leaves fruit flowers or stems Damage symptoms may vary with the type of plant that has been treated It is impossible to test all plants for phytotoxicity To assure that the plants to be treated are not sensitive to the treatment apply a small amount of the highest application rate of the product to a few leaves or the above ground portion of a plant and check within 3 days for signs of phytotoxicity Use product according to label directions]

DISEASES CONTROLLED [OR SUPPRESSED] [OR PREVENTED] [BY SERENADE MAX] [ON VEGETABLES, FRUITS NUTS ORNAMENTAL PLANTS] [Alternate ON [PLANTS] [, SITES]]

Anthracnose [(*Colletotrichum* spp)]
Bacteria [(*Erwinia* spp *Pseudomonas* spp *Xanthomonas* spp)]
Bacterial Leaf Blight [(*Xanthomonas campestris*)]
Bacterial Speck [(*Pseudomonas syringae* pv *tomato*)]
Bacterial Spot [(*Xanthomonas* spp)] – suppression
Bean Rust [(*Uromyces appendiculatus*)] – suppression
Black Mold [(*Alternaria alternata*)]
Black Rot/Black Crown Rot [(*Alternaria* spp)]
Black Spot [of Rose] [(*Diplocarpon rosea*)]
Botrytis [(*Botrytis* spp)]
Botrytis Leaf Blight [(*Botrytis squamosa*)]
Botrytis Neck Rot [(*Botrytis* spp)]
Downy Mildew [(*Bremia lactucae Peronospora* spp and *Plasmopara viticola*)] – suppression
Early Blight [(*Alternaria solani*)] – suppression
Fire Blight [(*Erwinia amylovora*)] – suppression
Gray Mold [(*Botrytis cinerea*)]
Greasy Spot [(*Mycosphaerella citri*)] – suppression
Late Blight [(*Phytophthora infestans*)] – suppression
Leaf Spots [(*Alternaria* spp *Cercospora* spp *Entomosporium* spp *Helminthsporium* spp *Myrothecium* spp *Septoria* spp)]
Onion Downy Mildew [(*Peronospora destructor*)]
Onion Purple Blotch [(*Alternaria porri*)]
***Phytophthora* spp**
Pin Rot [(*Alternaria/Xanthomonas* complex)] – suppression
Powdery Mildew [(*Uncinula necator Erysiphe* spp *Sphaerotheca* spp *Oidiopsis taurica Leveillula taurica Podosphaera leucotricha Oidium* spp *Podosphaera* spp]
Rust [(*Puccinia* spp)]
Scab [(*Venturia* spp)] – suppression
Sclerotinia Head and Leaf Drop [(*Sclerotinia* spp)]
Sour Rot
Target Spot [(*Corynespora cassiicola*)]
Walnut Blight [(*Xanthomonas campestris*)]
White Mold [(*Sclerotinia sclerotiorum*)] – suppression

[SERENADE MAX] MAY BE USED ON LAWNS[[, TURF] [SOD] [AND ORNAMENTAL TURF AND GOLF COURSES (FAIRWAYS GREENS, ROUGHS, TEES)]]

LAWNS, [, TURF] [, SOD] [AND ORNAMENTAL TURF] [, GOLF COURSES (FAIRWAYS, GREENS, ROUGHS, TEES)]
Bluegrass Bentgrass Bermudagrass Dichondra Fescue Orchardgrass Annual Bluegrass St Augustine Ryegrass Zoysia Mixtures and other grasses [turf] [sod] [or ornamental turf]

DISEASES CONTROLLED [OR SUPPRESSED] [OR PREVENTED] [BY SERENADE MAX] [ON LAWNS [, TURF] [SOD] [, ORNAMENTAL TURF] AND [GOLF COURSES (FAIRWAYS, GREENS, ROUGHS TEES)]]

Lawn [, Turf] [, and Sod] Diseases
Brown Patch [(*Rhizoctonia solani*)]
Dollar Spot [(*Lanzia* spp *Moellerodiscus* spp formerly *Sclerotinia homeocarpa*)]
Powdery Mildew [(*Erysiphe graminis*)]
Rust [(*Puccinia* spp)]
Anthracnose [(*Colletotrichum graminicola*)]
Red Thread [(*Laetisaria fuciformis*)]
Fairy Ring [(Various *Basidiomycetes*)]
Gray Snow Mold Typhula Blight [(*Typhula* spp)]
Pink Snow Mold Fusarium Patch [(*Microdochium nivale*)]
Pythium Blight [[(*Pythium aphanidermatum*)] [(*Pythium* spp)]]

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 Store at room temperature

PESTICIDE DISPOSAL AND CONTAINER HANDLING

Nonrefillable container Do not reuse or refill this container

If empty

Place in trash or offer for recycling if available

If partly filled

Call your local solid waste agency for disposal instructions Never place unused product down any indoor or outdoor drain

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[This label modified May 2012]

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