



GROUP	BM02	FUNGICIDE
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Serenade[®] MAX[™]
A Wettable Powder Biofungicide

Live Organism

COMMERCIAL

ACTIVE INGREDIENT:

QST 713 strain of *Bacillus subtilis*, contains a minimum of 7.3×10^9 CFU/g

KEEP OUT OF REACH OF CHILDREN

READ THE LABEL BEFORE USING

POTENTIAL SENSITIZER

REGISTRATION NO.: 28549 PEST CONTROL PRODUCTS ACT

NET CONTENTS: 3 – 6 Kg

Product Information: 1-888-283-6847

www.cropscience.bayer.ca

Bayer CropScience Inc.
Suite 200, 160 Quarry Park Blvd. S.E.
Calgary, Alberta T2C 3G3

In case of spills, poisoning or fire, telephone emergency response number
1-800-334-7577 (24 hours a day).

Date of Manufacture:

Made in Mexico

NOTICE TO USER:

This pest control product is to be used only in accordance with the directions on the label. It is an offence under the *Pest Control Products Act* to use this product in a way that is inconsistent with the directions on the label.

FIRST AID:

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

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

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

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

Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.

TOXICOLOGICAL INFORMATION: Treat symptomatically.

PRECAUTIONS:

KEEP OUT OF REACH OF CHILDREN. May cause sensitization. Avoid contact with eyes, skin or clothing. Avoid inhaling/breathing dusts and spray mists. Wear a long-sleeved shirt, long pants, waterproof gloves, socks and shoes and a NIOSH-approved particulate filtering facepiece respirator with any N, R or P filter when handling, mixing/loading or applying the product and during all clean-up/repair activities.

Apply only to agricultural crops when the potential for drift to areas of human habitation and human activity, such as houses, cottages, schools and recreational areas is minimal. Take into consideration wind speed, wind direction, temperature inversions, application equipment and sprayer settings.

STORAGE:

Serenade MAX should be used within 6 years from the date of manufacture when stored at room temperature. Store this product away from food or feed. Store in a dry area inaccessible to children. Store in original container only. Keep container closed when not in use.

DISPOSAL:

1. Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
2. Follow provincial instruction for any required additional cleaning of the container prior to its disposal.
3. Make the empty container unsuitable for further use.
4. Dispose of the container in accordance with provincial requirements.
5. For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.

ENVIRONMENTAL PRECAUTIONS:

To reduce runoff from treated areas into aquatic habitats, avoid application to areas with a moderate to steep slope, compacted soil or clay.

Avoid application when heavy rain is forecast.

Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative filter strip between the treated area and the edge of the water body.

GENERAL USE INFORMATION:

Serenade MAX is a broad spectrum, preventative product for the suppression of many plant diseases. Serenade MAX may be applied as a foliar spray alone, or in an alternating spray program 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. Serenade MAX may be applied with ground application equipment.

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.

USE RATE DETERMINATION:

Carefully read and follow all label directions, use rates and restrictions. Serenade MAX should be applied prior to or in the early stages of disease development. Use maximum label rates and shortened spray intervals for conditions conducive to rapid disease development. For proper application, determine the number of hectares to be treated, the recommended label use rate and select appropriate water volumes 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 including the day of harvest.

DIRECTIONS FOR USE:

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment and weather related factors determine the potential for spray drift. The applicator and the grower/treatment coordinator are responsible for considering all of these factors when making decisions. Where provinces/territories have more stringent regulations, they should be observed.

Use Restrictions: As this product is not registered for the control of pests in aquatic systems, DO NOT use to control aquatic pests.

DO NOT contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wash water.

DO NOT apply in greenhouses.

DO NOT apply by any type of irrigation system.

DO NOT apply by aerial application equipment unless otherwise specified in crop-specific use directions.

Restricted-Entry Interval (REI): **DO NOT** allow worker entry into treated areas for 4 hours or until sprays have dried unless wearing waterproof gloves, long-sleeved shirt, long pants, socks and shoes.

Preharvest Interval: Serenade MAX can be used up to and including the day of harvest. PHI=0 days.

APPLICATION INSTRUCTIONS:

GROUND APPLICATIONS: For foliar applications, thorough coverage of all foliage is essential for effective disease control. Serenade MAX can be applied in commonly used ground application equipment. To achieve good coverage, use the appropriate spray pressure, litres per hectare, nozzles, nozzle spacing and ground speed. Consult spray nozzle and accessory catalogues for specific information on proper equipment calibration.

AERIAL APPLICATIONS: Use the application rate indicated for the appropriate crop in sufficient water to achieve thorough coverage.

MIXING INSTRUCTIONS:

MIXING: Serenade MAX must be diluted with water for spray applications and may be used in spray equipment commonly used for making ground applications. 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. Maintain agitation continuously while spraying. Do not allow spray mixture to stand overnight or for prolonged periods.

Application Rates for Serenade MAX

When applied as directed (see table below), Serenade MAX will suppress the indicated diseases. Under conditions of moderate to high disease pressures, use the higher rate and shorter application interval indicated. Apply in sufficient water carrier volume to ensure good coverage.

Ground Application Only

Crop	Disease	Rate (kilogram/hectare)	Application Instructions
Asparagus	Botrytis blight (<i>Botrytis cinerea</i>)	3.0-6.0	Begin applications at the first sign of disease, or when conditions become conducive for disease development. Repeat as necessary on a 7-10 day interval.
Crop Group 13 Crops (Bushberries and Caneberries): Bayberry; bearberry; blackberry; highbush and lowbush blueberry; chokecherry; currant; elderberry; gooseberry; huckleberry; lingonberry; loganberry, mulberry; pincherry; raspberry; salal; Saskatoon berry; sea buckthorn; wild raspberry.	Botrytis grey mould (<i>Botrytis cinerea</i>)	3.0-6.0	Begin applications at the first sign of disease or when conditions become conducive for disease development. Repeat as necessary on a 7-10 day interval.
	Bacterial blight (<i>Pseudomonas syringae</i>)	1.0-3.0	Apply before fall rains and again during dormancy before spring.
Crop Group 13-07: Berry and Small Fruit Crop Group). Blackberry or raspberry, highbush blueberry, elderberry or mulberry, grape, strawberry, and fuzzy kiwifruit	Botrytis grey mould mould (<i>Botrytis cinerea</i>)	3.0 - 6.0	Begin application prior to disease development and repeat on 7-10 day intervals.
Highbush blueberry, lowbush blueberry	Mummy berry (<i>Monilinia vaccinii-corymbosi</i>)	3.5-6.0	Begin applications at the bud break stage of development. Repeat as necessary on a 7-14 day interval.
Crop Group 5 (Cole) Crops Broccoli, Chinese broccoli, Broccoli raab, Brussels sprouts,	Sclerotinia rot (<i>Sclerotinia sclerotium</i>)	3.0-6.0	Make the first application at emergence, or immediately following transplanting. Repeat applications on 10-14 day intervals if conditions for disease development continues.
	Downy mildew (<i>Peronospora parasitica</i>)	2.0-3.0	

cabbage (all types), cauliflower, cavalo broccoli, collards, kale, kohlrabi, mizuna, mustard greens, mustard spinach, rape greens.	Pin rot (<i>Alternaria / Xanthomonas Complex</i>)		
Crop Group 6 Crops (Legume Vegetables): Bean (<i>Lupinus</i> spp., <i>Phaseolus</i> spp., and <i>Vigna</i> spp.), chickpea, lentil, and pea (all types)	White mould (<i>Sclerotinia sclerotiorum</i>)	3.0-6.0	Make the first application at planting (or immediately following planting but prior to crop emergence). Make a second application as a directed spray with multiple nozzles per seed line in sufficient water to ensure thorough coverage of lower plant leaves and surrounding soil surface within 7 days of thinning. Repeat applications on 7-14 day intervals if conditions for disease development persist.
	Botrytis pod rot (<i>Botrytis cinerea</i>)	3.0-6.0	Begin applications at the first sign of disease, or when conditions become conducive for disease development. Repeat as necessary on a 7-10 day interval.
Soybean	White mould (<i>Sclerotinia sclerotium</i>)	1.0-3.5	Begin application soon after emergence and when conditions are conducive to disease development. Repeat as necessary on a 7-10 day interval.
	Brown spot (<i>Septoria glycines</i>) Frog eye (<i>Cercospora sojina</i>)	0.25-1.0	
Crop Group 3 Crops (Bulb Vegetables) Onions (all types), garlic (all types), leeks, shallots and chives	Botrytis neck rot (<i>Botrytis allii</i>)	3.0-4.5	Begin applications at the first sign of disease, or when conditions become conducive for disease development. Repeat as necessary on a 7-10 day interval.
	Botrytis leaf blight (<i>Botrytis squamosa</i>)		
	Downy mildew (<i>Peronospora destructor</i>)	3.0-6.0	
Peanut	Leaf spot (<i>Cercospora arachidicola, Cercosporidium personatum</i>)	1.0-3.0	Begin application soon after emergence or transplant and when conditions are conducive to disease development. Repeat as necessary on a 7-10 day interval.

<p>Crop Group 1: Root tuber vegetables: Garden beet, sugar beet, carrot, celeriac, chervil, chicory, ginseng, horseradish, turnip-rooted parsley, parsnip, potato, radish, Oriental radish, rutabaga, salsify, sweet potato, and turnip.</p>	<p>White mould <i>(Sclerotinia sclerotiorum)</i></p>	<p>2.0-4.0</p>	<p>Begin application soon after emergence and when conditions are conducive to disease development. Repeat as necessary on a 7-10 day interval.</p>
<p>Potato</p>	<p>Early blight <i>(Alternaria solani)</i></p>		
<p>Sugar, Garden Beet</p>	<p>Cercospora Leaf Spot (<i>Cercospora beticola</i>)</p>	<p>1.0 - 2.0</p>	<p>Begin application soon after emergence and when conditions are conducive to disease development. Repeat as necessary on a 7-10 day interval.</p> <p>Serenade MAX must be applied with a non-ionic surfactant at a rate of 0.25% v/v or at labeled rates.</p> <p>Use foliar boom or overhead boom spray equipment.</p> <p>Under conditions of moderate to high disease pressures, use the higher rate and shorter application interval indicated.</p>
<p>Crop Group 9 Crops (Cucurbits) Cantaloupe, Chinese waxgourd, cucumber, gherkin, edible gourd, melon, muskmelon, pumpkin, squash, and watermelon.</p>	<p>Powdery mildew <i>(Erysiphe cichoracearum, Sphaerotheca fuliginea)</i></p>	<p>3.0-6.0</p>	<p>Begin application soon after emergence or transplant, when conditions are conducive for disease development. Repeat applications on an interval of 7-10 days.</p>
	<p>Downy mildew <i>(Pseudoperonospora cubensis)</i></p>	<p>1.0-3.0</p>	<p>Begin application soon after emergence or transplant, when conditions are conducive to disease development. Repeat as necessary on a 7-10 day interval. When environmental conditions and plant stage are conducive to rapid disease development, use Serenade Max in a rotational program with other registered fungicides.</p>

Crop Group 8: Fruiting vegetables: Eggplant, ground cherry, okra, pepino, peppers (all varieties), tomatillo and tomatoes	Early blight (<i>Alternaria solani</i>)	4.5	Make the first application when plants are 6-10 cm high, or when conditions are conducive for disease development. Repeat applications on an interval of 5-7 days.
	Botrytis grey mould (<i>Botrytis cinerea</i>)	3.0-6.0	
Tomato, Peppers	Powdery mildew (<i>Erysiphe orontii</i> , <i>Leveillula taurica</i>)	3.0-6.0	Begin application soon after emergence or transplant, and repeat on an interval of 7-10 days.
	Bacterial spot (<i>Xanthomonas campestris</i>)	1.0-3.0	Begin application soon after emergence or transplant, when conditions are conducive to disease development. Repeat as necessary on a 7-10 day interval. When environmental conditions and plant stage are conducive to rapid disease development, use Serenade Max in a rotational program with other registered bacteriacides.
Grapes	Powdery mildew (<i>Uncinula necator</i>)	3.0-6.0	Begin application when new shoots are 1-3 cm high. Make a repeat application when shoots are 6-10 cm high, and when shoots are 18-20 cm high, then at 7-10 day intervals thereafter.
	Grey mold (<i>Botrytis cinerea</i>) Sour rot* (a complex of various pathogens)	3.0-6.0	Make the first application at bloom, then repeat at bunch closure, at veraison and preharvest. *Note that sour rot disease is caused by various yeast, fungal and bacterial pathogens, and that Serenade MAX has not been tested for control of all of these agents.
Crop Group 4 Crops (Leafy vegetables): Amaranth, arugula, Chinese celery, celtuce, chervil, corn salad, cress, dandelion, dock, endive, fennel, lettuce, orach, parsley, radicchio, and swiss chard.	Sclerotinia rot (<i>Sclerotinia minor</i> , <i>Sclerotinia sclerotiorum</i>)	1.0-3.0	Make the first application at planting (or immediately following planting but prior to crop emergence). Make a second application as a directed spray with multiple nozzles per seed line in sufficient water to ensure thorough coverage of lower plant leaves and surrounding soil surface within 7 days of thinning. Repeat applications on 10-14 day intervals if conditions for disease development persist.

	Grey mould (<i>Botrytis cinerea</i>)		For suppression, begin applications soon after emergence or transplant and continue as necessary on a 7 to 10 day interval. When environmental conditions are conducive to rapid disease development, use Serenade MAX in a rotational program with other registered fungicides. Thorough coverage is essential.
	Powdery mildew (<i>Erysiphe cichoracearum</i>)	3.0-6.0	Begin applications at the first sign of disease, or when conditions become conducive for disease development. Repeat as necessary on a 7-10 day interval.
Lettuce	Downy mildew (<i>Bremia lactucae</i>)	3.0-6.0	Begin applications at the first sign of disease, or when conditions become conducive for disease development. Repeat as necessary on a 7-10 day interval.
Spinach	White rust (<i>Albugo occidentalis</i>)	1.0-2.0	Begin applications at the first sign of disease, or when conditions become conducive for disease development. Repeat as necessary on a 7-10 day interval.
Celery	Pink Rot (<i>Sclerotinia sclerotiorum</i>)	3.0-6.0	Make the first application approximately 8 weeks before harvest and repeat on a 14-day interval. 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.
Crop Group 11 Crops (Pome Fruits): Apple, Crabapple, Loquat, Mayhaw, Pear, Oriental pear, Quince, and non- bearing pome fruit trees	Fire blight (<i>Erwinia amylovora</i>)	2.0-3.0	Begin applications at 1-5% bloom and repeat on 7-10 days interval. During periods of rapid bloom development and frequent infection periods, spray intervals of 4-7 days may be required.
	Scab (<i>Venturia inaequalis</i> ; <i>V. pirina</i>)	3.0-6.0	Begin application at green tip or when environmental conditions become favorable for primary scab development, and repeat on 7-10 day intervals.

Apples	Powdery Mildew (<i>Podosphaera leucotricha</i>)	3.0-6.0	Begin application at tight cluster, or sooner, if conditions are conducive to disease development. Repeat applications on a 7-10 day interval. Additional sprays beyond second cover may be needed on susceptible varieties or under heavy disease pressure.
Crop Group 12 Crops (Stone Fruits): Apricot, cherry, nectarine, peach, plum, plumcot, and prune	Brown Rot (<i>Monilinia spp.</i>)	2.0-3.0	Begin application at early bloom and repeat as necessary through petal fall on a 7-day interval.
Radish, turnip and rutabaga	Downy mildew (<i>Peronospora parasitica</i>)	2.5	Downy mildew: Begin application when environmental conditions are conducive to disease development and repeat on 7-10 day intervals.
Strawberry	Botrytis gray mould (<i>Botrytis cinerea</i>)	3.0-6.0	Begin application at the first sign of disease, or when conditions become conducive for disease development. Repeat as necessary on a 7-10 day interval.
Crop Group 19: Herbs and Spices Anise, balm, basil, borage, chamomile, caraway, catnip, celery seed, chervil, chive, coriander, costmary, dill, fennel, fenugreek, horehound, juniper berry, lavender, lemongrass, lovage, marigold, mustard (seed), nasturtium, parsley, rosemary, sage, savory, sweet bay, thyme, wintergreen, woodruff, and wormwood including transplants	Botrytis gray mould (<i>Botrytis cinerea</i>); White mould (<i>Sclerotinia sclerotiorum</i>)	3.0 – 6.0	Begin application when environmental conditions are conducive to disease development. Repeat as necessary on a 7- to 10-day interval.

Ground and Aerial Application

Crop	Disease	Rate (kilogram/ hectare)	Application Instructions
Crop Group 20A: Oilseed crops (rapeseed subgroup) Canola, borage, crambe, cuphea, echium, flax seed, gold of pleasure, hare's ear mustard, lesquerella, lunaria, meadowfoam, milkweed, mustard seed, oil radish, poppy seed, rapeseed, sweet rocket, cultivars, varieties and/or hybrids of these	Sclerotinia stem rot (Sclerotinia sclerotiorum)	0.6 - 1.6	Begin application at 20%- 30% bloom. A second application may be made 7-10 days later, at approximately 50% bloom and prior to significant petal fall, if conditions for disease development remain favorable. Use higher rates in fields with a history of heavy disease pressure. Spray Volume: minimum 50 L/ha

Aerial Application Instructions

Apply only by fixed-wing or rotary aircraft equipment that has been functionally and operationally calibrated for the atmospheric conditions of the area and the application rates and conditions of this label. Label rates, conditions and precautions are product-specific. Apply only at the rate recommended for aerial application on this label. Where no rate for aerial application appears for the specific use, this product cannot be applied by any type of aerial equipment. Ensure uniform application by using appropriate marking devices and/or electronic guidance equipment.

Use Precautions

Apply only when meteorological conditions at the treatment site allow for complete and even coverage. Apply only when meteorological conditions are in compliance with local and/or provincial authorities.

Operator Precautions

Do not allow the pilot to mix chemicals to be loaded onto the aircraft. Loading of premixed chemicals with a closed system is permitted.

It is desirable that the pilot have communication capabilities at each treatment site at the time of application.

The field crew and the mixer/loaders must wear the personal protective equipment described in the PRECAUTIONS section of this label.

All personnel on the job site must wash hands and face thoroughly before eating and drinking. Protective clothing, aircraft cockpit and vehicle cabs must be decontaminated regularly.

Product Specific Precautions

Read and understand the entire label before opening this product. If you have questions, call the manufacturer at 1-800-728-0014 or obtain technical advice from the distributor or your provincial agricultural or forestry representative. Application of this specific product must meet and/or conform to the following:

Volume: Apply the recommended rate in a minimum spray volume of 50 liters per hectare.

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