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READ SAFETY DIRECTIONS BEFORE OPENING OR USING

Serenade[®] Prime

Soil Ameliorant and Biofungicide

ACTIVE CONSTITUENT: Not less than 1.0×10^{12} CFU/L *Bacillus amyloliquefaciens* (formerly *Bacillus subtilis*) strain QST 713**GROUP** **BM02** **FUNGICIDE****A suspension concentrate form of the QST 713 strain of *Bacillus amyloliquefaciens* (formerly *Bacillus subtilis*) for use in agricultural and horticultural crops, as per the Directions for Use****DIRECTIONS FOR USE (For use in all States)****RESTRAINTS**

Users of this product **MUST make an accurate written record** of the details of each spray application within 24 hours following application, and must **KEEP** this record for at least 2 years. The spray application details that must be recorded are:

1 date with start and finish times of application **2** location address and paddock(s) sprayed **3** full name of this product **4** amount of product used per hectare and number of hectares applied to **5** crop or situation and weed or pest **6** wind speed and direction during application **7** air temperature and relative humidity during application **8** nozzle brand, type, spray angle, nozzle capacity and spray system pressure measured during application **9** name and address of person applying this product. (Additional record details may be required by the state or territory where this product is used.)

APPLICATION TO SOIL TO IMPROVE BIOAVAILABILITY OF SOIL RESOURCES FOR AGRICULTURAL AND HORTICULTURAL CROPS

Root colonisation is critical for a beneficial outcome from Serenade Prime Soil Ameliorant and Biofungicide. Apply Serenade Prime in a manner that will concentrate the product in the seed, root or transplant zone. This may include delivery of Serenade Prime via drip or micro sprinkler irrigation, soil drench, in-furrow application or plant-hole drench.

CROP	PURPOSE	RATE	CRITICAL COMMENTS
Vegetable crops, berries and other small fruits, row crops	Serenade Prime is a ready-to-use formulation of the highly active QST 713 strain of <i>Bacillus amyloliquefaciens</i> for application to soil to improve bioavailability of soil resources for agricultural and horticultural crops	5-10 L/ha	<p>Plant hole drench at transplanting: Apply the selected volume of drench mixture in the planting hole. Mix with sufficient water to allow a consistent volume to be applied to each plant (e.g. 50 mL of drench mixture per plant).</p> <p>In-furrow application (direct sown): Apply as an in-furrow spray in the required amount of water per hectare for the crop at planting. Mount the spray nozzle so the spray is directed into the furrow just before the seeds or seed pieces are covered.</p> <p>Drip irrigation: Apply product with the first irrigation after transplanting. Repeat applications may be made every 21-28 days depending on crop and growth rate.</p> <p>Soil surface boom spray: Apply after sowing or transplanting at the start of active root growth. Use irrigation or rainfall to incorporate the product into the root zone.</p>



CROP	PURPOSE	RATE	CRITICAL COMMENTS
Tree crops	Serenade Prime is a ready-to-use formulation of the highly active QST 713 strain of <i>Bacillus amyloliquefaciens</i> for application to soil to improve	35 mL/tree	Drip or micro-sprinkler irrigation or soil drench at root flush: Apply spray mixture to the surface of the soil at root flush (just prior to vegetative flush) through micro sprinkler, drip irrigation or soil drench system. Apply a sufficient quantity of irrigation to reach the root zone. In high density plantings do not exceed 10 L/ha of Serenade Prime.
Bananas	bioavailability of soil resources for agricultural and horticultural crops	2-5 mL/plant	Micro-sprinkler irrigation or soil drench at root flush: Apply a sufficient quantity of irrigation to reach the root zone. Do not exceed 10 L/ha of Serenade Prime.
Newly established tree, vine and berry crops		2-10 mL/plant	Drip or micro-sprinkler irrigation or soil drench: Apply a sufficient quantity of irrigation to reach the root zone. In high density plantings do not exceed 10 L/ha of Serenade Prime.

APPLICATION AS A BIOLOGICAL FUNGICIDE

CROP	DISEASE	RATE	CRITICAL COMMENTS
Potatoes	Soil borne black scurf - rhizoctonia root rot (<i>Rhizoctonia solani</i>) (Suppression only)	60 mL/ 100 m row	Apply Serenade Prime once as an in-furrow spray at planting. Mount the spray nozzle so the spray is directed into the furrow at the seed as a 15-20 cm band applied just before the seed is covered. Alternatively use a 2 nozzle system spraying the furrow prior to seed drop and after it has dropped just prior to covering. Apply Serenade Prime in 1-3 L of water/100 m of row. Ensure the water volume applied does not wash off any previously applied seed treatments. DO NOT apply Serenade Prime if conditions (e.g. high soil temperature and moisture in sandy soils) or seed quality favour seed piece breakdown, as the addition of any moisture to the seed may enhance the problem.
Sugarcane	Pineapple disease (<i>Ceratocystis paradoxa</i>) (Suppression only)	60 mL/ 100 m of row (equivalent to 4 L/ha for single row cane with 1.52 m spacing between rows) (for dual row each row is treated at the above row rate)	For the suppression of pineapple disease in sugarcane, apply as a spray onto cane setts in the planting chute. Serenade Prime should be applied immediately prior to placement in the furrow using an appropriate water volume (minimum of 5 L water/100 m of row) to ensure all surfaces of the cane setts are covered especially on the cut ends. Dip planters have not been tested with Serenade Prime. In situations where very heavy rainfall is predicted or where there may be prolonged waterlogging and/or cold weather conditions, the use of an additional fungicidal product is recommended.



CROP	DISEASE	RATE	CRITICAL COMMENTS
Bananas	<p>Yellow Sigatoka (<i>Mycosphaerella musicola</i>)</p> <p>Common leaf speckle (<i>Mycosphaerella musae</i>) (Suppression only)</p>	<p>1.0 L/ha (plus a high quality water miscible mineral crop oil at 3.5-5.0 L/ha*)</p>	<p>This use is subject to a CropLife resistance management strategy.</p> <p>Serenade Prime should be applied as part of a regular program of fungicide sprays, alternating with fungicides from different mode of action groups. For optimum disease control maintain thorough de-leafing practices, in accordance with industry guidelines, to reduce disease inoculum. Old leaves and leaves with advanced lesions should be removed, or infected parts of the leaf removed, prior to the application of Serenade Prime.</p> <p>Intervals between fungicide applications generally should be 14-21 days, but should be modified for locality, disease conditions and leaf emergence rates. Use a shorter interval when applied during conditions favourable to disease development (warm and high humidity).</p> <p>*Water miscible mineral crop oil <u>Yellow Sigatoka</u> Under conditions favourable to disease development such as prolonged periods of warm temperatures and high humidity, the use with a high quality water miscible mineral crop oil at 3.5 – 5.0 L/ha is required for control. Without the addition of a high quality water miscible mineral crop oil, suppression only of the disease may result.</p> <p><u>Common leaf speckle</u> The addition of a high quality water miscible mineral crop oil is required to achieve suppression of the disease.</p>

NOT TO BE USED FOR ANY PURPOSE, OR IN ANY MANNER, CONTRARY TO THIS LABEL UNLESS AUTHORISED UNDER APPROPRIATE LEGISLATION

**WITHHOLDING PERIOD
NOT REQUIRED WHEN USED AS DIRECTED**

GENERAL INSTRUCTIONS

Mixing

Prior to opening, shake or agitate the container vigorously, then add the required quantity of Serenade Prime to water in the tank while stirring or with agitators in motion. Maintain agitation until spraying is complete.

Application

Bananas

Ground application

Apply in sufficient water, using suitable application parameters (nozzles, pressure, speed, etc.) to ensure thorough and even coverage of the target area, as both are essential. Except when applying with orchard airblast equipment, use only MEDIUM spray droplet size classification according to ASABE S572 definition for standard nozzles.

Aerial application

Apply at least 20 L of spray mixture per hectare for aerial application. Use suitable application parameters (nozzles, pressure, speed, etc.) to deliver only a MEDIUM spray droplet size classification according to ASABE S572 definition for standard nozzles.

Cleaning Up

Equipment should be thoroughly cleaned by rinsing with water several times.



COMPATIBILITY

Serenade Prime has been tested for compatibility with many other conventional products including fungicides, insecticides, herbicides, and fertilizers. However, as formulations of other manufacturers' products are beyond the control of Bayer, all mixtures should be tested prior to mixing commercial quantities. As changes in climatic conditions can alter the sensitivity of plants to mixtures of sprays, Bayer cannot be responsible for the behaviour of such mixtures.

For the latest compatibility recommendations contact the Bayer Crop Science Technical Enquiry Hotline 1800 804 479 or your local Bayer Crop Science representative.

FUNGICIDE RESISTANCE

GROUP	BM02	FUNGICIDE
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Serenade Prime Soil Ameliorant and Biofungicide is a microbial fungicide. For fungicide resistance management the product is a Group BM02 fungicide. Some naturally occurring individual fungi resistant to the product and other Group BM02 fungicides may exist through normal genetic variability in any fungal population. The resistant individuals cannot be controlled by this product and other Group BM02 fungicides, thus resulting in a reduction of efficacy and possible yield loss. Since the occurrence of resistant fungi is difficult to detect prior to use, Bayer CropScience Pty Ltd accepts no liability for any losses that result from failure of this product to control resistant fungi.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

DO NOT contaminate wetlands or watercourses with this product or used containers.

STORAGE AND DISPOSAL

Store out of reach of children.

Store in the closed, original container in a cool, well-ventilated area. Do not store for prolonged periods in direct sunlight. Serenade Prime can be stored for 36 months from the date of manufacture when stored at ambient temperature conditions (17 – 25 °C).

Triple rinse containers before disposal. Add rinsings to spray tank. DO NOT dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush, or puncture and deliver empty packaging to an approved waste management facility. If an approved waste management facility is not available, bury the empty packaging 500 mm below the surface in a disposal pit specifically marked and set up for this purpose, clear of waterways, desirable vegetation and tree roots, in compliance with relevant Local, State or Territory government regulations. DO NOT burn empty containers or product. DO NOT re-use empty containers for any other purpose.

SAFETY DIRECTIONS

May irritate the eyes. Avoid contact with eyes. When opening the container and preparing the product for use, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing) and disposable gloves. If product in eyes, wash it out immediately with water. Wash hands after use. After each day's use, wash contaminated clothing.

FIRST AID

First aid is not generally required. If in doubt, contact a Poisons Information Centre (phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor.

SAFETY DATA SHEET

Additional information is listed in the Safety Data Sheet, which can be obtained from www.crop.bayer.com.au.

EXCLUSION OF LIABILITY

This product must be used strictly as directed, and in accordance with all instructions appearing on the label and in other reference material. So far as it is lawfully able to do so, Bayer CropScience Pty Ltd accepts no liability or responsibility for loss or damage arising from failure to follow such directions and instructions.

Serenade® is a Registered Trademark of the Bayer Group.

APVMA Approval No: 85292/118695

FOR 24 HOUR SPECIALIST ADVICE IN EMERGENCY ONLY PHONE 1800 033 111
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GHS STATEMENTS

Classification not required according to GHS criteria.
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