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READ SAFETY DIRECTIONS BEFORE OPENING OR USING

**Serenade<sup>®</sup> SOIL ACTIV**

Biological Soil Ameliorant

**ACTIVE CONSTITUENT:** Not less than  $3.0 \times 10^{13}$  CFU/L *Bacillus amyloliquefaciens* (formerly *Bacillus subtilis*) strain QST 713**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**

Root colonisation is critical for a beneficial outcome from Serenade SOIL ACTIV as a soil ameliorant. Apply Serenade SOIL ACTIV in a manner that will concentrate the product in the seed, root or transplant zone. This may include delivery of Serenade SOIL ACTIV 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 SOIL ACTIV 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	1 - 2 L/ha	<p><b>Plant hole drench at transplanting:</b> 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><b>In-furrow application (direct sown):</b> 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><b>Drip irrigation:</b> 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><b>Soil surface boom spray:</b> 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>
Tree crops		7 mL/tree	<p><b>Drip or micro-sprinkler irrigation or soil drench at root flush:</b> 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 2 L/ha of Serenade SOIL ACTIV.</p>
Bananas		0.4 - 1 mL/plant	<p><b>Micro-sprinkler irrigation or soil drench at root flush:</b> Apply a sufficient quantity of irrigation to reach the root zone. Do not exceed 2 L/ha of Serenade SOIL ACTIV.</p>
Newly established tree, vine and berry crops		0.4 - 2 mL/plant	<p><b>Drip or micro-sprinkler irrigation or soil drench:</b> Apply a sufficient quantity of irrigation to reach the root zone. In high density plantings do not exceed 2 L/ha of Serenade SOIL ACTIV.</p>



### WITHHOLDING PERIOD

Harvest and Grazing: **NOT REQUIRED WHEN USED AS DIRECTED**

### GENERAL INSTRUCTIONS

For application to soil to improve bioavailability of soil resources for agricultural and horticultural crops.

#### Mixing

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

#### Cleaning up

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

### COMPATIBILITY

Serenade SOIL ACTIV 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.

### 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 SOIL ACTIV can be stored for 24 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) 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](http://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.

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



**GHS STATEMENTS**

**Classification not required according to GHS criteria.**