

USER GUIDE

Serenade Prime

The biological link between soil and plant root systems



What is Serenade Prime?

Serenade Prime is a ready-to-use formulation of the beneficial bacteria, *Bacillus subtilis* strain QST713 for application to soil to improve the bioavailability of soil resources for crops.

What are the benefits of using Serenade Prime?

- Faster and increased root growth
- Increased seedling vigour, improved nutrient availability and more productive plants
- Improved yields can result, but often an increase in quality and marketable yield is seen
- Increased stress tolerance, crop uniformity, earlier maturity and improved storage.

How does Serenade Prime work?

Serenade Prime contains viable dormant spores of the *Bacillus subtilis* (strain QST713). When applied close to plant roots, these spores germinate and rapidly colonise the plant root surfaces and live in the rhizosphere around plant root surfaces and the soil. The bacterial colonies function as a dynamic biological link between the soil and plant roots. This mutually beneficial plant/bacteria relationship allows resources required for growth, such as nutrients and water, to become more available.

When should Serenade Prime be applied?

In annual/short cycle crops, Serenade Prime should be applied early during planting or transplanting. This allows colonisation of the young, actively growing root system to maximise early crop growth. In perennial crops, application should coincide with new root growth (root flush) periods.

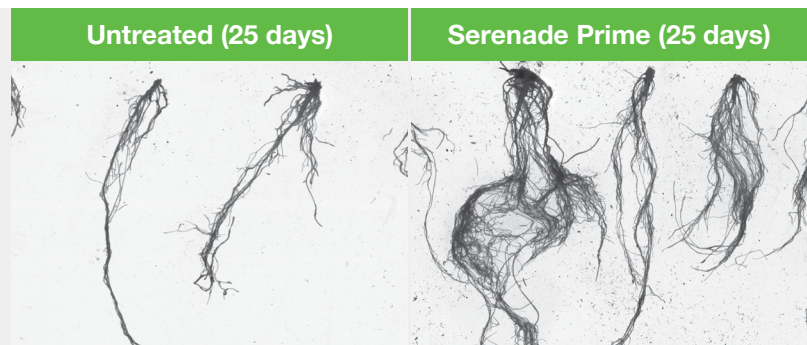
How should Serenade Prime be applied?

Plant hole drench methods, in-furrow bands, sprays, drench or drip and micro-sprinkler irrigation.



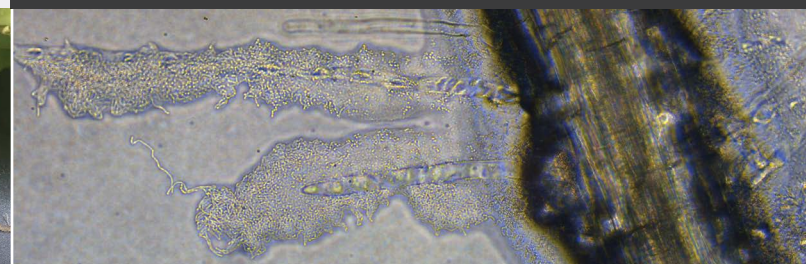
Lettuce treated

Lettuce untreated



Serenade Application Studies-Vegetables.

Saman Mahmood, Debbie Marcus BLX-West Sacramento June 16, 2017.
Tomato growth analysis using WinRhizo at 25 days after planting.



Serenade Prime colonising the root surface and root hairs.

QUICK GUIDE: USING SERENADE PRIME

ACTIVE ORGANISM	<i>Bacillus subtilis</i> (<i>Bacillus amyloliquefaciens</i>) strain QST713
FORMULATION	A suspension concentrate formulation of dormant viable spores <i>B.subtilis</i> strain QST713 spores plus associated biochemicals
PACK SIZE	10 L
RATE	Vegetables, berries and other small fruits, row crops – 5-7 L/ha Tree crops – 35-70 mL/tree Do not exceed 10 L/ha
APPLICATION TARGET	Apply to the soil, targeting the root zone
APPLICATION METHOD	Plant hole drench methods, in-furrow bands, sprays, drench, drip and micro-sprinkler irrigation injectors
APPLICATION PLACEMENT	Serenade Prime needs to be placed within 13cm of growing roots for colonisation to occur
TIMING	Vegetable/annual crops – apply immediately after planting/transplanting or when crop roots are present. For longer term crops, repeat applications at 28 day intervals can have a beneficial effect on new roots in the crop Tree crops – time applications with root flush growth periods
SPEED OF EFFECT	Colonisation occurs within 2-3 days
IRRIGATION	Avoid excessive irrigation for 2-3 days after application to prevent washing the spores out of the root zone
UV STABILITY	Very stable
COMPATIBILITY	Compatible with most pesticides and fertiliser products
WITHHOLDING PERIOD	Not required when used as directed

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Insist on Serenade Prime from Bayer.

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