



# Serenade<sup>®</sup> Fungicides

## Group 44 Fungicides

### /// INTRODUCTION TO SERENADE<sup>®</sup>

Serenade<sup>®</sup> fungicides are versatile tools designed to provide effective disease protection. Serenade Opti provides protection against foliar fungal and bacterial diseases, while Serenade ASO protects against the effects of fungal and bacterial diseases in soil and foliage.

### /// ORGANIC GROWER BENEFITS

Serenade ASO and Serenade Opti are part of a collection of biologicals from Bayer that give organic growers more options in their integrated disease management programs.

- Effective protection against soil and foliar, bacterial and fungal diseases.
- Exempt from the Maximum Residue Levels (MRLs) requirements for export to global markets.
- Unique mode of action with FRAC Code 44 for resistance management.
- Minimal re-entry interval and zero-day pre-harvest interval provide maximum flexibility to control late-season disease problems.

### /// PROVEN PERFORMANCE

Serenade fungicides are composed of a potent biological chemistry and spores of *Bacillus subtilis* QST 713, which is a beneficial bacterium. The bacteria act as small factories colonizing the roots, producing biological chemistries. The colonization and biological chemistries provide different benefits important for healthy, high-yielding plants.

- **Pathogen Protection** – Lipopeptides destroy fungi on contact, while other compounds attack bacteria.
- **Defense Activation** – Plants respond to lipopeptide contact by preparing to repel pathogens.
- **Stress Reduction** – Serenade stimulates the plant to better tolerate stressors like drought and heat.
- **Stimulates Early-season Root Development** – Allows for greater nutrient uptake and protection from adverse weather conditions.
- **Nutrient Availability** – Serenade solubilizes key nutrients in the soil to enhance uptake, leading to healthier, higher-quality produce with an increased shelf life.

### /// SOIL HEALTH: SERENADE® ASO

When applied at planting, Serenade® ASO quickly builds a disease-protection zone around the seed or transplant. As the plant roots grow, the beneficial bacteria in Serenade ASO grow with them, expanding the disease protection zone and attaching themselves, like armor, to the roots of the plant.

The enhanced microbial activity and disease protection near the plant roots can lead to greater nutrient availability and uptake by the growing plant. This results in healthier plants and a higher yield potential.

/// REGISTERED CROPS			/// APPLICATION	
<ul style="list-style-type: none"> <li>• Artichokes</li> <li>• Asparagus</li> <li>• Avocados and mangoes</li> <li>• Bananas and plantains</li> <li>• Berries</li> <li>• Brassica (cole) leafy vegetables</li> <li>• Bulb vegetables</li> <li>• Cereal grains</li> <li>• Citrus fruit</li> <li>• Coffee</li> <li>• Corn</li> <li>• Cotton</li> <li>• Cucurbits</li> </ul>	<ul style="list-style-type: none"> <li>• Fruiting vegetables</li> <li>• Grapes</li> <li>• Grass seed production crops</li> <li>• Herbs/spices</li> <li>• Hops</li> <li>• Kiwis</li> <li>• Leafy vegetables</li> <li>• Legume vegetables (succulent and dried)</li> <li>• Mint</li> <li>• Non-grass animal feeds</li> <li>• Oil seed crops</li> </ul>	<ul style="list-style-type: none"> <li>• Olives</li> <li>• Papayas</li> <li>• Peanuts</li> <li>• Pineapples</li> <li>• Pome fruit</li> <li>• Pomegranates</li> <li>• Root/tuber and corm vegetables</li> <li>• Soybeans</li> <li>• Stone fruit</li> <li>• Strawberries</li> <li>• Sugarcane</li> <li>• Tobacco</li> <li>• Tree nuts</li> <li>• Watercress</li> </ul>	<b>Rate</b> <ul style="list-style-type: none"> <li>• Serenade® Opti: 14–20 fl. oz./A</li> <li>• Serenade ASO: 0.5–3 qts./A</li> </ul>	<b>Timing</b> <ul style="list-style-type: none"> <li>• Early in the season before disease pressures peak to suppress outbreaks</li> <li>• Right after rain when disease pressures flare</li> <li>• Near harvest time to maintain tight harvest schedules                             <ul style="list-style-type: none"> <li>– Zero-day pre-harvest interval</li> <li>– Four-hour re-entry interval</li> </ul> </li> <li>• In rotation with other products to maintain disease control with a softer profile</li> </ul>
			<b>Methods</b> <ul style="list-style-type: none"> <li>• Ground</li> <li>• Air</li> <li>• Chemigation</li> </ul>	

/// ULTIMATE DISEASE CONTROL: BENEFITS OF SERENADE® FUNGICIDES														
	Alternaria Species	Botrytis	Sclerotinia	Xanthomonas	White Mold	Aerial Stem Rot	Erwinia	Powdery Mildew	Phytophthora	Pythium	Rhizoctonia	Verticillium	Soil Health	Resistance Management
Serenade® Opti	✓	✓	✓	✓	✓	✓	✓	✓						✓
Serenade ASO	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

**IMPORTANT:** This bulletin is not intended to provide adequate information for use of these products. Read label before using these products. Observe all label directions and precautions while using these products. Not registered for use on all crops in California.

