



SERENADE® ASO SOIL AND FOLIAR FUNGICIDE

Serenade® ASO fungicide is a powerful tool designed to protect against the effects of soil and foliar bacterial and fungal diseases.

Applied at planting or through chemigation, Serenade quickly builds a disease-protection zone around the seed or transplant. As the plant's roots grow, the beneficial bacteria in Serenade ASO formulated and provided at optimized levels grow with them, expanding the disease protection zone and attaching themselves, like armor, to the roots of the plant.

Applied as a foliar spray, Serenade ASO protects crops against diseases such as *Botrytis*, Powdery mildew, *Sclerotinia*, *Xanthomonas* and *Erwinia*.

PERFORMANCE

The active ingredient in Serenade ASO fungicide, *Bacillus subtilis* strain QST 713, is a beneficial bacterium. The beneficial bacteria in Serenade ASO act as small factories, producing bioactive compounds in addition to those in the product. These bioactive compounds provide three different effects important for healthy, high-yielding plants.

First, the lipopeptides destroy fungi on contact, while other compounds attack bacteria. Second, *Bacillus subtilis* QST 713 induces systemic resistance which primes plants to defend themselves against pathogens as they grow. Third, Serenade ASO has an important biological chemistry that combats plant stressors like salinity, drought and heat.

Key Benefits

Soil

- Directly attacks diseases in the soil including *Rhizoctonia*, *Fusarium*, *Phytophthora*, *Sclerotinia* and other pathogens
- Activates plant's natural defenses by inducing systemic responses in the plant
- Apply using existing spray, drench or chemigation equipment

Foliar

- Unique mode of action (FRAC Code 44) for defense against the development of resistance
- Exempt from residue tolerance for export to global markets, providing growers with additional solutions to manage the requirements of the global food chain
- Compatible with registered products such as copper, sulfur, micronutrients, insecticides and fungicides

FLEXIBILITY

Serenade ASO is a flexible tankmix option and complements standard disease control programs. It has a four-hour re-entry interval and zero-day pre-harvest interval, making it an excellent tool for late-season disease problems, right up to and including the day of harvest. Serenade ASO fungicide can be applied in a number of ways including:

- Shanked-in or injected applications prior to, at or post-planting, alone or with most types of liquid nutrients
- In-furrow applications as a direct spray into the furrow just before seeds are covered
- Drench applications at any stage of growth



YIELD

Using Serenade® ASO fungicide protects the plant from diseases and prevents damaging effects from stress, thereby increasing yield. Field trials and grower demos show disease control and yield increases across a large variety of crops including legumes, root and tuber vegetables and fruiting vegetables. Potato growers using Serenade ASO report fewer skips, reduced need for resets, increased total yields and improved grading quality. Cucurbit growers report larger, greener and more vigorous plants when using Serenade ASO. Processing tomato growers report several days' earlier harvests and yield improvements of up to 15% over untreated fields, while fresh market growers report higher marketable yields and improvements in fruit size, compared to fungicide standards.

Registered Crops
Brassica (Cole) Leafy Vegetables <ul style="list-style-type: none"> • Broccoli • Cabbage • Cauliflower • Brussels Sprouts • Collards • Kale • Mustard Greens • Kohlrabi • Other brassica leafy vegetable crops
Bulb Vegetables <ul style="list-style-type: none"> • Onions • Garlic • Shallots • Other bulb vegetable crops (including those grown for seed production)
Grapes
Citrus Fruit <ul style="list-style-type: none"> • Oranges • Grapefruit • Lemons • Other citrus fruit crops
Pome Fruit

Registered Crops (cont.)
Corn <ul style="list-style-type: none"> • Sweet corn • Popcorn • Seed corn • Silage corn • Field corn
Root/Tuber and Corm Vegetables <ul style="list-style-type: none"> • Carrots • Potatoes • Sweet Potatoes • Beets • Turnips • Other root/tuber and corm crops (including those grown for seed production)
Fruiting Vegetables <ul style="list-style-type: none"> • Peppers • Tomatoes • Eggplant • Other fruiting vegetable crops
Cucurbits <ul style="list-style-type: none"> • Cucumbers • Cantaloupes • Squash • Watermelons • Other cucurbit vegetable crops
Leafy Vegetables <ul style="list-style-type: none"> • Lettuce • Celery • Spinach • Parsley • Radicchio • Other leafy vegetable crops
Legume Vegetables (Succulent or Dried) <ul style="list-style-type: none"> • Beans • Green beans • Snap beans • Soybeans • Dry beans • Peas • Lentils • Other legume vegetable crops (including those grow for seed or oil production)
Stone Fruit
Strawberries

Serenade ASO is part of a collection of biological fungicides and insecticides from Bayer that gives growers more options in their integrated disease management programs and the fight against resistance.

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

