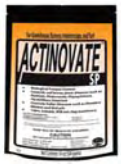
FLORALBUZZ
A GROWER'S REFERENCE TO FLORAL CARE
JULY 2009

Biological Fungicide
For Foliar Spray Or Soil Drench

ACTINOVATE® SP
BIOLOGICAL FUNGICIDE



Actinovate® SP is a high concentration of patented beneficial bacteria on a 100% water soluble powder. This powerful new product effectively controls/suppresses a wide range of soil borne diseases (when applied as a drench) and foliar diseases (when applied as a spray). Use Actinovate SP for *Pythium, Phytophthora, Fusarium, Rhizoctonia* and other root decay fungi. Foliar diseases controlled/suppressed include powdery mildew and *Botrytis*. In fact, when used as a preventative, researchers have seen Actinovate® SP work as well or better than most chemicals.

How it Works

Actinovate® SP contains a high concentration of the microorganism *Streptomyces lydicus* strain WYEC 108. When introduced into the root zone or applied to foliage this microbe colonizes and grows around the structure of the plant. While settling on the foliage or in the root's rhizosphere, Actinovate® microbes form a synergetic relationship, feeding off of the plant's waste materials while secreting beneficial and protective by-products. This combination of the colonization and the protective secretions forms a defensive barrier around the plant which in turn suppresses and controls soil pathogens. In addition, *S. lydicus* also has been shown to prey on certain pathogens, disrupting their cell walls and disabling them in the process.

Trials & Research

Streptomyces lydicus WYEC 108 is currently used in products by thousands of turf, agriculture and horticulture professionals around the world. To request more research please contact your MGS Horticultural sales representative.

Actinovate on the hunt.
Using an electron microscope, the above magnified photo shows *Streptomyces lydicus* strain WYEC 108 attacking and disrupting the membrane of a *Pythium* strand.

Safe & Effective For:

- ***Annuals***
- ***Perennials***
- ***Turf & Golf Courses***
- ***Tree & Shrubs***
- ***Approved for Organic Use***
- ***Landscape Transplants***
- ***Vegetables, Herbs & Many More***

Fight Powdery Mildew!

Gerbera Daisies treated with Actinovate® SP

Gerbera Daisies untreated and infected with powdery mildew

Gerbera Daisies treated with Actinovate® SP

Gerbera Daisies untreated and infected with powdery mildew

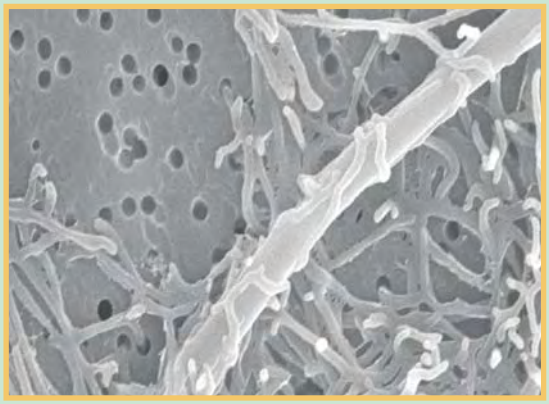
Directions For Use

Actinovate® SP can be used as a drench, liquid feed, irrigation, spray or similar application. It is compatible with fungicides, fertilizers and biological stimulants. Actinovate® SP is 100% soluble and does not need constant agitation to keep it suspended in a solution. It will not clog machinery.

Soil Drench: Dissolve 4-6 oz. of Actinovate SP into 100 gallons to create solution. Apply until soil is saturated without runoff. Apply at seeding, transplant, as a dip or even late in plant development.

Foliar Spray: Use 6 – 12 oz. Actinovate SP in 100 gallons of water per acre. Apply to all areas of foliage and plant to wet just prior to run off. Reapply every 7 – 14 days depending on disease pressure. For best results use in conjunction with a spreader-sticker.

Technical Information



Organism (Active Ingredient):
Streptomyces lydicus strain WYEC 108 Patented worldwide

General Description:
Saprophytic rhizosphere colonizing actiomycete

Soil Diseases Suppressed/Controlled:
Pythium, Phytophthora, Fusarium, Rhizoctonia, Verticillium and other root decay fungi

Foliar Diseases Suppressed/Controlled:
Powdery Mildew, *Botrytis* and others

Origin:
Isolated from the roots of a linseed plant

Temperature Tolerance:
Spores of *S. lydicus* are regularly frozen at very low temperatures for storage. Temperatures above 140 °F will sterilize the spores. Germinated spores (which occur, for instance, when spores are added to growing media) can survive the same temperature range as long as there is adequate moisture and a food source such as peat, bark or humates available.

PH Tolerance:
S.lydicus can survive a pH range 4.0-10.0. The organism is active between 5.0 and 9.1 pH.

Longevity:
The spore shelf life is guaranteed at 12 months. Germinated spores can survive much longer if there is a food source, moisture and minimal microbial competition (such as in bagged potting soil). Storing in refrigerated conditions may extend the shelf life.

Chemical Compatibility:
S.lydicus is compatible with all chemical fungicides and fertilizers. Bactericides at levels above 75ppm should not be used in conjunction with it.

UV Sensitivity:
The bacterium is not UV sensitive.

By-Products:
Siderophore, chitenase, and several antibiotics.

OMRI™ Listed

Can be used in organic gardening.