

Root Disease Protection.

Reduce Fertilizer Use.

Long-Term Greening.

Slow-Release Iron.

Humic Acid.

Increase Vigor.

Attack Fungi.

Beautiful Plants.



Actino-Iron®

BIOLOGICAL FUNGICIDE

with iron & humic acid

The Ultimate Fungicide for Soil Incorporation

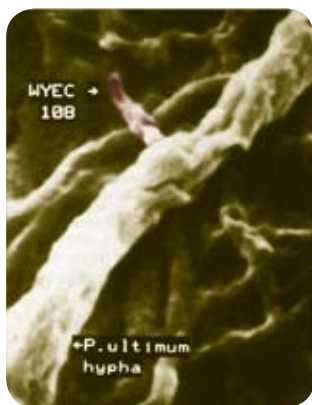
Actino-Iron is a high concentration of patented beneficial bacteria on an iron and humic acid carrier. This powerful new product effectively suppresses a wide range of soil borne diseases including *Pythium*, *Phytophthora*, *Fusarium*, *Rhizoctonia* and other root decay fungi. In fact, when used as a preventative, researchers have seen Actino-Iron work as well or better than most chemicals. In addition, the special properties of the Actino-Iron microbe combined with the iron and humic acid helps plants grow stronger and larger. Plants treated with Actino-Iron will have a robust root system and long-term greening.

Protects Roots Against:

- *Pythium*
- *Phytophthora*
- *Fusarium*
- *Rhizoctonia*
- And Other Root-Borne Diseases

Provides Slow-release Iron To:

Petunias, Poinsettias, Calibrachos,
Geraniums, Mums, Annuals, Perennials,
Shrubs, Trees, Grasses, Herbs
and Vegetables



Actino-Iron 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.

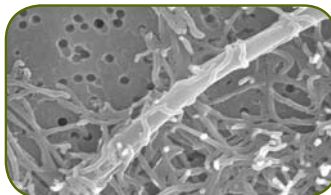
How it Works

Actino-Iron contains a high concentration of the microorganism *Streptomyces lydicus* strain WYEC 108. When introduced into the soil, this microbe colonizes and grows around the root system of the plant. While settling in the root's rhizosphere, the Actino-Iron microbe forms a synergetic relationship, feeding off of the plant's waste materials while secreting beneficial and protective by-products. The combination of 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 both published and unpublished research please contact the Natural Industries corporate office or your local products supplier.

Cures iron deficiency problems on calibrachos and petunias.



Call 888.261.4731 for more information.

Protect & Green At The Same Time!



Salvia mums. Left is untreated. Right is treated with Actino-Iron.

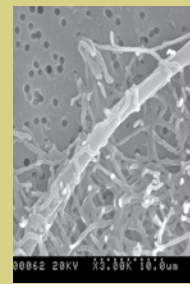
Directions For Use

Actino-Iron can be used as a soil amendment or a top dressing. As a soil amendment, it can be incorporated into the growing media by the grower or it can be incorporated directly into a custom mix by a professional mix manufacturer. It is compatible with chemical fungicides, insecticides, fertilizers and other biological products. Actino-Iron can also be added at transplanting.

Soil Incorporation: Evenly blend Actino-Iron into growing media at a rate of 5 lbs. per cubic yard.

Top Dressing: Use 1 teaspoon of Actino-Iron per 6-inch pot or 1 tablespoon per gallon pot. Sprinkle evenly or scratch in near base of plant. Water in immediately afterwards.

Protect & enhance your
plant's root system.



Technical Information

Organism (Active Ingredient):

Streptomyces lydicus strain WYEC 108
Patented worldwide

General Description:

Saprophytic rhizosphere colonizing actinomycete

Diseases Suppressed/Controlled:

Pythium, *Phytophthora*, *Fusarium*, *Rhizoctonia*, *Verticillium*,
Postia, *Geotrichum*, *Sclerotinia* and other root decay fungi

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:

Actino-Iron's shelf life is guaranteed at 18 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 75 ppm should not be used in conjunction with it.

UV Sensitivity:

The bacterium is not UV sensitive.

By-Products:

Siderophore, chitinase, and several antibiotics.

OMRI™
Listed

can be used in organic gardening.

www.naturalindustries.com

Use Actino-Iron to Protect & Green Your Plants.

Eliminate Iron Chelates!



Petunias treated with Actino-Iron.

Attack Root Disease!



Primroses. Plant on left untreated. Plant on right treated exclusively with Actino-Iron.

Add Actino-Iron To Your Growing Mix Today!



Shrub treated with Actino-Iron prior to planting.

Features & Benefits

- Controls soil borne diseases including *Pythium*, *Rhizoctonia*, *Fusarium*, *Phytophthora*, *Verticillium* and other root rot diseases
- Contains complexed, slow-release iron
- Contains humic acid
- Enhances root systems
- Promotes plant vigor and strength
- OMRI Listed
- Low 4-Hour REI
- Non-phytotoxic, will not burn plants
- Survives in bulk, bagged or baled potting soil for up to two years
- Reduces loss, increases production
- Multiple modes of anti-fungal action

For Use On

Annuals, Perennials, Turf & Golf Courses, Trees & Shrubs, Landscape Plants, Vegetables, & Herbs.



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