

# MYCORRHIZAL INOCULANT

KNOWN WORLDWIDE FOR SIMPLY THE BEST...
...NATURAL FERTILIZER & SOIL BUILDERS!

# SUSTÅNE GRANULAR ARBUSCULAR MYCORRHIZAL INOCULANT

#### **Description:**

Mycorrhizal fungi are used to treat disturbed soils that have been depleted of beneficial microorganisms. Mycorrhizae are major facilitators in soil microbiological processes. The addition of mycorrhizal inoculants has a positive effect on microbial populations by providing an environment for organisms that aggregate the soil, convert matter to available plant nutrients and suppress pathogens, which are generally present in higher populations when mycorrhizae are not present and when soils are compacted and anaerobic.

## **About Mycorrhizal Fungi:**

Mycorrhizal fungi are living organisms that provide several benefits for their host plant. These organisms are entirely dependent upon their symbiotic relationship for survival and consequently provide a number of services and materials to assure their host plant's survival and productivity. The host plant provides nourishment to the mycorrhizae through plant root exudates and sugars. While most plants form an association with mycorrhizal fungi, not all plants require mycorrhizae to survive. However most plants are more vigorous and more resistant to plant senescence when in the presence of symbiotic mycorrhizae.

SUSTÅNE'S PROPRIETARTY BLEND
OF FOUR SELECT
ENDOMYCORRHIZAE SPECIES OF
WHICH 85% OF ALL PLANTS FORM
AN ASSOCIATION WITH.

### Benefits of Sustane Mycorrhizae:

Efficient use of water and plant nutrients: Upon colonization of the host plant, mycorrhizae begin to significantly increase the plant's access to the soil resource pool by extending (literally miles of additional) microfilaments known as hyphae throughout the rhizoshpere (root zone). These threadlike structures extract both soil moisture and plant nutrients from an enlarged area and from minute sites that are inaccessible to bare roots drawing water and nutrients from a volume of soil that is 40 to 50 times greater than what the plant alone can access.

#### **Enhanced Plant Immune and Defense System:**

Mycorrhizae provide access to soil nutrients such as phosphorous, calcium, sulfur, ammoniacal nitrogen and zinc. These specific plant nutrients are key to the plant's formation of immuno-defense compounds such as alkaloids, terpenes phenols, and flavinoids. When these compounds are present at sufficient levels in a plant it has the capacity to fend off pests and pathogens.

Improved Soil Structure: As mycorrhizal hyphae develop they excrete a glue-like substance called "glomalin". Glomalin is an important substance found in well-aggregated soils that creates additional porosity, which allows for increased movement of air, water and beneficial soil organisms throughout the soil profile. Many of the common root pathogens actually prefer waterlogged and compacted soils (anaerobic conditions). Conversely, an oxygen-rich (aerobic) soil environment created by well aggregated soils favors many of the beneficial microorganisms that assist plants in soil mineralization (of plant nutrients) and help in the suppression of plant and soil pathogens.



#### **APPLICATIONS AND RATES**

Rates: Coverage

Apply 60 lb. per acre 1.4 lb. covers 1,000 ft<sup>2</sup> @ 60 lb. per acre Apply 7 g per 1 m<sup>2</sup> 700 g covers 100 m<sup>2</sup> @ 70 kg per hectare

Remember that mycorrhizae require (light) coverage or soil incorporation and should form an association with living plant roots within days after incorporation.

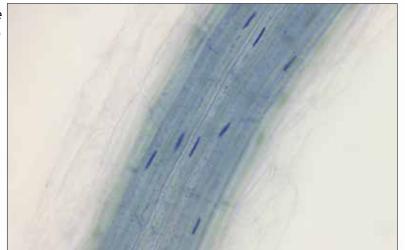
Apply mycorrhizae with the first pass with seed and Sustane organic fertilizer (e.g. 4-6-4, 5-2-4, 6-1-3, or 8-2-4). Follow first pass application with mulch or other cover.

**Top Dress:** Incorporate mycorrhizae onto the soil at or below seed placement or root zone and work lightly into soil.

**Seed Drilling:** Incorporate mycorrhizae into the soil at or below seed placement.

**Broadcast and Till:** Uniformly apply organic fertilizer and mycorrhizae over the seedbed before seeding. Broadcast seed and cover the seeded area

by light incorporation or surface tillage, or apply a light mulch layer over the seed and mycorrhizae.



Light microscopy image of a plant root with an effective mycorrhizal infection. Blue stained portions represent effective colonization of the root by the endo-mycorrhizae.

#### Sustane Endo-Mycorrhizae Inoculant

(guar. min. 200 spores per gram)

Medium Grade, 200 SGN (2.8 mm - 1.4 mm)

Item #: 10-2500

Package Size: 40 lb. bags Units / Pallet: 50 bags / pallet

#### Storage:

Store Sustane Arbuscular Mycorrhizal Inoculant in a cool, dry environment. Store and handle mycorrhizae as one would with seed. Use product within two years of purchase. Caution: Keep out of reach of children.

DISTRIBUTED BY:

# Arbuscular Mycorrhizal Inoculant

Auxiliary Soil and Plant Substance Non-Plant Food

Contains vesicular arbuscular mycorrhizal fungi

| Endo-Mycorrhizae Inoculant | 200 spores/g |
|----------------------------|--------------|
| Rhizophagus irregularis    | 140 spores/g |
| Rhizophagus clarus         | 20 spores/g  |
| Septoglomus deserticola    | 20 spores/g  |
| Claroideoglomus etunicatum | 20 spores/g  |

Information regarding the contents and levels of metals in this product is available on the internet at <a href="http://www.aapfco.org/metals.html">http://www.aapfco.org/metals.html</a>