

# **Mycorrhizae and Microbes – Ecology and use in the garden**

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# Mycorrhizae Basics

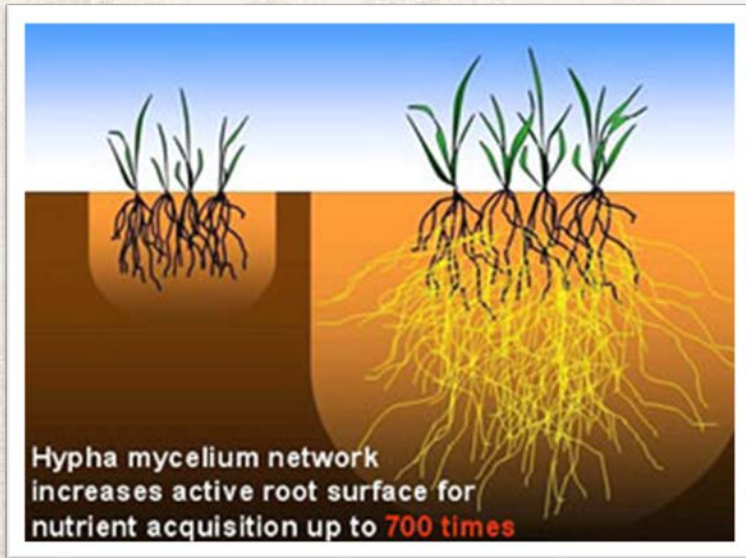
The most common forms of mycorrhizae are **ENDO** and **ECTO**:

- **ENDO mycorrhizae** form with garden variety plants and fruit trees. This makes up roughly 80% of plants in the world. Also called VAM or Arbuscular.
- **ECTO mycorrhizae** form with most varieties of trees, such as softwood conifers, broadleaf hardwoods, most shrubs and woody ornamental landscapes bushes.





# MYCORRHIZAL FUNGI BENEFITS



- Enhanced nutrient and water uptake
- Enhanced root growth
- Enhanced yields
- Improved tolerance of drought stress
- Improved tolerance to transplant shock

Mycorrhizal fungi increase the surface absorbing area of roots up to 700 times, improving a host plant's ability to access and utilize the soil resources significantly better. Mycorrhizae enhances nutrient uptake by increasing the absorption area of the root mass.

Mycorrhizal fungi release enzymes into the soil that dissolve locked up nutrients, such as phosphorus, iron, and other tightly bound soil nutrients. This process of accessing locked up nutrients is very important and explains why non-mycorrhizal plants require high levels of fertility. Mycorrhizal fungi form an intricate web that captures and assimilates nutrients, which helps conserve nutrients in the soil.



# BACTERIA & OTHER FUNGI

## Bacteria and Trichoderma Benefits Summarized

- Production of high levels of amino acids to enhance plant growth
- Reduction in nitrogen fertilizer inputs.
- Conversion of nitrates and ammonia to biomass, that may otherwise be lost
- Naturally occurring organisms, not genetically modified
- Symbiotic relationship with mycorrhizae and other beneficial fungal organisms
- Promote humus formation
- Enhance active fungal length and biomass
- Increase total bacterial biomass
- Increase nitrogen fixing organisms





# Application types

Water Soluble (existing plants) and Granular (Transplanting).



Plant Success Organics Soluble

- Water soluble comprehensive package product
- Contains both endo and ecto mycorrhizae
- Contains 13 species bacteria and trichoderma
- Easy to use on existing plants or through fertigation
- Certified OMRI and OIM organic
- Seaweed and humic acids promote biology



Plant Success Organics Granular

- Granular comprehensive package product
- Contains both endo and ecto mycorrhizae
- 13 species bacteria and trichoderma
- Use on transplants
- Certified OMRI and OIM organic
- 3-1-2 starter fertilizer