Use of Mycorrhizal Fungi
In Softwood Propagation and Perennials Production

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Mycorrhizal Root Colonization

Liners potted July 2001, roots cut September 2002 (n=8)
Laboratory analysis at Premier Tech, Quebec

Cornus Ivory Halo

% root colonization

- Nursery mix
- Add Premier Mycorise
Laboratory plant-drying oven with bagged samples
Mycorrhizae on top growth

Liners in 1-gallon pots July 2001, cut September 2002 (n=20)
Measure of top dry weight after 24 hours at 105°C

- Spiraea Froebeli
- Cornus Ivory Halo

Bar chart showing:
- Nursery mix
- Add Premier Mycorise

Top dry weight (grams)
Mycorrhizae and water stress

Chile pepper plants (*Capsicum annuum*) exposed to drought cycles

Plant on the right was inoculated with a desert mycorrhizal fungi

Photos by F.T. Davies, Texas A&M University, 2002
Plants that are colonised by mycorrhizal fungi have a higher tolerance to environmental stresses such as transplant, drought, poor soil, high salts, cold weather, root rot.
Mycelial network of ectomycorrhiza *Suillus b.* in association with *Pinus sylvestris*

Photo from J.R. Leake, University of Sheffield, UK
Canadian Journal of Botany
2004
Mycorrhizal Associations
D.H. Marx, Plant Health Care Inc., 1997

- No mycorrhizae
  Early-succession plants
  Lamb’s quarter, buckwheat, broccoli, spinach, beet

- Endo-mycorrhizae
  VAM, Ericaceous (rhododendron), Orchidaceous
  Very common, occurs on 85% of green plants
  Turf grass, vegetables, most shrubs, most trees

- Ecto-mycorrhizae
  On about 10% of plants, mostly late succession plants
  Fir, spruce, pine, birch, beech, oak, linden, willow
Mycorrhizae on root weight
Juniperus 'Blue Star' cuttings planted 23 September.
Measure of root dry weight at 20 weeks after potting. (n=63)
Five weeks after potting
3- Byland mix
4- no P. + mycorrhizae
Mycorrhizae on branching
Flax (Linium) cuttings potted July 4 (n=21)

Number of branches per plant

- Perennial mix
- Byland mix
- Byland + Premier Mycorise

1-Aug
3-Sep
3-Oct
Endo Mycorrhizae

3 - Roots granule
Applied August 1st

1 - Untreated
Picture on August 30
Golden chanterelles, ecto-mycorrhizal association in Douglas-fir and hemlock forests of the West Coast

Photo by T.F. Lockwood
US Department Agriculture
2003