

33% increase in total fresh weight

SMOOTH BARK MEXICAN PINE

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OBJECTIVE

Determine the benefits of mycorrhizal inoculation of Smooth Bark Mexican Pines (*Pinus pseudostrobus*) in a forestry nursery in Mexico.

METHODS

Mycorrhizal inoculation was done on 10 weeks old seedlings at the Morelia nursery in March 2004. Fungal inoculum of *Pisolithus tinctorius* was added or not to 5 ml of water and applied individually to seedlings with a custom hand sprayer. Mycorrhizal inoculum was added according to the following recommendations:

Spores 1 = 1 million spores per plant
Spores 2 = 3 million spores per plant
Hyphae 1 = 50 propagules per plant
Hyphae 2 = 100 propagules per plant

There were 77 seedlings per tray and 4 trays per treatment. Eight individuals per tray were harvested after 16 weeks; their height, collar diameter, total fresh weight, aerial fresh/dry weight, root fresh/dry weight was measured.

RESULTS

Pinus pseudostrobus responded very well to mycorrhizal inoculation with *Pisolithus tinctorius* (Figure 1). Significant increases in all growth parameters measured were observed between mycorrhizal and non-mycorrhizal seedlings. There were no significant differences between inoculum type and level of inoculum added. Significant increases for collar diameter (20%), height (19%), total fresh weight (33%), aerial fresh weight (30%), root fresh weight (40%), aerial dry weight (33%) and dry root weight (43%) resulted in plants of greater vigour.



Figure 1
General appearance of *Pinus pseudostrobus* exposed or not to mycorrhizal inoculation.

