

Growth increase with mycorrhizae

POINSETTIA

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OBJECTIVE

Compare the growth of poinsettia cultivated with and without a mycorrhizal fungus (*Glomus intraradices*) when grown in a peat based mix.

METHODS

Poinsettia cuttings were previously rooted before sticking them in either the mycorrhizal inoculated or the non inoculated control growing mix. They were grown in 6 inch pots (azalea type). The day temperature was kept at 26.5-35 °C during the first 4 weeks and at a maximum of 24°C for the last 10 weeks. Night temperature for the same periods was kept at 20-21°C and 15.5-16.5°C respectively.

Fertigation practices were used with commercial fertilizers. The mycorrhizal plants were fertilized with a 20-2-20 (Plantex/Plantco Inc.) prepared in order to have a concentration of 200 ppm of nitrogen. Non-mycorrhizal plants received a fertilizer with more phosphorus, 20-10-20 which was applied at the same nitrogen

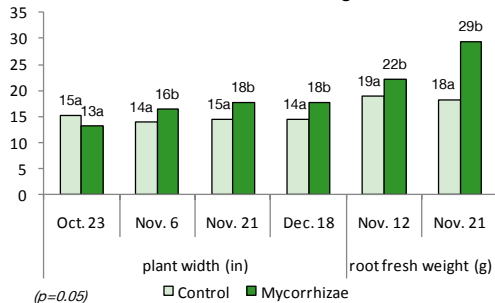
rate as 20-2-20. Irrigation solution was applied with a drip tube irrigation system.

From the 3 000 poinsettias grown in each growing media, 20 plants were monitored from each group throughout their growth. The plant width, the root fresh weight and the number of coloured bracts were recorded. At the end of the trial which lasted 14 weeks (September 10 to December 18), plant height and bract width were measured and the number of leaves were counted.

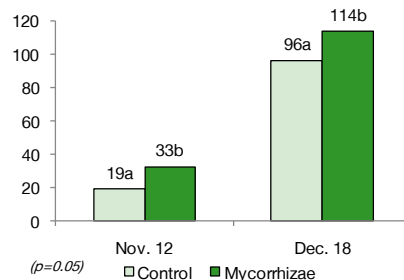
RESULTS

Mycorrhizal inoculated poinsettia showed growth differences from the controls. By November 6, plants became statistically larger. The coloured bracts appeared sooner, 73% more numerous by November 12. The other measured parameters also showed that the mycorrhizal inoculated plants were larger than the controls.

Effect of mycorrhizae on poinsettia plant width and on root fresh weight



Effect of mycorrhizae on the number of coloured bracts of poinsettia



Effect of mycorrhizae on poinsettia growth parameters after 14 weeks

