

Increased survival

GERBERA

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OBJECTIVE

Determine the effect of the mycorrhizal fungus (*Glomus intraradices*) on the survival and growth of gerbera produced in tissue culture.

METHODS

Vitro-plants of gerbera were transferred from test tubes to substrates in Cell Pack multicell containers (100 cm³).

An acclimatization period of six weeks was maintained in a small plastic tunnel with a mist in the first two weeks. Afterwards, the plants were transplanted in 10 cm pots filled with a peat based substrate and transferred to a greenhouse for 11 weeks. The substrate (75% Canadian sphagnum peat moss and 25% vermiculite) was either inoculated with the mycorrhizal fungus *Glomus intraradices* or not inoculated (Control).

Plants were watered as needed and fertilized weekly with 100 ml commercial fertilizer which contained per litre 480 mg of

mgSO₄.H₂O, 750 mg of Ca(NO₃)₂.4H₂O, 31.4 mg of 10-52-10 (Plant Products Co. Ltd., Bramalea, ON, Canada) and 550 mg of 12-0-44 (Plant Products Co. Ltd.).

The growth response was measured by harvesting one random replicate of each treatment in each block 4, 8, 12 and 16 weeks following inoculation. The plant tissues were oven-dried for 72 h at 65°C (105°F) before dry weights were recorded.

RESULTS

At 8 weeks after mycorrhizal inoculation, survival rates of inoculated plantlets were increased by 5,4%. Shoot dry weight was increased significantly by mycorrhizal inoculation during the growth of gerbera, by 31% after 8 weeks and 17% after 12 weeks. As for the root dry weight, increases were 35% after 8 weeks and 8% after 12 weeks. The mycorrhizal inoculation had a positive impact on survival and growth of gerbera.

