More flowers with mycorrhizae

GERANIUM

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OBJECTIVE
Compare vegetative growth, flowering and colonization of geraniums grown in a commercial greenhouse with growing media inoculated with the mycorrhizal fungus *Glomus intraradices*.

METHODS
Pelargonium hortorum Bailey Sprinter Scarlet were sown in flats. Seedlings were transplanted into 1.18l plastic pots containing PRO-MIX®.

Prior to planting, mycorrhizal inoculant was placed in planting holes. The non-mycorrhizal treatment received the same inoculum but inactivated by autoclaving for one hour. Five grams of Osmocote 18-6-12 were top dressed in each pot after transplanting.

A randomized complete block design was set up in a greenhouse with five replicates. A supplemental lighting HID (320 mmol/s) was provided when required. Plants were watered when needed with overhead irrigation. A supplemental feeding of 100 mg / l of 20-10-20 was applied seven weeks after.

Plants were harvested when the first floret opened, allowing for a comparison of treatments at the same stage of plant maturity. At harvest, the number of days to flowering, shoot and root fresh weights, height and width at the two widest points were recorded. Developmental stage of the inflorescence was categorised as follows: one open floret, inflorescence above the foliage but no florets open and inflorescence visible.

RESULTS
Results of analysis of variance indicated significant differences *(p= 0.05)* due to mycorrhizae for the number of ramifications, days to flowering, number of visible inflorescences, lateral branch length and number of flowers per plant. However, other parameters monitored such as shoot and root fresh or dry weight, plant height, width, leaf area and leaf number did not vary significantly due to mycorrhizal colonization.

The effect of mycorrhizal fungi on flowering may be directly related to lateral branch development and overcoming apical dominance. Other results obtained with commercial growers have shown that increased ramifications are a major effect encountered with mycorrhizae.