

Growth response of sweet corn (*Zea mays*) to *Glomus mosseae* inoculation over different plant ages.

ABSTRACT

A glasshouse study was conducted to investigate the growth response of sweet corn (*Zea mays*) to mycorrhizal fungi inoculation over different plant ages (2, 4, 6, 8 and 10 weeks) and to determine the interaction between the host and mycorrhizal fungus on mycorrhizal development, using soil substrate as inoculum for *Glomus mosseae* . Inoculation had no significant effect on growth parameters in plants harvested at early ages in terms of plant height, total root length, root and shoot dry weights. The significant effect of mycorrhizal inoculation was observed on plants of eight weeks old. Percentage of mycorrhizal colonization and number of spores increased significantly at plants of 2 weeks old (24.1 and 39.2%), respectively while; the highest AMF spores level was recorded at plants of four weeks old. Inoculation with *G. mosseae* enhanced growth of sweet corn by increasing concentration of N, P and K (24.2, 8.4 and 18.2%), respectively. We concluded that the mycorrhizal inoculation need a time (not less than one month in sweet corn) until showed the beneficial effects on host plant to be desired.

Keyword: Symbiotic colonization; Benefit of AMF; Am fungi; Sweet corn; *Glomus mosseae*.