Influence of arbuscular mycorrhizal fungi inoculation on plant growth performance, physiological changes and yield quality of sweet basil grown in soilless culture media.

ABSTRACT

A study was conducted to investigate the growth performance, physiological changes and yield quality of sweet basil (Ocimum basilicum) to inoculation by different rate (0, 10, 20 and 30g inoculums) of Arbuscular Mycorrhizal Fungi (AMF) under the soilless culture system. The result showed that plant height, total leaf area, plant fresh and dry weight, root shoot ratio, total chlorophyll content, photosynthetic rate, stomatal conductance, total ethanol soluble carbohydrate and leaf ascorbic acid were significantly influenced by AMF. Oil production increased significantly with increasing the inoculums rate on both fresh and dry weights of basil. Spore counts and percentage of root colonization were not significantly affected by AMF inoculation.

Keyword: Sweet basil; Arbuscular mycorrhizal fungi; Oil production; Photosynthesis rate; Root colonization.