World Academy of Science, Engineering and Technology
International Journal of Agricultural and Biosystems Engineering
Vol:11, No:11, 2017

Influence of Vesicular Arbuscular Mycorrhiza on Growth of Cucumis myriocarpus Indigenous Leafy Vegetable

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Abstract : Climate-smart agriculture dictates that underusilised indigenous plant, which served as food for local marginalized communities, be assessed for introduction into mainstream agriculture. Most of the underutilised indigenous plants had survived adverse conditions in the wild; with limited information on how the interact with most abiotic and biotic factors. Cucumis myriocarpus leafy vegetable has nutritional, pharmacological and industrial applications, with limited information on how it interacts with effective microorganisms. The objective of this study was to determine the effects vesicular arbuscular mycorrhiza (VAM) on the growth of C. myriocarpus indigenous leafy vegetable under greenhouse conditions. Four-weeks-old seedlings of C. myriocarpus were transplanted into 20-cm-diameter plastic pots. Two weeks after transplanting, VAM was applied at 0, 10, 20, 30, 40, 50, 60 and 70 g Biocult-VAM plant. At 56 days after treatments, plant growth variables of C. myriocarpus with increase Biocult-VAM levels exhibited positive quadratic relations. Plant variables and increasing concentrations of salinity exhibited positive quadric relations, with 95 to 99% associations. Inclusion, Biocult-VAM can be used in sustainable production of C. myriocarpus for functional food security.

Keywords : abiotic, biotic, rhizasphere, sustainable agriculture
Conference Title : ICSAEF 2017 : International Conference on Sustainable Agriculture, Environment and Forestry
Conference Location : Cape Town, South Africa
Conference Dates : November 02-03, 2017