Title of Article: SCREEN HOUSE AND FIELD INVESTIGATIONS OF Arbuscular mycorrhiza AND ORGANIC FERTILIZER FOR THE CONTROL OF THE ROOT KNOT NEMATODE, Meloidogyne incognita INFECTING COWPEA IN SOUTH WESTERN, NIGERIA

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Outlet: Journal of Agricultural Science and Environment

Date:

Abstract

This study was undertaken to determine the potential of individual and combined effects of Glomusmosseae, a mycorrhiza fungus and organic fertilizer for the management of Meloidogyne incognita, aroot knot nematode infection of cowpea (IT90K-277-2) under Screen house and field conditions. Thestandardised method of evaluating crop germplasm for resistance to M. incognita including crop yieldwas employed. M. incognita caused significant reduction in the yield components of the cowpea varietyboth in the screen house and under field conditions. Single and combined treatments of Glomusmosseae and organic fertilizer significantly increased the pod weight, grain yield and number of podsper plant of cowpea plants as compared to nematode infected plants. Single treatments of Glomusmosseae and organic fertilizer significantly suppressed root galling; inhibited nematode reproductionand nematode population both in the screen house and under field conditions. The mixture of G.mosseae and organic fertilizer as a treatment was more effective than individual treatments in suppressionof M. incognita. This study shows that G. mosseae has potential in the management of Rootknot nematodes of cowpea and should be exploited with organic fertilizer serving as a viable carrier in Nigeria.