

**INTERACTIONS BETWEEN A VESICULAR ARBUSCULAR  
MYCORRHIZAL FUNGUS, *GLOMUS* SP. AND THE ROOT - KNOT  
NEMATODE, *MELOIDOGYNE JAVANICA*, ON *ACACIA SEYAL* AND  
*ACACIA HOLOSERICEA***

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Vesicular and arbuscular mycorrhizal fungi (VAM) had potential as biocontrol agents when both groups of microorganisms (plant - parasitic nematodes and VAM) occurred simultaneously in the roots or rhizosphere of the same plant. Our study investigated the interactions between *Meloidogyne javanica* and an endomycorrhizal fungus, *Glomus* sp. on *Acacia seyal* and *Acacia holosericea*, a Sahelian and an Australian species with considerable potential for use in reafforestation in Sahelian areas but very susceptibles to *M. javanica*.

In pots, mycorrhizal and non mycorrhizal seedlings have been inoculated with different nematode inoculum densities (100, 250 and 2000 J2s per pot). One month after the nematode inoculation, the biomass and the nematodes development were measured. An histological study was carried out on the development of *M. javanica* in the roots of both acacias.

All the mycorrhizal plants with or without *M.javanica* grew significantly better than non mycorrhizal plants infected or not by *M. javanica*. The mycorrhizal application did not reduce nematode population per plant but significant differences have been measured between nematode populations from mycorrhizal and non mycorrhizal roots of each plant. Mycorrhizae markedly influence plant health by altering plant reactions to nematodes. The mechanisms which could be involved in these interactions are discussed and the possibilities to improve this mycorrhizal effect are exposed.

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