

Effect of *Glomus versiforme* inoculation on reactive oxygen metabolism of *Citrus tangerine* leaves exposed to water stress

Frontiers of Agriculture in China

October 2007, Volume 1, Issue 4, pp 438–443

- [REDACTED] (1) (2)
- [REDACTED] (2)
- [REDACTED] (1) Email author (renxuexia@mail.hzau.edu.cn)

1. College of Horticulture and Forestry, Huazhong Agricultural University, Wuhan, China

2. College of Horticulture and Gardening, Yangtze University, Jingzhou, China

Research Article

DOI (Digital Object Identifier): 10.1007/s11703-007-0072-1

Cite this article as:

Wu, Q., Zou, Y. & Xia, R. *Front. Agric. China* (2007) 1: 438.
doi:10.1007/s11703-007-0072-1

- [1 Citations](#)

Abstract

In a potted greenhouse experiment, *Citrus tangerine* Hort. ex Tanaka was inoculated with arbuscular mycorrhizal (AM) fungus, *Glomus versiforme* (Karsten) Berch, or non-AM fungus as control. Arbuscular mycorrhizal and non-AM seedlings were grown under well-watered or water-stressed conditions after 97 days of acclimation. The reactive oxygen metabolism of *C. tangerine* leaves was studied in order to elucidate whether AM symbiosis affects enzymatic and non-enzymatic antioxidants. The results showed that water stress caused a decrement of 33% for the colonization of *G. versiforme* on *C. tangerine* roots. Under well-watered and water-stressed conditions, *G. versiforme* inoculation increased the leaf phosphorus (P) content by 45% and 27%, and decreased the leaf malondialdehyde and hydrogen peroxide contents by 25% and 21%, and 16% and 16%, respectively, compared with the control. Inoculation with *G. versiforme* enhanced the activities of leaf