

Beneficial effects of mycorrhizal association for crop production in the tropics - a review.

ABSTRACT

Mycorrhiza plays a significant role in sustainable agriculture and has mutualistic symbiotic association with plant roots. There are several species of mycorrhiza and among the species studied *Glomus mosseae* is well known to colonize several vegetables, fruits, cereals and industrial crops. This paper highlighted the symbioses and beneficial effects of arbuscular mycorrhiza fungi (AMF) with tomato (*Solanum lycopersicum*), brinjal (*S. melongena*), potato (*S. tuberosum*), lady's finger (*Abelmoschus esculentus*), cucumber (*Cucumis sativus*), bean (*Phaseolus vulgaris*), pepper (*Capsicum annum*), wheat (*Triticum aestivum*), aerobic rice (*Oryza sativa*), corn (*Zea mays*), durian (*Durio zibethinus*), rambutan (*Nephelium lappaceum*), pineapple (*Ananas comosus*), citrus (*Citrus sinensis*), banana (*Musa acuminata*), oil palm (*Elaeis guineensis*) and kenaf (*Hibiscus cannabinus*). Application of AMF increased nutrient uptake, water relations and perform as bio-protectants against pathogens and toxic stresses. In order to further improve their benefits, it is necessary to ensure the management practices comprising low tillage, abridged use of chemical fertilizers, especially the phosphatic fertilizers.

Keyword: Growth; Infection; Inoculation; Mycorrhizae association; Symbiotic.