

# Phosphorus Uptake and Response of Tomato Plants to Addition of Mycorrhizae in Drought Stressed Conditions

by Lili Sugiyarto, Nur Aeni Ariyanti, Suyitno Aloysius, Djukri

## ABSTRACT

Tomato (*Lycopersicon esculentum* Mill) has a strategic role in the agricultural sector and also in the community's economy. In terms of soil agro-climate, dry land is one of the marginal lands that has various constraints, the most important of which are low soil fertility, limited water availability, and high soil temperatures. One way to utilize marginal land is by useful microorganisms and is a harmless symbiotic fungus, even mutually beneficial between soil-borne fungi and plant roots.

This research in an experimental study using 2 factorial completely randomized design (CRD) namely the addition of mycorrhizae and the frequency of watering. This research was conducted at the Green house of the Biology Gardens, Faculty of Mathematics and Natural Science, UNY. Parameters observed in this study were phosphorus uptake, plant height, number of branches and leaves of plants, stem diameter, root length, plant dry weight, chlorophyll content.

This result showed that addition of mycorrhizae had no effect on the measured parameters, while the frequency of watering had an effect on the measured parameters such as plant height, number of branches and leaves of plants, stem diameter, root length and chlorophyll content.

Kata Kunci: *mycorrhizae, tomato plant response, phosphorus uptake, drought stress*