Arbuscular Mycorrhiza Fungi Improved Oil Palm Seedling Growth

 at Various Condition of Water Stress

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Abstract

Drought can cause significant effect on plant growth and it effects become permanent if the plant not treated immediately. Arbusclar mycorrhizal fungi (AMF) can be used to reduce the negative effect of water stress on oil palm. This study aimed to determine which type of AMF that increase oil palm seedling growth and reduce the effect of water stress condition. The experiment was conducted in green house for 7 months. The treatment design was a factorial (3x4) arranged in randomize completely block design with 4 replications. The first factor was type of AMF i.e. without AMF (mo), *Glomus* sp. (m1) and *Enthrophospora* sp. (m2) and the second factor was the length of water stress i.e. seedlings were water daily (s0), no watering for 7 days (s1), 14 days (s2), and 21 days (s3). The results showed that application of *Glomus* sp. gave the best seedling growth. Water stress treatment of no watering for 21 days inhibited the growth of oil palm seedling. However, effect of AMF on the growth of the seedling are not affected by the duration of water stress treatment, because all AMF treated and non treated seedling showed a similar response to all condition of water stress.