

EFFECT OF WATERING REGIME AND MYCORRHIZAL INOCULATION
ON THE GROWTH OF *Jatropha curcas* (Linn) and *Ricinus communis* (Linn)
SEEDLINGS

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ABSTRACT

This experiment assessed the effect of mycorrhizal inoculation and watering regime: W_0 (watering everyday), W_1 (watering every other day), W_2 (watering once in a week) and Mycorrhizal inoculation: M_0 (No Mycorrhizal) and M_1 (Ectomycorrhizal) on the seedlings of two indigenous shrubs of *Jatropha curcas* (Linn) and *Ricinus communis* (Linn). In each experiment, six experimental treatments were replicated 5 times in each species. Split-split plot experimental design was used to analyze the data obtained for a period of 12 weeks taken fortnightly. The result indicated that in both species, application of ectomycorrhizal enhances morphological growth. The interaction effect showed that application of mycorrhizal and watering at watering every other day (W_1) to field capacity enhanced best morphological characteristics in both species. The highest shoot height (21.88cm) and (43.38cm) in *Jatropha curcas* and *Ricinus communis* respectively, the highest collar diameter (2.19cm) and (1.00cm) in *Jatropha curcas* and *Ricinus communis* respectively and highest leaf area (112.80cm²) and (132.20cm²) in *Jatropha curcas* and *Ricinus communis* respectively. The highest dry weight obtained (5.26g) and (1.90g) in *Jatropha curcas* and *Ricinus communis* respectively. Irrespective of mycorrhizal inoculation, watering at watering everyday (W_0) and watering every other day (W_1) produced highest morphological characteristics in seedlings of *Jatropha curcas* and *Ricinus communis* respectively. Irrespective of species application of mycorrhizal influenced relative water content in the seedlings. In *Ricinus communis* application of mycorrhizal inoculation increase Net assimilation rate with decrease in moisture content, in *Jatropha curcas* increased frequency of watering (W_1) produced the highest leaf turgidity (24.30%).