

**EFFECTS OF SOIL MOISTURE STRESS IN
COMBINATION WITH DIFFERENT POTTING
MEDIA ON THE GROWTH AND YIELD OF BRINJAL**

(Solanum melongina)



BY

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ABSTRACT

An experiment was conducted at the Crop farm of the Eastern University in the *Yala* 2015 to investigate the effects of soil moisture stress under four potting media during different growth stages on the growth and yield of brinjal cultivar 'Palugamam Purple'. The treatments consisted of moisture stress and control in combination with four potting media. T₁ where top soil: red soil: compost 1: 1: 1 ratio in regular irrigation. The same potting media with moisture stress in the T₂ treatment. In T₃, top soil: red soil: goat manure media in similar ratio. The same potting media with moisture stress in T₄ treatment. T₅ where top soil: red soil: cow dung in similar ratio. T₆ is same media under moisture stress treatment. T₇ where control (top soil only). T₈ is same media under moisture stress condition. The experiment was laid out in the Completely Randomized Design with eight treatments and four replications.

The results revealed that there were significant ($P < 0.05$) differences between treatments in the plant heights, leaf area index (LAI), leaf dry weights, fruit dry weights, stem dry weights, fruit length, fruit girth, root dry weights and yield. Among the treatments the highest value for growth attributes were found in the T₁ treatment on plant height, leaf area index (LAI), leaf dry weights, fruit dry weights, stem dry weights, root dry weights, pod length, pod girth and yield. T₃ (top soil + red soil + goat manure-regular irrigation) and T₅ (top soil + red soil + cow dung-regular irrigation) treated plants showed similar results as T₁ treatment. The lowest values were recorded in the T₈ treated plants during the vegetative, flowering, early fruiting and fruiting stages.

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