

The Effectiveness of Using Planting Media based on Biotechnology Agents on the Growth of Ornamental Plants Betel Ivory (*Epipremnum aureum*)

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Abstract

Betel Ivory (*Epipremnum aureum*) is a plant that is easily propagated by cuttings. However, propagation by cuttings prevents the plant from taking root. In order for Betel Ivory to grow well, it is necessary to pay attention to the planting media used. This study aims to determine the effectiveness of providing planting media based on biotechnology agents on the growth of Betel Ivory plant. This study was a quantitative quasi-experimental using Randomized Block Design, because there were differences in the used subjects, so the study used six treatments with four replications. The treatments are K – soil as control, T₁ - Planting media based on biotechnology agents = Pukcapedia planting medium = Burnt Husk + Cocopeat + Raw Husk + Andam + Livestock Manure + liquid fertilizer against pests, anti-fungal, Mycorrhizae (1:1:1:1:1), T₂ - Pukcapedia planting medium + burnt husk (1:1), T₃ - Pukcapedia planting medium + cocopeat (1:1), T₄ - Pukcapedia planting medium + raw husk (1:1), and T₅ - Pukcapedia planting medium + andam (1:1). Follow-up test using Duncan's Post-Hoc Test at 5% level using the SPSS version 26 program. The results of the analysis of variance from the study stated that planting media based on biotechnology agents with a mixture of burnt husks, cocopeat, raw husks, andam, animal manure and liquid fertilizers obtained results < 0.05, which means that it has a significant effect on the parameters measured are the number of leaves, stem height, and root length. These results indicate that the effectiveness of the use of growing media containing many nutrients potassium, calcium, phosphorus, and also

through a fermentation process assisted by biotechnological agents such as rhizobium, mycorrhizae, and phytohormones. The most optimal composition for Betel Ivory plants based on Duncan's Post-Hoc test results is T₂ treatment with a ratio of Pukcapedia planting medium + roasted husks is 1:1. Climatic factors also affect the growth of Betel Ivory, such that plants grows well in place that are not exposed to direct sunlight, normal ambient temperature and humidity, soil moisture that is neither too wet or too dry, and optimal soil pH.

Treatments	Analysis Result
K Treatment	1,00
T ₁ Treatment	2,00
T ₂ Treatment	4,00
T ₃ Treatment	1,25
T ₄ Treatment	1,25
T ₅ Treatment	0,50

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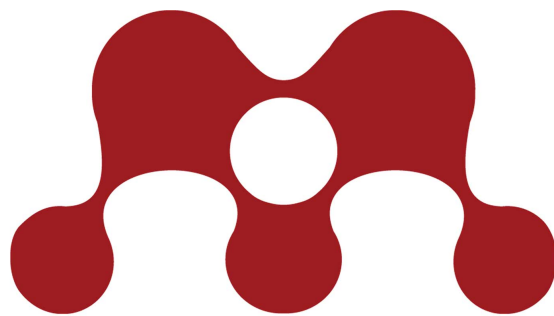
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