

ABSTRACT

Hesti Fitria Dewi, 2022. *The Effectiveness of Using Planting Media Based On Biotechnology Agents on the Growth of Wijayakusuma Ornamental Plants (Epiphyllum oxypetalum (DC.) Haw).* Advisor I Dr. Cartonno, M.Pd., M.T. and II Mimi Halimah, S.Pd., M.Si.

Wijayakusuma ornamental plant (Epiphyllum oxypetalum (DC.) Haw.) is a plant that is easily propagated by cuttings. To overcome this problem, it is necessary to pay attention to the planting media used. This study aims to determine the effectiveness of using planting media based on biotechnology agents on the growth of ornamental plants Wijayakusuma (Epiphyllum oxypetalum (DC.) Haw.). This study used a quasi-experimental quantitative research method (quasi-experimental) with a RAK (Randomized Block Design) design, because there were differences in the subjects used, so the study used six treatments with four repetitions. The treatments used were K – Soil as K – soil as control, T₁ - Planting media based on biotechnology agents = planting medium Pukcapedia = Burnt Husk + Cocopeat + Raw Husk + Andam + Livestock Manure + liquid fertilizer anti-pest, anti-fungal, Mycorrhizal (1 :1:1:1:1), T₂ - Planting media based on biotechnology agents + burnt husk (1:1), T₃ - Planting media based on biotechnology agents + cocopeat (1:1), T₄ - Planting media for biotechnology + husks raw (1:1), and T₅ - Planting media based on biotechnological agents + andam (1:1). Follow-up test using Duncan's Post-Hoc Test at a rate of 5% using SPSS version 26. The results obtained 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 measured parameters. Parameters measured in this study were the number of leaves, stem height and root length. The results showed that T₂ treatment with planting media based on biotechnology agents with a mixture of fueled husk or husk charcoal was the most effective in growing number of leaves, stem height and root length. It contains nutrients, potassium, calcium, phosphorus and a fermentation process assisted by biotechnological agents such as rhizobium, mycorrhizae and phytohormones that affect the growth of Wijayakusuma ornamental plants. The composition of the most optimal planting media based on biotechnology agents for ornamental plants Wijayakusuma (Epiphyllum oxypetalum (DC.) Haw.) based on the results of Duncan's Post-Hoc test T₂ treatment with a ratio of planting media based on biotechnology agents + roasted husks was 1:1. And climatic factors with the growth of ornamental plants Wijayakusuma there is a relationship. Wijayakusuma plants (Epiphyllum oxypetalum (DC.) Haw.) grow well in places that are not exposed to direct sunlight, normal ambient temperature and humidity, soil moisture that is neither too wet nor too dry, and optimal soil pH.

Keywords: *Biotechnology Agent, Planting Media, Burnt Husk or Husk Charcoal, Wijayakusuma (Epiphyllum oxypetalum (DC.) Haw)*