

ABSTRACT

Nabila Luthfiah Azzahra, 2022. *The Effectiveness of Using Planting Media Based on Biotechnology Agents on the Growth of Miana Ornamental Plants (Coleus atropurpureus (L) Benth)*. Supervised by Dr. Cartonno, M.Pd., M.T., Mimi Halimah, S.Pd., M.Si

Excessive use of inorganic growing media can damage soil quality. The solution that can be used is the use of planting media enriched with organic extracts and nutrients with biotechnology techniques to improve soil fertility so that plants get sufficient nutrients. This is done to improve the quality and quantity of plant growth. The purpose of this study was to determine the effectiveness of the application of planting media based on biotechnology agents on the growth of Miana (Coleus atropurpureus (L) Benth) ornamental plants. The method used in this study is a quasi-experimental quantitative method with a Randomized Block Design (RAK) research design. The main parameters measured included number of leaves, stem height, and root length and also supporting parameters including supporting data measured in this study consisted of environmental temperature, light intensity, air humidity, soil moisture and soil pH. The population in this study is ornamental plants with species (Coleus atropurpureus (L) Benth) in the Cinunuk area, Bandung Regency, so that a sample of 24 pieces consisting of six treatments and four repetitions was obtained. After the data has been collected for two months, the observation process is then analyzed by performing normality tests, homogeneity tests and ANOVA tests. Based on the research results, plant media based on biotechnology agents significantly affected the growth of Miana (Coleus atropurpureus (L) Benth) ornamental plants. (1) number of leaves T3, T5, T4, T2, T1, and K; (2) stem length T3, T5, T2, T4, T1, and K; (3) root length T3, T5, T2, T4, T1 and K. After conducting the correlation test, there was a significant relationship between the growth of the Miana ornamental plant (Coleus atropurpureus (L) Benth) with environmental climatic factors, namely temperature, light intensity, air humidity, soil moisture and soil pH. Especially light intensity and soil moisture, because Miana ornamental plants (Coleus atropurpureus (L) Benth) requires direct sunlight and requires a lot of water so it needs regular watering.

Key Words: *Plant Media, Miana (Coleus atropurpureus (L) Benth), Plant Growth*