

**THE EFFECTIVENESS OF USING PLANTING MEDIA
BASED ON BIOTECHNOLOGY AGENTS ON THE GROWTH
OF ORNAMENTAL PLANTS EPISCIA (*Episcia cupreata*
Hanst.)**

ABSTRACT

Planting media is one of the most important aspects for plant growth. However, the quality of agricultural land in Indonesia is relatively low. The causes are, among others, a nutrient deficit, a decrease in organic matter, contamination of waste in the soil, a decrease in microbial activity, and salinization/alkalinization. The use of materials can be an alternative solution to overcome the problem of organic nutrient needs in the soil, as well as a plant growth regulator, especially for *Episcia* ornamental plants. This study aims to determine the effectiveness of using planting media based on biotechnology agents on the growth of ornamental plants *Episcia cupreata*. This research method is quasi-experiment with Randomized Block Design which consists of 6 treatments, 4 treatments. The parameters measured included the main parameters in the form of growth in the number of leaves, stem length, and root length, as well as supporting parameters measured including soil pH, environmental temperature, air humidity, soil moisture, and light intensity. The result shows the effectiveness of using planting media based on biotechnology agents on the growth of ornamental plants *Episcia cupreata*. With the calculated F value > F table for each parameter including: (1) number of leaves 62,339 > 2.90; (2) bar length 153,847 > 2.90; (3) root length 44,952 > 2.90. The order of optimization is as follows: (1) the number of leaves T1, T2, T3, T4, T5, and K; (2) the length of the rods T2, T1, T3, T4, T5, and K; (3) root lengths T2, T1, T4, T3, T5, and K. With the environmental physicochemical conditions, the soil pH is between 5-6, the average air temperature is 27°C, the average humidity is 83%, the soil moisture is in each respectively. each treatment ranged from 5-6, and the average light intensity of 1010 lux was able to support the growth of *Episcia cupreata* ornamental plants.

Keywords: biotechnology agent, episcia, growing media, growth.