

ABSTRACT

Almadela Alifa Putri. 2022. Testing the Potential of *Eco-enzymes* on the Growth of Kangkung Plants (*Ipomea aquatica* Forsk) Using Hydroponic Techniques. Dibimbing oleh Prof. Dr. H. Toto Sutarto Gani Utari, M.Pd selaku Dosen Pembimbing I dan Dr. Hj. Mia Nurkanti, M.Kes selaku Dosen Pembimbing II.

*Garbage is a natural process or the remnants of human activities in the form of solid or semi-solid organic and inorganic substances, the presence of organic waste such as the remnants of vegetables, fruits, leaves and others can be recycled and used for the manufacture of Eco-enzymes. Eco-enzyme is a solution of complex organic substances produced from the fermentation process of organic waste, sugar and water. The type of vegetable that is able to absorb heavy metal content from its growth medium in high enough quantities is kale. Kangkung is a type of green vegetable plant that contains a lot of important protein for the body. Kangkung is suitable for planting using hydroponic techniques, hydroponics is a method of growing crops without using soil as a growing medium. The purpose of this study was to determine the potential or effect of giving Eco-enzyme and to compare the differences in the results of the Eco-enzyme potency test on the growth of kale (*Ipomea aquatica* Forsk). The method used in this study was the experimental method which consisted of 2 treatments and 4 repetitions. The first treatment was kale with Eco-enzyme and the second treatment without Eco-enzyme. The design in this study used RAL (Rancangan Acak Lengkap). The parameters measured in this study were stem height, plant weight, number of leaves and leaf width of kale. The data that has been obtained is then analyzed using the ANOVA test. The results obtained showed that given the Eco-enzyme showed the potential for the growth of stem height with the highest yield of 39 cm and the highest weight of kale was obtained at 300 grams. The maximum number of leaves was 14 strands and the largest leaf width was 5 cm. The instrument test and hypothesis testing showed that the administration of Eco-enzyme gave better results on the growth of kale as a whole and significantly affected the results of the ANOVA test < 0.05 of the four parameters seen.*

Key word : *Eco-enzyme*; kangkung; hydroponic; organic waste