

O 15. THE TESTING OF COW MANURE FERTILIZER DOSES TO PLANT GROWTH COMPONENTS AND BIOACTIVE COMPOUND OF DEWA LEAF (*GYNURA PSEUDOCHINA* (L.) DC)

Achmad Yozer Perkasa^{1,2*}, Danner Sagala³, Erik Mulyana⁴, Rahmi Taufika⁵, Rista Delyani⁶

¹(present address) *Department of Field Crops, Ankara University, Faculty Agriculture 06120 Kavacik -Subayevleri Ankara Turkey,*

²*Department of Agrotechnology, Gunadarma University, Depok Indonesia,*

^{3 4 5 6}*Department Agronomy and Horticulture, Graduate School Faculty of Agriculture, Bogor Agricultural University, Bogor Indonesia.*

(former address) *Achmad Yozer Perkasa, Department of Agrotechnology, Gunadarma University, Depok 16424 Indonesia*

E-mail: perkasa@ankara.edu.tr

ABSTRACT: Dewa leaf (*Gyanura psudeochina* L) as a potentially medicinal plant have been widely studied for the contents of their metabolites. The content of secondary metabolites in dewa leaf has benefits such as anti-inflammatory, anti-allergic, bronchitis, kidney stones, uterine bleeding, diabetes and anti-HSV (Herpes Simplex Viral) which are effective against the infection of the herpes virus. The cultivation process of dewa leaf requires specific treatments to grow and produce the optimum bioactive materials. One factor that must be considered in the cultivation of medicinal plants is fertilization. The aims of this research was to study the growth and bioactive compounds of plant leaves of Dewa leaf as potential medicinal plants that cultivated with various doses of cow manure. The research was conducted at the Biofarmaka experimental station, Bogor Agricultural University. Chlorophyll analysis at Plant Molecular Biology Laboratory and post-harvest handling performed at the Post Harvest Laboratory, Department of Agronomy and Horticulture, Faculty of Agriculture, Bogor Agricultural University. The experiments were analyzed using a randomized block design, the first factor was the dose of cow manure with three levels i.e. 0 g polybag-1 (control), 500 g polybag-1 and 1000 g of polybag-1. The experiments used 4 replications. The data were analyzed by analysis of variance with SAS 9.1.3, if significantly different continued with Duncan's Multiple Range Test at 5% level. Results showed that fertilizer treatment of cow manure doses did not provide a significant difference in the growth and production of dewa leaf except for plant height at 3 weeks after planting and width of the widest leaf at 4 weeks after planting. Fertilizing with cow manure in this experiment is still not able to increase the growth of canopies, tubers and the content of the bioactive compounds of dewa leaf. The high rate of caterpillar attacks since the second week has disrupted growth and the production of bioactive compounds from the dewa leaf.

Keywords: Cow manure fertilizer, bioactive compound, dose, Gynura pseudochina (L.) DC, physiology components