

## INTISARI

### **PENGARUH PEMBERIAN LIMBAH BUDIDAYA *MAGGOT Hermetia illucens* TERHADAP PERTUMBUHAN DAN KANDUNGAN NUTRIEN *Wolffia* sp.**

Penelitian ini bertujuan untuk mengetahui pemberian limbah budidaya *Maggot Hermetia illucens* dengan dosis berbeda terhadap kandungan nutrisi dan pertumbuhan pada *Wolffia* sp. Penelitian menggunakan Rancangan Acak Lengkap dengan tiga perlakuan dosis pupuk 1,5 g/L, 2,5 g/L, dan 3,5 g/L serta tiga ulangan. *Wolffia* dibudidayakan selama 30 hari dengan padat tebar sebanyak 2 g/L dengan penambahan air limbah budidaya *maggot* setiap 10 hari sebanyak 2 L berdasarkan perlakuan dan sampling yang dilakukan setiap 5 hari. Data pertumbuhan dan kandungan nutrisi yang diperoleh dianalisis menggunakan *Analysis of Varians* dengan ketelitian 95%, jika hasil analisis menunjukkan beda nyata maka dilanjutkan dengan menggunakan Uji *Tukey Honestly Significant Difference*. Limbah budidaya *maggot* mengandung kisaran protein sebesar  $63,95 \pm 1,15\%$  -  $69,37 \pm 0,42\%$ , lemak  $0,40 \pm 0,00\%$  -  $2,22 \pm 0,20\%$ , *carbohydrate by difference*  $6,22 \pm 0,50\%$  -  $26,84 \pm 0,06\%$ , dan beta karoten  $21.661,21 \pm 102,02$  -  $32.493,32 \pm 65,12$   $\mu\text{g}/100\text{g}$ . Hasil penelitian menunjukkan bahwa pertumbuhan *Wolffia* tertinggi pada pemberian pupuk sebesar 1,5 g/L dengan rerata berat akhir sebesar  $107,61 \pm 8,39$  g.

**KATA KUNCI :** Limbah *Maggot*, NPK, Nutrien Pertumbuhan, *Wolffia* sp.

## ABSTRACT

### **The Effect of Maggot *Hermetia illucens* Cultivation Waste Fertilizer on the Growth and Nutrient Content of *Wolffia* sp.**

This study aimed to determine the effects of different doses of maggot (*Hermetia illucens*) culture waste on the nutrient content and growth of *Wolffia* sp. The experiment employed a Completely Randomized Design with three fertilizer dose treatments—1.5 g/L, 2.5 g/L, and 3.5 g/L—and triplicates. *Wolffia* was cultured for 30 days at a stocking density of 2 g/L, with the addition of maggot culture wastewater every 10 days at a volume of 2 L according to the respective treatments, and sampling was conducted every 5 days. Growth and nutrient content data were analyzed using Analysis of Variance at a 95% confidence level, when significant differences were detected, Tukey's Honestly Significant Different test was applied. Maggot culture waste contained protein ranging from  $63.95 \pm 1.15\%$  to  $69.37 \pm 0.42\%$ , fat from  $0.40 \pm 0.00\%$  to  $2.22 \pm 0.20\%$ , carbohydrates by difference from  $6.22 \pm 0.50\%$  to  $26.84 \pm 0.06\%$ , and beta-carotene from  $21,661.21 \pm 102.02 \mu\text{g}/100 \text{ g}$  to  $32,493.32 \pm 65.12 \mu\text{g}/100 \text{ g}$ . The results showed that the highest *Wolffia* growth was achieved with a fertilizer dose of 1.5 g/L, yielding an average final weight of  $107.61 \pm 8.39 \text{ g}$ .

**KEYWORDS:** Maggot Waste, NPK, Growth Nutrients, *Wolffia* sp