

## INTISARI

### Pertumbuhan *Moina* sp. (Baird, 1850) yang Dibudidayakan dengan Media Air Limbah Budidaya Lele dan *Maggot Hermetia illucens*

Penelitian ini bertujuan untuk mengetahui kandungan nutrisi limbah budidaya maggot *Hermetia illucens*, pengaruh penggunaan air limbah budidaya lele yang diperkaya dengan limbah budidaya maggot *Hermetia illucens* terhadap pertumbuhan *Moina* sp., dan dosis limbah budidaya maggot *Hermetia illucens* yang menghasilkan biomassa *Moina* sp. tertinggi. Air media berasal dari 25% air limbah budidaya lele ditambah dengan 75% air tawar. Penelitian menggunakan metode Rancangan Acak Lengkap yang terdiri dari empat perlakuan dan tiga ulangan. Perlakuan meliputi pemberian limbah budidaya maggot dengan dosis 0 g/L, 0,75 g/L, 1,5 g/L, dan 2,25 g/L. *Moina* sp. dibudidayakan selama 13 hari dengan kepadatan awal 20 ind./L dan waktu pemupukan setiap dua hari. Data yang diperoleh dianalisis menggunakan analisis varian dengan tingkat ketelitian 95%. Jika hasil menunjukkan beda nyata maka dilanjutkan dengan *Duncan's Multiple Range Test*. Limbah budidaya maggot mengandung Nitrogen (N) 4,68%, Fosfor (P) 0,46%, dan Kalium (K) 1,61%. Kepadatan populasi tertinggi terdapat pada dosis pupuk 1,5 g/L ( $83,10 \pm 3,98$  ind./L). Puncak populasi *Moina* sp. tertinggi terdapat pada perlakuan dosis 2,25 g/L sebanyak 187 ind./L pada hari ke-5. Laju pertumbuhan spesifik *Moina* sp. tertinggi terdapat pada perlakuan dosis 2,25 g/L  $4,627 \pm 0,092$  ind./L/hari. Biomassa tertinggi *Moina* sp. pada hari ke-4 terdapat pada dosis 2,25 g/L (18,07 mg/L) dan pada hari ke-8 dan 12 terdapat pada dosis 1,5 g/L (12,17 mg/L dan 3,47 mg/L). Kandungan nutrisi *Moina* sp. tertinggi ditunjukkan oleh dosis 0,75 g/L meliputi kadar protein sebesar 52,92%, lemak sebesar 8,75%, karbohidrat sebesar 39,8%, abu sebesar 5,65%, dan serat kasar sebesar 29,57%.

Kata kunci: air limbah budidaya lele, *Moina* sp., laju pertumbuhan, populasi, limbah budidaya maggot *Hermetia illucens*

## ABSTRACT

### The Growth of *Moina* sp. (Baird, 1850) Cultivated Using Catfish Wastewater and *Maggot Hermetia illucens* Media

This research aims to determine the nutrient content of *Hermetia illucens* maggot farming waste, to determine the effect of using catfish farming wastewater enriched with *Hermetia illucens* maggot farming waste on the growth of *Moina* sp., and to determine the dose of *Hermetia illucens* maggot farming waste that produces the highest *Moina* sp. biomass. The air media is composed of 25% catfish aquaculture wastewater and 75% freshwater. The research used a Completely Randomized Design method consisting of four treatments and three replications. The treatments included the administration of maggot farming waste at doses of 0 g/L, 0.75 g/L, 1.5 g/L, and 2.25 g/L. *Moina* sp. was cultured for 13 days with an initial density of 20 ind./L and fertilization every two days. The data obtained were analyzed using analysis of variance with a 95% confidence level. If the results showed a significant difference, *Duncan's Multiple Range Test* was then performed. Maggot farming waste contains Nitrogen (N) 4.68%, Phosphorus (P) 0.46%, and Potassium (K) 1.61%. The highest population density was found at a fertilizer dose of 1.5 g/L ( $83.10 \pm 3.98$  ind./L). The highest population peak of *Moina* sp. was found in the 2.25 g/L dose treatment, with 187 ind./L on day 5. The highest specific growth rate of *Moina* sp. was found in the 2.25 g/L dose treatment, at  $4.627 \pm 0.092$  ind./L/day. The highest biomass of *Moina* sp. on day 4 was found in the 2.25 g/L dose (18.07 mg/L), and on days 8 and 12, it was found in the 1.5 g/L dose (12.17 mg/L and 3.47 mg/L). The highest nutrient content of *Moina* sp. was shown by a dose of 0.75 g/L, including a protein content of 52.92%, fat content of 8.75%, carbohydrate content of 39.8%, ash content of 5.65%, and crude fiber content of 29.57%.

Keywords: catfish farming wastewater, *Moina* sp., growth rate, population, maggot *Hermetia illucens* farming waste