



Intisari

PEMANFAATAN AIR LIMBAH BUDIDAYA LELE YANG DIFERMENTASI UNTUK BUDIDAYA *Daphnia Magna*

Penelitian ini bertujuan untuk mengetahui pengaruh pemberian pupuk fermentasi air limbah budidaya lele terhadap pertumbuhan populasi *Daphnia magna* dan dosis pupuk fermentasi air limbah budidaya lele yang menghasilkan produksi *Daphnia magna* tertinggi. Penelitian menggunakan metode Rancangan Acak Lengkap (RAL) yang terdiri dari 5 perlakuan dosis pemberian pupuk fermentasi yaitu 1, 2, 3, 4, dan 5% dengan masing-masing tiga kali ulangan. *Daphnia magna* dibudidayakan selama 14 hari dengan kepadatan awal 10 individu/L. Parameter penelitian yang diamati meliputi pertumbuhan populasi, laju pertumbuhan hingga puncak populasi, laju pertumbuhan spesifik selama pemeliharaan, dan kualitas air. Parameter pertumbuhan selanjutnya dianalisis menggunakan ANOVA (*Analysis of Varians*) dengan ketelitian 95%, jika hasil analisis terdapat beda nyata dilanjutkan dengan uji LSD (*Least Significant Differences*). Hasil penelitian menunjukkan bahwa pemberian pupuk fermentasi air limbah budidaya lele berpengaruh terhadap pertumbuhan *Daphnia magna*. Dosis pupuk 4% menghasilkan produksi *Daphnia magna* tertinggi sebanyak 356 individu/L dengan puncak populasi pada hari ke-11.

Kata kunci : *Daphnia magna*, fermentasi, air limbah budidaya lele, populasi, pupuk.



Abstract

UTILIZATION OF FERMENTED CATFISH EFFLUENT
FOR *Daphnia magna* CULTIVATION

This research aimed to determine the effect of fermentation of catfish culture waste fertilizer on the population growth of *Daphnia magna* and the dosage of fertilizer fermented catfish culture waste that produces the highest *Daphnia magna* production. The method used was a Completely Randomized Design (CRD) method consisting of 5 treatments of 1, 2, 3, 4, and 5% doses of fermented fertilizer with three replications each. *Daphnia magna* is cultivated for 14 days with an initial density of 10 individuals / L. The observed research parameters included population growth, specific growth rate, peak population growth rate, and water quality. The growth data was then analyzed using ANOVA (Analysis of Variance) with 95% accuracy, if significantly differences was found than used the LSD (Least Significant Differences) test. Based on the research showed that the fermented fertilizer dose has significant effect on *Daphnia magna* growth. Treatment with 4% dose got population peak 356 individuals/L which need 11 days to reach it.

Keywords : catfish effluent, *Daphnia magna*, fermentation, fertilizer, population.