

## **ABSTRACT**

### **UTILIZATION OF PALM KERNEL CAKE AS GROWTH SUBSTRAT OF SILK WORM (*Tubifex* sp)**

**By**

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The aim of this research are to observe the effect of utilization of palm kernel cake fermented to weight growth and population of *Tubifex* sp. This research was conducted at Aquaculture Laboratory, University of Lampung for 50 days. The research was used Completely Randomized Design (CDR) with 4 treatments and 3 replicates, respectively. The treatments are A 100% (field mud), B 25% (palm kernel cake) with 75% (field mud), C 50% (bungkil inti sawit) with 50% (field mud), D 75% (palm kernel cake) with 25% (field mud), and E 100% (palm kernel cake). Data were analyzed using analysis of variance (ANOVA) test and then continued with Least Significant Difference (LSD) test. The main of parameters measured were the population and biomass of *Tubifex* sp and parameters of water quality were pH, temperature, dissolved oxygen, and ammonia. The results showed that the utilization of palm kernel cake fermented have significantly effect ( $p < 0,05$ ) on the biomass, and population of the silk worm. The best result of this research has found in formulation media from 50% palm kernel cake fermented and 50% field mud that was produced of 111.008 ind/m<sup>2</sup> and 750,72 gr/m<sup>2</sup> of *Tubifex* sp. Water quality of cultured of *Tubifex* are ammonia 0,26-0,91 ppm, pH 6,14-7,11, temperature 25-28°C, and dissolved oxygen 2,9-3,9 ppm.

*Keyword: Biomass, Fermentation, Palm kernel cake, Population, Tubifex sp.*

## **ABSTRAK**

### **PEMANFAATAN BUNGKIL INTI SAWIT SEBAGAI MEDIA PERTUMBUHAN CACING SUTRA (*Tubifex* sp.)**

**Oleh**

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Penelitian ini bertujuan untuk mengetahui pengaruh penggunaan media fermentasi bungkil inti sawit terhadap pertumbuhan biomassa dan populasi cacing sutra (*Tubifex* sp.). Penelitian ini dilakukan di Laboratorium Budidaya Perikanan Universitas Lampung selama 50 hari pemeliharaan. Penelitian ini menggunakan Rancangan Acak Lengkap (RAL) dengan lima perlakuan dan tiga ulangan. Perlakuan pada penelitian meliputi A 100% (lumpur sawah), B 25% (bungkil inti sawit) dengan 75% (lumpur sawah), C 50% (bungkil inti sawit) dengan 50% (lumpur sawah), D 75% (bungkil inti sawit) dengan 25% (lumpur sawah), dan E 100% (bungkil inti sawit). Data hasil penelitian yang diperoleh di analisis sidik ragam (ANOVA) dan di uji lanjut dengan uji Beda Nyata Terkecil (BNT). Parameter utama yang diamati yaitu jumlah populasi dan biomassa *Tubifex* sp., sedangkan parameter kualitas air yaitu pH, oksigen terlarut, suhu, dan amonia. Hasil dari penelitian menunjukkan bahwa formulasi media bungkil inti sawit berpengaruh nyata ( $p < 0,05$ ) terhadap pertumbuhan biomassa dan populasi cacing sutra. Hasil terbaik terdapat pada perlakuan dengan formulasi 50% bungkil inti sawit dan 50% lumpur sawah yang menghasilkan populasi 111.008 ind/m<sup>2</sup> dan biomassa 750,72 gr/m<sup>2</sup>. Kualitas air selama pemeliharaan yaitu amoniak berkisar antara 0,26-0,91 ppm, pH berkisar antara 6,14-7,11, suhu berkisar antara 25-28°C, dan oksigen terlarut berkisar antara 2,9-3,9 ppm.

*Kata Kunci: Biomassa, Bungkil inti sawit, Fermentasi, Populasi, Tubifex sp.*