

## ABSTRAK

### **PENGARUH PEMBERIAN PROBIOTIK KOMERSIAL DAN PRODUK FERMENTASI TRADISIONAL KIMCHI TERHADAP PERTUMBUHAN BENUR UDANG VANNAMEI (*Litopenaeus vannamei*) PADA STADIA ZOEAE**

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Indonesia merupakan salah satu negara terbesar penghasil produk budidaya termasuk udang. Banyak masyarakat yang mengembangkan budidaya udang vannamei (*Litopenaeus vannamei*) karena meningkatnya permintaan pasar dan merupakan salah satu komoditas ekspor unggulan di sektor perikanan. Udang merupakan salah satu komoditas andalan sektor perikanan yang mampu meningkatkan devisa negara. Pada kegiatan budidaya salah satu strategi dalam pengendalian hama dan penyakit adalah melalui kontrol biologis. Penelitian ini bertujuan untuk menganalisis pengaruh pemberian probiotik dengan dosis berbeda terhadap pertumbuhan panjang, penambahan berat, dan kelulushidupan udang. Penelitian yang dilakukan secara eksperimental dengan metode Rancangan Acak Lengkap (RAL) 5 perlakuan dan tiap perlakuan 4 kali ulangan. Setiap bak budidaya dipelihara benur udang umur 15 hari (Zoea 3) dengan padat tebar 18 ekor/L. Pengaplikasian probiotik superlacto dan kimchi diberikan setiap dua kali sehari pada pakan udang vannamei dengan perlakuan K- = tanpa perlakuan, K + = probiotik superlacto 125 ppm, KC1(kimchi dosis 125 ppm), KC2 (kimchi dosis 250 ppm), KC3 (kimchi dosis 375 ppm). Berdasarkan hasil penelitian diketahui pertumbuhan panjang mutlak tertinggi dan terendah secara berturut-turut ditemukan pada perlakuan KC2, KC3, KC1, KC+, dan K-.375 ppm). Berdasarkan analisis statistik *one way* ANOVA dan uji lanjutan duncan dengan taraf  $\alpha=0,05$  diperoleh hasil perlakuan KC3 berbeda nyata dengan kontrol.dengan kontrol terhadap pertumbuhan panjang. Hasil analisis pada perlakuan KC1 berbeda nyata terhadap penambahan berat dan KC2 berbeda nyata terhadap kelulushidupan udang.

**Kata kunci:** Udang Vannamei, Probiotik, Patogen, Asam Laktat

## ABSTRAK

### EFFECT OF COMMERCIAL PROBIOTICS AND TRADITIONAL FERMENTED PRODUCTS OF KIMCHI ON THE GROWTH OF VANNAMEI SHRIMP FRY (*litopenaeus vannamei*) IN STADIA ZOEAE

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Indonesia is one of the largest producers of aquaculture products, including shrimp. Many communities have developed vannamei shrimp cultivation (*Litopenaeus vannamei*) due to increasing market demand and is one of the leading export commodities in the fisheries sector. Shrimp is one of the mainstay commodities of the fisheries sector that is able to increase the country's foreign exchange. In cultivation activities, one of the strategies in pest and disease control is through biological control. This study aims to analyze the effect of giving probiotics at different doses on shrimp growth length, weight gain, and graduation. The research was conducted experimentally with the Complete Random Design (RAL) method of 5 treatments and each treatment was 4 replicates. Each cultivation tank is kept with 15-day-old shrimp fry (Zoea 3) with a stocking density of 18 fish/L. The application of superlacto and kimchi probiotics is given twice a day on vannamei shrimp feed with K- treatment = no treatment, K+ = superlacto probiotics 125 ppm, KC1 (kimchi 125 ppm), KC2 (kimchi 250 ppm), KC3 (kimchi 375 ppm). Based on the results of the study, it is known that the highest and lowest absolute length growth was found in the treatment of KC2, KC3, KC1, K+, and K-.375 ppm). Based on *one-way* ANOVA statistical analysis and Duncan follow-up test with  $\alpha=0.05$  level, the results of KC3 is markedly different from the controls against long growth. The results of the analysis on KC1 treatment were significantly different from weight gain and KC2 was significantly different from survival rate.

**Keywords:** Vannamei Shrimp, Probiotics, Pathogens, Lactic Acid