Intisari

PENGARUH GARAM KROSOK PADA KONSENTRASI 17-32 PPT TERHADAP SINTASAN DAN PERTUMBUHAN UDANG VANAME (*Litopenaeus vannamei* Boone, 1931) PADA BUDIDAYA DI LAHAN PEDALAMAN

Upaya mengatasi masalah keterbatasan lahan pesisir yang baik maka perlu pengembangan budidaya udang di lahan pedalaman dengan media air bersalinitas menggunakan larutan garam krosok. Penelitian ini bertujuan untuk mengetahui pengaruh dan menentukan konsentrasi garam krosok terhadap sintasan dan pertumbuhan udang vaname (*Litopenaeus vannamei*). Penelitian menggunakan metode eksperimen dengan rancangan acak lengkap (RAL) terdiri atas 5 perlakuan salinitas, yaitu 17 ppt, 22 ppt, 27 ppt, 32 ppt, dan kontrol (air laut bersalinitas 38 ppt). Masing-masing perlakuan diulang 3 kali. Media air bersalinitas berbeda dibuat dengan melarutkan garam krosok dalam air tawar. Percobaan menggunakan ember plastik (kapasitas 70 l) diisi air media bersalinitas berbeda dengan volume 50 l dan dilengkapi aerasi blower. Udang vaname diberi pakan bentuk remah kadar protein sekitar 38%, yang diberikan empat kali sehari dengan ransum menurun tiap 2 minggu, dari 45 sampai 5% total biomassa. Pengamatan berat dan panjang individu dilakukan secara sampling sebanyak 50%, serta kualitas air setiap dua minggu sekali. Data sintasan, pertumbuhan dan rasio konversi pakan dianalisis dengan analisis varian dan diuji dengan Duncan's test dengan tingkat kepercayaan 95%, bila hasilnya signifikan dilakukan uji lanjut dengan uji p*olinomial orthogonal*. Parameter kualitas air diuji secara deskriptif. Hasil penelitian yang diperoleh: sintasan berkisar 65,99-96,70 %, pertumbuhan berat mutlak 0,94–2,85g dan pertumbuhan panjang mutlak 1,51–3,83cm, laju pertumbuhan berat spesifik 2,98–5,30g/hari dan laju pertumbuhan panjang spesifik 0,84–1,75 cm/hari. Hasil penelitian dapat disimpulkan bahwa konsentrasi garam krosok 17-32 ppt berpengaruh yang nyata ($P<0,05$) terhadap berat mutlak, panjang mutlak dan berat spesifik udang vaname. Konsentrasi kadar garam krosok atau salinitas terbaik untuk budidaya udang vaname di lahan pedalaman berkisar 21,70 – 27 ppt.

Kata kunci: garam krosok, pertumbuhan, salinitas, sintasan, udang vaname.

Abstract

EFFECT OF UNREFINED SALT AT 17-32 PPT ON SURVIVAL AND GROWTH OF WHITELEG SHRIMP (*Litopenaeus vannamei* Boone, 1931) IN INLAND AQUACULTURE

One effort to solve a limited suitable area of coastal for shrimp culture is to develop shrimp farming in inland area using unrefined salt that is solved in freshwater as live media. This research aimed to know the effect of unrefined salt salinity of 17-32 ppt on survival and growth and to determine optimal concentration for culture of white leg shrimp (*Litopenaeus vannamei*). A completely randomized design was used in this experiment with five treatments: 17 ppt, 22 ppt, 27 ppt, 32 ppt, and control (38 ppt of sea water) and with three replications each. The media was made by dissolving unrefined salt in fresh water. Culture experiment used plastic bucket (cap 70 l), filled with water volume 50 l with different salinity and provided with blower aeration. The grannule feed contained 38% protein was given 4 times/day with decreasing rate of 45 to 5% biomass every two weeks. Individual weight and length of shrimps were observed by sampling of 50% biomass, and also water quality paramters were checked every two weeks. Data of survival and growth were analyzed by ANOVA (analysis of variance) test and Duncan's test with significance level of 95%. If the results were significant, further tests were carried out with the orthogonal polynomial test. Water quality parameters were tested descriptively. The result obtained: survival rate ranged of 65.99-96.70 %; absolute and spesific weight growth 0.94–2.85g and 2.98–5.30g/day; absolute and spesific length growth 1.51–3.83cm and 0.84–1.75cm/day. The research can be concluded that unrefined salt concentration of 17-32 ppt significantly effect ($P<0.05$) absolute weight and length growth, and specific weight growth. The best of unrefined salt concentration or salinities for shrimp culture in inland area ranged 21.70 – 27 ppt.

Keywords: growth, salinity, survival, unrefined salt, white shrimp