Intisari

Pengaruh Garam Krosok pada Konsentrasi 5-25 ppt terhadap Performa Budidaya Udang Vaname (*Litopenaeus vannamei* Boone, 1931) di Lahan Pedalaman

Budidaya udang di lahan pedalaman menjadi salah satu solusi untuk meningatkan produktivitas udang di Indonesia dan aram krosok dapat dimanfaatkan sebagai media penyedia air bersalinitas. Penelitian ini bertujuan untuk mengetahui pengaruh perbedaan kadar garam krosok pada salinitas 5-25 ppt dan mencari salinitas optimal untuk budidaya berdasarkan sintasan, pertumbuhan dan rasio konversi pakan di lahan pedalaman. Penelitian berlangsung 56 hari pada 19 Agustus hingga 15 Oktober 2020, di Kabupaten Sleman, Daerah Istimewa Yogyakarta. Penelitian dilakukan dengan metode rancangan acak lengkap menggunakan ember plastik berkapasitas 75 L. Perlakuan yang dicoba yaitu salinitas 5, 10, 15, 20, dan 25 ppt. Masing-masing perlakuan diulang tiga kali. Media dibuat dengan melarutkan garam dalam air tawar. Benih yang digunakan memiliki rata-rata berat 0,7-0,9 g dan rata-rata panjang 4,86-5,23 cm. Pakan buatan bentuk butiran mengandung protein 38% diberikan 4 kali sehari dengan ransum 5-7 % biomassa. Pengamatan jumlah, berat dan panjang individu dilakukan secara sensus, serta kualitas air setiap dua minggu sekali. Data sintasan, pertumbuhan dan rasio konversi pakan dianalisis dengan analisis varian dan diuji dengan Duncan's test 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 0-93%, pertumbuhan berat mutlak 0,80-6,22 g dan pertumbuhan panjang mutlak 1,32-5,31 cm, rasio konversi pakan 1,24-2,14. Hasil penelitian dapat disimpulkan bahwa salinitas 5-25 ppt berpengaruh nyata ($P<0,05$) terhadap sintasan, pertumbuhan dan rasio konversi pakan dengan hubungan kuadratik dan salinitas optimal berkisar 16,90-18,02 ppt. Kualitas air memenuhi syarat untuk budidaya udang vaname.

Kata Kunci: garam krosok, pertumbuhan, rasio konversi pakan (FCR), sintasan, udang vaname

Abstract

Effect of Unrefined Salt at 5-25 ppt on Performance of Whiteleg Shrimp *(Litopenaeus vannamei* Boone*, 1931)* Culture in Inland Aquaculture

Shrimp farming in inland lands is one solution to increasing shrimp productivity in Indonesia and unrefined salt can be used as a medium for making water salinity in inland areas. This study aims to know the effect of differences in unrefined salt concentration or salinity of 5-25 ppt and to determine optimal salinity for cultivation based on survival, growth and feed conversion ratio in inland areas. The study conducted for 56 days from August 19 to October 15, 2020, in Sleman Regency, Yogyakarta Special Region. The research was conducted using a completely randomized design (CRD) method using a plastic bucket with a capacity of 75 L. The treatments tested were salinities of: 5, 10, 15, 20, and 25 ppt. Each treatment was repeated three times. The media was made by dissolving unrefined salt in fresh water. The vanname shrimp used had an average weight of 0.7-0.9 and an average length of 4.86-5.23 cm. Feeding is done 4 times with a dose of 5-7%. The grannule feed contained 38% protein was given 4 times/day with a rate of 5-7% biomass. Individual weight and length of shrimps were observed by census, and also water quality paramters were checked every two weeks. Data of survival, growth and feed conversion ratio 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 results obtained: survival rate ranged of 0-93%; absolute weight growth ranged 0.80- 6.22 g, and absolute length growth ranged of 1.32 – 5.31 cm, feed convertion ratio 1.24-2.14. The research can be concluded that unrefined salt concentration of 5-25 ppt significantly effect ($P<0.05$) to survival, growth rate of shrimp and feed conversion ratio with quadratic relationships, and the optimum salinity ranged of 16.90-18.02 ppt. The value of water quality paramters obtained were suitable for vannamei shrimp culture.

Keywords: unrefined salt, growth, survival rate, feed convertion ratio, vannamei shrimp