

Intisari

PENGARUH PADAT TEBAR TERHADAP SINTASAN DAN PERTUMBUHAN UDANG VANAME (*Litopenaeus vannamei*, Boone 1931) PADA BUDIDAYA DENGAN MEDIA AIR PAYAU BUATAN

Budidaya udang vaname (*Litopenaeus vannamei*) menggunakan media air payau buatan menjadi salah satu solusi untuk mengatasi masalah keterbatasan lahan pesisir. Penelitian ini bertujuan untuk mengetahui pengaruh padat tebar terhadap sintasan dan pertumbuhan budidaya udang vaname dengan media air payau buatan dan mengetahui padat tebar terbaik dalam budidaya udang vaname dengan media air payau buatan. Penelitian ini dilaksanakan di Condongcatur, Kepanewonan Depok, Kabupaten Sleman, Daerah Istimewa Yogyakarta selama 28 hari. Penelitian menggunakan metode eksperimen dengan rancangan acak lengkap (RAL) terdiri atas 3 perlakuan padat tebar, yaitu 400 ekor/m³, 800 ekor/m³ dan 1.200 ekor/m³. Masing-masing perlakuan diulang sebanyak 5 kali. Media air payau buatan dibuat dengan melarutkan garam krosok dalam air tawar. Percobaan menggunakan air ember plastik (kapasitas 70 L) diisi air payau buatan dengan volume 50 L dan dilengkapi aerasi blower. Udang vaname diberi pakan berbentuk *crumble* dengan kadar protein 38%. Pemberian pakan dilakukan sebanyak 5 kali sehari. Pengamatan panjang dan berat individu dilakukan seminggu sekali serta dilakukan pengamatan kualitas air dan kandungan mineral. Data sintasan, pertumbuhan dan rasio konversi pakan dianalisis dengan ANOVA menggunakan uji Duncan dengan tingkat kepercayaan 95%. Parameter kualitas air dan kandungan mineral dilakukan secara deskriptif. Hasil penelitian yang diperoleh: sintasan berkisar 52%-84%, pertumbuhan berat mutlak 2,17-3,17 g, pertumbuhan panjang mutlak 2,07-2,41 cm dan konversi rasio pakan 1,39-2,10. Hasil penelitian dapat disimpulkan bahwa padat tebar berpengaruh nyata ($P < 0,05$) terhadap sintasan sedangkan terhadap pertumbuhan dan FCR tidak berpengaruh nyata ($P > 0,05$). Hasil terbaik diperoleh dari perlakuan padat tebar 400 ekor/m³.

Kata kunci: garam krosok, padat tebar, pertumbuhan, sintasan, udang vaname

Abstract

EFFECT OF STOCKING DENSITY ON SURVIVAL AND GROWTH OF THE WHITE LEG SHRIMP (*Litopenaeus vannamei* Boone, 1931) FARMING WITH ARTIFICIAL BRACKISH WATER

Vannamei shrimp (*Litopenaeus vannamei*) cultivation using water media with artificial brackish water is one of the solutions to overcome the of limited coastal land. This study aimed to determine the effect of stocking density on the survival and growth of white shrimp with unrefined salt water media, and this study aimed to determine the optimal stocking density in vaname shrimp cultivation with unrefined salt. This research was conducted in Condongcatu, Depok, Sleman Regency, Yogyakarta Special Region in 28 days. The study used an experimental method with a completely randomized design (CRD) consisting of 3 treatments of stocking density named 400 shrimp/m³, 800 shrimp/m³, and 1.200 shrimp/m³. Each treatment was repeated 5 times. The artificial brackish water media with 20 ppt salinity was prepared by dissolving unrefined salt in water. This experiment used a plastic container with 70 liters capacity filled with 50 liters of unrefined salt water and equipped with an aeration blower. Vanname shrimp were fed with crumble form consisting of 38% protein 5 times a day. The observations were carried out once a week in order to observe the quality of water and mineral content. Data on survival, growth and feed conversion ratio were analyzed by ANOVA using Duncan's test with a 95% significant level. analysis parameters of water quality and mineral content analysis were carried out descriptively. The research obtained: survival ranged from 52%-84%, absolute weight growth 2.17-3.17 g, absolute length growth 2.07-2.41 cm and feed ratio conversion 1.39-2.10. In conclusion, stocking density had a significant effect ($P < 0.05$) on survival rate, while growth and FCR had no significant effect ($P > 0.05$). The best results were obtained from treatment with a stocking density of 400 shrimp/m³.

Key words: unrefined salt, stocking density, growth, survival, vaname shrimp