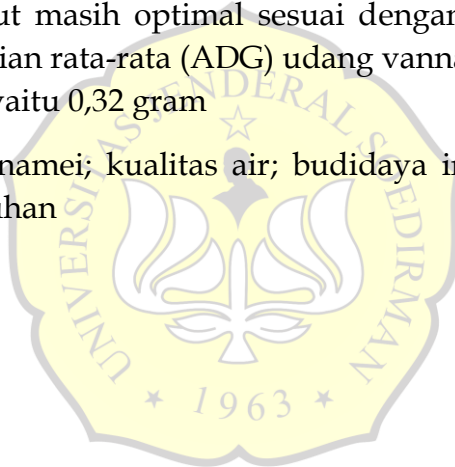


ABSTRAK

Produksi udang vannamei (*Litopenaeus vannamei*) melalui sistem budidaya intensif terus mengalami peningkatan sehingga perlu pengelolaan kualitas air yang optimal. Metode Millennial Shrimp Farming (MSF) dengan sistem resirkulasi menjadi salah satu solusi untuk meningkatkan pertumbuhan udang vannamei. Penelitian ini dilakukan dengan pengamatan rutin pada parameter kualitas air pH, salinitas, nitrit, alkalinitas, dan amonia yang dilakukan pada 3 kolam MSF. Sampel diambil secara acak dari 17 kolam yang dioperasikan menggunakan metode MSF. Nilai pH di kolam no 2 berkisar antara 7,78-8,04, kolam no 8 sebesar 7,66-8,34 dan kolam no 14 sebesar 7,88-8,13. Sementara itu, salinitas di kolam no 2 sebesar 24-33, kolam no 8 sebesar 23-33 dan kolam no 14 sebesar 22-34. Nilai nitrit di kolam no 2 sebesar 0,0001-4,0750, kolam no 8 sebesar 0,0001-2,6200 dan kolam no 14 sebesar 0,0001-1,6400, sedangkan parameter alkalinitas di kolam no 2 sebesar 120-220, kolam no 8 sebesar 122-214 dan kolam no 14 sebesar 122-206. Untuk parameter amonia di kolam no 2 sebesar 0,032-0,0148, kolam no 8 sebesar 0,035-0,0095 dan kolam no 14 sebesar 0,027-0,093. Keseluruhan hasil tersebut masih optimal sesuai dengan standar SNI 8037.1:2014. Namun pertumbuhan harian rata-rata (ADG) udang vannamei yang terbaik terdapat pada kolam no 8 sebesar yaitu 0,32 gram

Kata kunci : Udang vannamei; kualitas air; budidaya intensif; Millennial Shrimp Farming (MSF); pertumbuhan



ABSTRACT

The production of Vannamei shrimp (Litopenaeus vannamei) through intensive farming systems has been subject to a steady increase, necessitating optimal water quality management. The recirculation system employed in conjunction with the Millennial Shrimp Farming (MSF) method represents a solution that has been demonstrated to enhance the growth of vannamei shrimp. This study was conducted by routinely observing water quality parameters such as pH, salinity, nitrite, alkalinity, and ammonia in three MSF ponds. Samples were obtained from 17 ponds that were operated using the MSF method. The pH values in ponds 2, 8, and 14 ranged from 7.78 to 8.04, 7.66 to 8.34, and 7.88 to 8.13, respectively. Concurrently, the salinity levels in pond no. 2 ranged from 24 to 33, in pond no. 8 from 23 to 33, and in pond no. 14 from 22 to 34. The range of nitrite values recorded in pond number 2 was from 0.0001 to 4.0750, in pond number 8, it ranged from 0.0001 to 2.6200, and in pond number 14, the range was from 0.0001 to 1.6400. The alkalinity parameter in pond number 2 ranged from 120 to 220, in pond number 8, it ranged from 122 to 214, and in pond number 14, it ranged from 122 to 206. The ammonia parameter exhibited the following values in the respective ponds: 0.032–0.0148 in pond no. 2, 0.035–0.0095 in pond no. 8, and 0.027–0.093 in pond no. 14. It is noteworthy that all of these results remain in accordance with the provisions stipulated in SNI 8037.1:2014 standards. However, the highest average daily growth (ADG) of vannamei shrimp was observed in pond no. 8, with a recorded value of 0.32 grams

Key words : *Vannamei shrimp; water quality; intensive farming; Millennial Shrimp Farming (MSF); growth*