

ABSTRAK

DINAMIKA KUALITAS AIR DAN PERFORMA PERTUMBUHAN UDANG VANAME *Litopenaeus vannamei* (BOONE, 1931) DI MILLENIAL SHRIMP FARM (MSF) BALAI BESAR PERIKANAN BUDIDAYA AIR PAYAU (BBPBAP) JEPARA

Oleh

Mizarkham Al Ghivari

Millenial Shrimp Farm (MSF) merupakan konsep budi daya udang dengan memanfaatkan teknologi digital dan melibatkan kaum milenial untuk mengembangkan budi daya udang. Namun, perlu dilakukan evaluasi terkait kualitas air dan produksi udang dengan konsep MSF. Tujuan dari penelitian ini adalah untuk menganalisis dinamika kualitas air dan performa pertumbuhan udang vaname di tambak milenial BBPBAP Jepara. Penelitian ini menggunakan metode observasi pada lima kolam budi daya udang vaname dengan sistem tambak millenial. Pengukuran parameter kualitas air yang dilakukan meliputi suhu, pH, salinitas, DO, dan TAN. Parameter performa pertumbuhan yang dilakukan meliputi *average daily growth* (ADG), *average body weight* (ABW), dan *survival rate* (SR). Hasil penelitian menunjukkan bahwa kondisi kualitas air masih optimal untuk kegiatan budi daya udang vaname, diantaranya suhu 28 – 30°C, salinitas 20 – 25 ppt, pH 7,4 – 7,7, dan DO 5,0 – 7,6 mg/L, namun untuk TAN sudah melebihi baku mutu untuk budi daya udang vaname yaitu 1,5 – 2,2 mg/L. Performa pertumbuhan udang menunjukkan nilai ADG dan ABW pada DOC 79 mencapai rata-rata 0,32 gram/hari dan 13,04 gram/ekor. Hasil SR pada kolam A1, A5, C1, D1, dan E1 mencapai 86,5%, 79,1%, 61,4%, 50,7%, dan 85,3%. Dinamika kualitas air tambak milenial mendapatkan hasil yang baik, namun TAN masih tinggi untuk budi daya udang vaname. Performa pertumbuhan udang vaname di tambak milenial mendapatkan hasil yang baik, namun masih terdapat kolam yang memperoleh nilai yang SR yang rendah.

Kata Kunci: Kualitas air, milenial shrimp farm, performa pertumbuhan, udang vaname

ABSTARCT

THE WATER QUALITY DYNAMICS AND GROWTH PERFORMANCE OF WHITE SHRIMP *Litopenaeus vannamei* (BOONE, 1931) IN THE MILLENNIAL SHRIMP FARM (MSF) OF BALAI BESAR PERIKANAN BUDIDAYA AIR PAYAU (BBPBAP) JEPARA

By

Mizarkham Al Ghivari

Millennial Shrimp Farm (MSF) is a shrimp farming concept that utilizes digital technology and involves millennials to develop shrimp farming. However, it is necessary to evaluate water quality and shrimp production with the MSF concept. The purpose of this study was to analyze the dynamics of water quality and growth performance of vaname shrimp in millennial ponds of BBPBAP Jepara. This study used observation method in five vaname shrimp farming ponds with millennial pond system. Measurement of water quality parameters include temperature, pH, salinity, DO, and TAN. Growth performance parameters include average daily growth (ADG), average body weight (ABW), and survival rate (SR). The results showed that water quality conditions were optimal for vaname shrimp farming activities, including temperature 28 - 30°C, salinity 20 - 25 ppt, pH 7.4 - 7.7, and DO 5.0 - 7.6 mg/L, but for TAN was already above the quality standard for vaname shrimp farming which was 1.5 - 2.2 mg/L. Growth performance showed good results including ADG at DOC 79 had an average of 0.32 grams / day and ABW at DOC 79 had an average of 13.04 grams / head, for SR which results in ponds A1, A5, C1, D1, and E1 reached 86.5%, 79.1%, 61.4%, 50.7%, and 85.3%. Millennial pond water quality dynamics get good results, but for TAN was still high for vaname shrimp farming. The growth performance of vaname shrimp in millennial ponds had good results, but the TAN was still high for vaname shrimp farming.

Keyword : White shrimp, millennial shrimp farm, water quality, water quality management, growth performance