

INTISARI

Kajian Kualitas Air dan Pertumbuhan
Udang Vaname (*Litopenaeus vannamei*, Boone 1931)
pada Tambak Budidaya Semi Intensif
di Kalurahan Parangtritis Kapanewon Kretek Kabupaten Bantul

Penelitian ini bertujuan untuk mengetahui kualitas air dan pertumbuhan udang vaname (*Litopenaeus vannamei*, Boone 1931) pada tambak semi intensif di Kalurahan Parangtritis, Kapanewon Kretek Kabupaten Bantul. Penelitian dilaksanakan selama 2 bulan pada bulan Desember sampai Februari 2021. Penelitian dilakukan dengan metode pengamatan langsung terhadap 2 tambak dengan padat tebar 112 ekor/m². Tambak yang diteliti memiliki luas yang sama: 2.000 m², kedalaman air tambak di bagian tepi 1 m dan pada bagian tengah 1,5 m, dan volume air sekitar 2.500 m³. Pengamatan kualitas air dan pertumbuhan udang dilakukan setiap 7-21 hari pada pemeliharaan hari ke 15 sampai dengan 81. Hasil pengamatan disampaikan secara deskriptif. Hasil pengamatan menunjukkan bahwa dua tambak yang diteliti pada saat panen (hari ke 100 dan 84, dengan sintasan 99 dan 100 %) mempunyai produktivitas udang vaname rata-rata 23.925 kg/Ha, dengan nisbah konversi pakan (*feed conversion ratio*) rata-rata 1,29. Kualitas air tambak selama pemeliharaan udang hari ke 15 sampai dengan 81 menunjukkan salinitas berkisar antara 17,7-22,7 ppt; bahan organik 20-78,4 mg/L; kecerahan 52-94 cm; suhu air 25,4-31,9 °C; derajat keasaman (pH) 7,3-8,7; kandungan oksigen terlarut 3,3-8,8 mg/L; karbondioksida bebas 0-60 mg/L; alkalinitas 140-358 mg/L, yang termasuk optimal dan sesuai untuk budidaya udang vaname. Nilai padatan terendapkan berkisar antara 0,1-0,5 ml/L, termasuk kurang optimal dan tidak sesuai untuk budidaya udang vaname. Nilai senyawa amonia 0,0014-0,81 mg/L, nitrat 0,19-5,495 mg/L dan fosfat 0,173-1,665 mg/L tergolong dalam kesuburan mesotrofik (sedang) hingga eutrofik (tinggi). Kepadatan fitoplankton 4.096-21.205 ind/L dengan nilai keanekaragaman 1,6-2,8 yang termasuk golongan sedang dan kepadatan zooplankton 0-1084 ind/L dengan nilai keanekaragaman 0-1,2 yang termasuk golongan rendah. Pertumbuhan berat dan panjang udang vaname yang harian 0,23 g/hari dan 0,15 cm/hari; mutlak 17,7 g dan 12,9 cm; dan spesifik 4 % berat/hari dan 2 % panjang/hari.

Kata : Kualitas air, pertumbuhan, semi intensif, tambak, udang vaname

ABSTRACT

Study on the Water Quality and
White Shrimp (*Litopenaeus vannamei*, Boone 1931)
Growth of Semi Intensive Cultivation Ponds
at Parangtritis Village, Kretek Districts, Bantul Regency

This study aimed to determine water quality and growth of white shrimp (*Litopenaeus vannamei*, Boone 1931) in semi-intensive ponds in Parangtritis Village, Kretek Districts, Bantul Regency. The research was conducted for 2 months from December 2020 to February 2021. The study was conducted by direct observation method on 2 ponds with stocking density of 112 fishes/m². The ponds studied have the same area of 2,000 m², the depth of pond water at the edge of 1 m and 1.5 m in the middle, and the volume of water was about 2,500 m³. The observation of water quality and shrimp growth was carried out every 7-21 days on the 15th to 81st day of culture. The results of the observations were presented descriptively. The results showed that the two ponds studied at harvest time (100 days and 84 days, with a survival rate of 99 % and 100 %) had an average productivity of 23,925 kg/ha of white shrimp, with an average feed conversion ratio of 1,29. The water quality of ponds during shrimp rearing days 15th to 81th showed water salinity ranges from 17.7-22.7 ppt; organic matter 20-78.4 mg/L; brightness 52-94 cm; temperature 25.4-31.9 °C; degree of acidity (pH) 7,3-8,7; dissolved oxygen content 3,3-8,8 mg/L; free carbon dioxide 0-60 mg/L; alkalinity 140-358 mg/L, which were considered optimal and suitable for the cultivation of white shrimp. The value of precipitated solids ranged from 0.1-0.5 ml/L, including less than optimal and unsuitable for white shrimp cultivation. Ammonia compound values 0.0014-0.81 mg/L, nitrate 0.19-5.495 mg/L and phosphate 0.173-1.665 mg/L were classified as mesotrophic (moderate) to eutrophic (high) fertility. The density of phytoplankton was 4.096-21.205 ind/L with a diversity value of 1.6-2.8 which was included in the medium group and a density of zooplankton from 0-1084 ind/L with a diversity value of 0-1.2 which was included in the low group. The weight and length growth of white shrimps daily 0.23 g/day and 0.15 cm/day; absolutely 17.7 g and 12.9 cm; and specific 4 % weight/day and 2 % length/day.

Key Words: growth, pond, semi-intensive, water quality, white shrimp