ABSTRAK

Udang vaname (*Litopeneus vannamei*) merupakan salah satu komoditas unggulan budidaya di Indonesia. Salah satu hambatan dalam kegiatan budidaya udang vaname adalah munculnya penyakit yang dapat menurunkan produksi. Upaya untuk mengantisipasi kegagalan ini, pemerintah melalui Balai Perikanan Budidaya Air Payau Situbondo mengembangkan sistem budidaya yang disebut *Millenial Shrimp Farm*. Tujuan dari skripsi ini adalah untuk mengetahui kondisi kualitas air serta keberadaan bakteri patogen *Vibrio parahaemolyticus* penyebab penyakit AHPND pada air dan udang vaname (*Litopenaeus vannamei*) yang dibudidayakan di *Millenial Shrimp Farm* BPBAP Situbondo. Penelitian ini menggunakan metode studi observasi pada 6 petak tambak milenial dengan air tambak dan udang vaname sebagai objek penelitian. Pengukuran parameter kualitas air seperti suhu, pH, salinitas dan DO dilakukan 2 kali dalam sehari (07.00 dan 16.00). Sedangkan pengukuran parameter amoniak, nitrit, total bahan organik, total bakteri umum dan total bakteri vibrio dilakukan setiap satu minggu sekali. Deteksi bakteri *Vibrio parahemolyticus* dilakukan sebanyak 3 kali selama masa penelitian. Hasil penelitian menunjukkan bahwa kondisi kualitas air diantaranya suhu, salinitas, pH, DO, amoniak, nitrit, total bahan organik, total bakteri umum dan total bakteri vibrio di *Millenial Shrimp Farm* BPBAP Situbondo optimal untuk kegiatan budidaya udang vaname. Selain itu, bakteri patogen *Vibrio parahemolyticus* tidak ditemukan pada air dan udang vaname.

Kata Kunci : *Udang Vaname (Litopeneus vannamei); Millenial Shrimp Farm; Kualitas Air; Vibrio parahaemolyticus; Acute Hepatopancreatic Necrosis Disease*

ABSTRACT

Vannamei shrimp (*Litopeneus vannamei*) is one of the leading aquaculture commodities in Indonesia. One of the obstacles in vaname shrimp farming activities is the emergence of diseases that can reduce production. In an effort to anticipate this failure, the Indonesian government through the Balai Perikanan Budidaya Air Payau Situbondo develops a cultivation system called the Millennial Shrimp Farm. The purpose of this work was to monitor the water quality of and the presence of pathogenic bacteria *Vibrio parahaemolyticus* causing AHPND at Millenial Farm of White Shrimp (*Litopenaeus vannamei*) at BPBAP Situbondo. Measurement of water quality parameters including temperature, pH, salinity and DO were carried out twice a day (07.00 and 16.00). Meanwhile, the measurement of the parameters of ammonia, nitrite, total organic matter, total common bacteria and total vibrio bacteria was carried out once a week. Detection of *Vibrio parahaemolyticus* bacteria was carried out at week 1, week 3 and week 6. The results showed that water quality parameters including temperature, salinity, pH, DO, ammonia, nitrite, total organic matter, total common bacteria and total vibrio bacteria at Millenial Shrimp Farm BPBAP Situbondo were suitable for vaname shrimp farming activities. In addition, the pathogenic bacterium *Vibrio parahemolyticus* was not found in water and white shrimp.

Keywords *: Vaname Shrimp (Litopeneus vannamei); Millennial Shrimp Farm; Water Quality; Vibrio parahaemolyticus; Acute Hepatopancreatic Necrosis Disease*