

ABSTRAK

Udang vannamei (*Litopenaeus vannamei*) merupakan komoditas budidaya perikanan dengan produksi tertinggi secara global, namun keberadaannya rentan terhadap serangan patogen terutama beberapa jenis bakteri *Vibrio*. Pemantauan keberadaan bakteri umum dan *Vibrio* di tambak secara rutin menjadi langkah penting dalam mendukung keberhasilan budidaya udang vannamei. Tujuan penelitian ini yaitu memantau *Total Vibrio Count* (TVC) dan *Total Bacteria Count* (TBC) serta mengetahui korelasi antara *Total Vibrio Count* (TVC) dan *Total Bacteria Count* (TBC). Metode yang digunakan dalam penelitian ini adalah metode observasi dan kuantitatif deskriptif komparatif dengan membandingkan baku mutu dalam SOP PT Central Proteina Prima Tbk. Data yang didapatkan dianalisis menggunakan analisis uji Anova, dilanjutkan dengan uji lanjut Tukey HSD dan uji one sample t-test, untuk analisis korelasi menggunakan uji pearson. Hasil penelitian dapat dilihat diperoleh rata-rata total vibrio berkisar 3 ± 8 - 2244 ± 544 CFU/mL, rata-rata total bakteri berkisar 4.100 ± 4036 - 87.714 ± 43.458 CFU/mL. Kondisi total vibrio dan total bakteri cenderung mengalami fluktuatif yang disebabkan oleh berbagai faktor seperti faktor lingkungan dan adanya manajemen tambak. Korelasi antara total vibrio dengan total bakteri diperoleh nilai $r = 0,467$ (korelasi positif kategori sedang). Secara statistik, korelasi tersebut belum cukup kuat untuk digeneralisasikan ($p = 0,068$). Keberadaan bakteri patogen dan non patogen yang melebihi standar menjadi peringatan pentingnya pemantauan tambak secara rutin.

Kata kunci : *Akuakultur, Bakteri, Perikanan, Udang Vannamei, Vibrio*

ABSTRACT

Vannamei shrimp (*Litopenaeus vannamei*) is the most produced aquaculture commodity worldwide; yet, it is susceptible to pathogen assaults, particularly from various species of *Vibrio* bacterium. Regularly monitoring the prevalence of common bacteria and *Vibrio* in ponds is crucial for the success of vannamei shrimp production. This study aimed to assess Total *Vibrio* Count (TVC) and Total Bacteria Count (TBC) and to establish the association between them. This research employs observational and comparative descriptive quantitative approaches, benchmarked against the quality requirements outlined in the standard operating procedures of PT. Central Proteina Prima Tbk. The acquired data were examined utilizing ANOVA, succeeded by Tukey HSD and one-sample t-test for correlation analysis employing Pearson's test. The study results indicate that the average total vibrio ranged from 3 ± 8 to 2244 ± 544 CFU/mL, whereas the average total bacteria ranged from $4,100 \pm 4036$ to $87,714 \pm 43,458$ CFU/mL. The levels of total vibrio and total bacteria change due to several variables, including environmental conditions and pond management practices. The correlation between total vibrio and total bacteria yielded a result of $r = 0.467$, indicating a moderate positive association. The connection was insufficiently robust for generalization ($p = 0.068$). The detection of dangerous and non-pathogenic microorganisms exceeding standard levels underscores the necessity of regular pond monitoring.

Keywords : *Aquaculture, Bacteria, Fisheries, Vannamei shrimp, Vibrio.*

