

ABSTRACT

Lantika Intania. 24020120130111. The Effect of Providing Postbiotic *Bacillus amyloliquefaciens* in Feed on The Growth Performance and Immune Response of Vannamei Shrimp (*Litopenaeus vannamei*) against *Vibrio harveyi*. **Anto Budiharjo and Nurhayati.**

Postbiotic are preparations of dead microorganisms and their components that have health benefits for the host. Vaname shrimp (*L. vannamei*) is one of the commodities with high consumption value, so its production needs to be developed to maintain its quality and standard. This study was designed to investigate the effects of postbiotics from *B. amyloliquefaciens* on the growth and immune response of vaname shrimp in combating *V. harveyi*. This study consisted of three treatments: *B. amyloliquefaciens* postbiotics (feed with *B. amyloliquefaciens* postbiotics and challenged with *V. harveyi*), C(+) (feed with phosphate buffered saline (PBS) and challenged with *V. harveyi*), and C(-) (commercial feed without challenge). The dose of postbiotics used in this study was 10^6 CFU/g feed. The concentration of *V. harveyi* used for the challenge test was 10^7 CFU/mL. The study used PostLarva 12 days vaname shrimp and was conducted for 35 days, with the last 7 days being the challenge test. In vitro results showed antimicrobial activity as a clear zone of *B. amyloliquefaciens* against *V. harveyi*. *B. amyloliquefaciens* postbiotics treatment did not show a significant effect on growth parameters (survival rate (SR), weight growth (W), specific growth rate (SGR), and feed conversion ratio (FCR)). *B. amyloliquefaciens* postbiotics showed a significant effect (Sig, <0.05) on immune response parameters (*total hemocyte count* (THC)) after the challenge test, with a value of $4,56 \times 10^6$ cells/mL. The conclusion of this study is that *B. amyloliquefaciens* postbiotics have an insignificant impact on improving growth performance (survival rate (SR), weight growth (W), specific growth rate (SGR), and feed conversion ratio (FCR)) but have proven to act as an immunostimulant in vaname shrimp against the pathogen *V. harveyi*.

Keywords: *postbiotic, Bacillus amyloliquefaciens, Litopenaeus vannamei, Vibrio harveyi, growth performance, immune response.*