

ABSTRACT

Roiyan Nur Khoirul Umam, 24020219140075. Dietary Supplementation of Shrimp Feed with Red Galangal (*Alpinia purpurata* K. Schum) for the Survival and Growth of Pacific White Shrimp (*Litopenaeus vannamei*) Post-Larvae (Under the supervision of Hermin Pancasakti Kusumaningrum and Arina Tri Lunggani).

The post larval (PL) stage of Pacific white shrimp (*Litopenaeus vannamei*) is highly susceptible to environmental stress and pathogenic infections under suboptimal conditions. Dietary supplementation is a viable strategy to mitigate these challenges, with red galangal (*Alpinia purpurata*) emerging as a potential feed additive. This study aimed to evaluate the effects of *A. purpurata* supplementation on the survival rate, weight gain, and length growth of *L. vannamei* post-larvae. The research employed an experimental method over a 30-day period using a Completely Randomized Design (CRD), consisting of six treatments and three replicates. The experimental dosage levels were 0% (control), 0.5% (A), 1% (B), 2% (C), 4% (D), and 8% (E). A total of 900 shrimp post larvae were utilized and divided to 18 units, with a stocking density of 50 individuals per experimental unit. Observed parameters included survival rate, weight gain, and length growth. Data were analyzed using Kaplan-Meier survival analysis and Analysis of Variance (ANOVA) to determine the optimal dosage for enhancing the performance of *L. vannamei*. The results showed that feed supplementation with *A. purpurata* had an impact on the survival rate, weight gain, and length growth. However, the most pronounced effect was observed in the survival rate ($p < 0,05$), whereas weight gain and length growth did not significantly different ($p > 0,05$).

keyword: *Alpinia purpurata*, dietary supplementation, *L. vannamei* post larvae, survival rate, growth.