

Kajian bakteri probiotik lokal untuk meningkatkan status kesehatan udang vannamei *litopenaeus vannamei* (boone)

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Abstrak

ABSTRACT

Shrimp cultivation in ponds, especially *Penaeus monodon* Fabricius in Indonesia is depressed by disease, particularly due to white spot syndrome virus (WSSV). Antibiotics, which have been used in large quantities in aquaculture are often cause for concern in promoting transfer of antibiotic resistance to human pathogens. Many scientists reported that the application of probiotic bacteria provides a promising solution to these problems. Probiotic is now developed and used for shrimp culture in several countries such as: Thailand, China, Philippines, India, and Taiwan to increase the production target.

The aim of this study was to find indigenous probiotic bacteria which can be used as therapeutic agent for vannamei shrimp (*Litopenaeus vannamei*) (Boone) toward WSSV. To achieve the aim above, a number of experiments were conducted, ie. 1) isolation and selection of indigenous probiotic bacteria based on shrimp's survival rate; 2) selection of probiotic bacteria based on their ability to cure vannamei shrimp infected by WSSV, 3) efficacy test of probiotic bacteria on the hatching rate of the cysts of *Artemia salina*, and 4) identification of selected isolates based on sequence of 16S ribosomal RNA gene.

The hypotheses of this studies were as follows: (a) indigenous probiotic bacteria can be isolated from several locations of shrimp farming (b) indigenous probiotic bacteria can be used as therapeutic agent for shrimp towards WSSV, (c) indigenous probiotic bacteria show no negative effect towards other trophic level in aquaculture i.e. *A. salina*, and (d) selected probiotic bacteria can be identified based on 16S ribosomal RNA gene sequence analysis.