

## PENINGKATAN SINTASAN DAN KETAHANAN LARVA UDANG WINDU (*Penaeus monodon*) MELALUI PENAMBAHAN BAKTERI *Vibrio harveyi* KE DALAM PAKAN MIKRO

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### ABSTRAK

Vibriosis merupakan kendala utama yang dihadapi para pengelola hatcheri dalam memproduksi benih udang. Vaksinasi diyakini merupakan suatu metoda yang efektif untuk meningkatkan ketahanan udang terhadap infeksi bakteri. Di Loka Penelitian Perikanan Gondol, Bali, telah dilakukan penelitian untuk mengetahui pengaruh penambahan bakteri *Vibrio harveyi* yang sudah dimatikan ke dalam pakan mikro terhadap sintasan larva udang windu sampai stadia PL-1 dan dilanjutkan dengan ujiantang selama lima hari menggunakan bakteri *V. harveyi* hidup. Konsentrasi *V. harveyi* dalam pakan mikro adalah 0,05% (A), 0,5% (B), 5% (C) dan 0% (tanpa penambahan *V. harveyi*) sebagai kontrol. Penelitian dilakukan menggunakan Rancangan Acak Lengkap dengan tiga ulangan. Penelitian terbagi atas dua percobaan. Pada percobaan pertama hanya diberi pakan mikro sedang pada percobaan ke dua selain pakan mikro juga diberikan pakan alami *Chaetoceros* sp. Sintasan larva pada percobaan pertama masing-masing adalah 54,33% (A), 49,00% (B), 49,33% (C), dan 39,00% (Kontrol), dan setelah ujiantang selama lima hari masing-masing adalah 84,8% (A), 81,9% (B), 78,1% (C), dan 60,0% (kontrol). Pada percobaan ke dua, rata-rata sintasan masing-masing perlakuan adalah 69,00% (A), 56,00% (B), 55,00% (C), dan 40,67% (Kontrol), dan setelah ujiantang selama lima hari rata-rata sintasannya adalah 72,5% (A), 69,17% (B), 66,67% (C), dan 54,17% (kontrol). Ini menunjukkan bahwa penambahan bakteri *V. harveyi* yang sudah dimatikan ke dalam pakan mikro mampu meningkatkan ketahanan larva udang windu terhadap infeksi *V. harveyi* sehingga memberikan sintasan yang lebih tinggi dibandingkan dengan kontrol.

**ABSTRACT:** *Increase of survival and resistance of giant tiger prawn larvae (Penaeus monodon) by addition of killed Vibrio harveyi into microdiet. By: Zafran, Des Roza and Ketut Suwirya*

*Luminescent vibriosis is the most serious threat to giant tiger prawns (Penaeus monodon) larvae in hatchery, these may cause mass mortality within a few days. Effort to combat this disease has been practiced by using a wide range of control measures, such as chemical and drug treatment. So far, the disease controls have not been quite succesful. Vaccine perceived as another alternative mean of disease control which is more economical, safe, practical and effective to enhance efficient aquaculture. An experiment on micro diets supplemented with formalin killed Vibrio harveyi was conducted at Gondol Research Station for Coastal Fisheries, Bali from June-July 1996. The purpose of the experiment is to know the effects of addition of killed V. harveyi into microdiet to survival and resistance of P. monodon larvae up to PL-1 and after challenge with live V. harveyi for five days. Killed V. harveyi were added to microdiet at a level of 0.05% (A), 0.5% (B), and 5.0% (C) dry weight based. As a control is microdiet without V. harveyi. The experiment was arranged in completely randomized design with three replication. Result of the first experiment (larvae fed only with test diet) showed that larvae fed with microdiet supplemented with V. harveyi gave higher survival than that of control, namely 54.3% (A), 49.0% (B), 49.3% (C), and 39.0% (control), respectively. After five days challenged, survival of larvae were 84.8% (A), 81.9% (B), 78.1% (C), and 60.0% (control), respectively. Second experiment (larvae fed with test diets and Chaetoceros sp.) showed the same phenomena. Survival of larvae up to PL-1 were 69.0% (A), 56.0% (B), 55.0% (C), and 40.67% (control). After challenged for five days, survival of larvae were 72.5% (A), 69.2% (B), 66.7% (C), and 54.2% (control), respectively. The results showed that inclusion of killed V. harveyi into microdiet improved the survival of larval P. monodon and preventing infection by luminescent V. harveyi.*

**KEYWORDS:** *Penaeus monodon, Survival rate, Vibrio harveyi, micro diet, larvae.*

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