

Intisari

Pengaruh Pemberian Probiotik *Bacillus tropicus* PCP1 terhadap Daya Tetas Telur dan Pertumbuhan Benih Lele Mutiara (*Clarias sp.*)

Penelitian ini bertujuan untuk mengevaluasi pengaruh pemberian probiotik *Bacillus tropicus* PCP1 terhadap daya tetas telur, kelangsungan hidup, dan pertumbuhan benih lele (*Clarias gariepinus*). Penelitian dilakukan secara eksperimental menggunakan Rancangan Acak Lengkap (RAL) dengan empat perlakuan dosis (sel/ml) probiotik (0, 10^2 , 10^4 , dan 10^6) dalam tiga ulangan. Probiotik diberikan melalui air pemeliharaan pada hari ke-1 sampai 14 kemudian dilanjutkan melalui pakan pada hari ke 14 sampai 30. Parameter yang diamati meliputi *hatching rate*, *survival rate* larva dan *fry*, pertumbuhan mutlak *fry*, serta laju pertumbuhan spesifik *fry* (SGR). Hasil penelitian menunjukkan bahwa probiotik tidak berpengaruh signifikan terhadap *hatching rate* dan *survival rate* ($p > 0,05$), Namun, pada dosis 10^6 sel/ml, *B. tropicus* secara signifikan meningkatkan pertumbuhan mutlak dan SGR ($p < 0,05$), dengan nilai SGR panjang mencapai 3,13%/hari, SGR berat 7,31%/hari, dan pertambahan berat mutlak sebesar 0,369 g. Kualitas air selama masa pemeliharaan berada dalam kisaran optimal. Berdasarkan hasil tersebut, pemberian *B. tropicus* dapat direkomendasikan sebagai strategi alami dan berkelanjutan untuk meningkatkan performa pertumbuhan benih ikan lele.

KATA KUNCI: *Bacillus tropicus* , daya tetas, ikan lele, pertumbuhan, probiotik

Abstract

Effect of Probiotic *Bacillus tropicus* PCP1 Administration on the Hatching Rate and Growth of Mutiara Catfish (*Clarias sp.*) Larvae

This study aimed to evaluate the effect of *Bacillus tropicus* PCP1 probiotic supplementation on egg hatching rate, survival, and growth performance of catfish (*Clarias gariepinus*) fry. The experiment was conducted using a Completely Randomized Design (CRD) with four probiotic dose (cell/ml) treatments (0, 10^2 , 10^4 , and 10^6 cells/ml), each with three replications. The probiotic was administered through the rearing water from day 1 to 14, followed by feed supplementation from day 14 to 30. Observed parameters included hatching rate, larval and fry survival rate, absolute growth, and specific growth rate (SGR) of the fry. The results showed that probiotic supplementation had no significant effect on hatching and survival rates ($p > 0.05$). However, at a dose of 10^6 cells/ml, *B. tropicus* significantly enhanced absolute growth and SGR ($p < 0.05$), with a length SGR of 3.13%/day, weight SGR of 7.31%/day, and absolute weight gain of 0.369 g. Water quality remained within the optimal range throughout the rearing period. Based on these findings, supplementation of *B. tropicus* at the highest dose can be recommended as a natural and sustainable strategy to improve the growth performance of catfish fry.

KEYWORDS: *Bacillus tropicus* , catfish, growth, hatching rate, probiotic