

Intisari

PENGARUH PENAMBAHAN BAKTERI PROTEOLITIK *Priestia flexa* DALAM PAKAN TERHADAP PERTUMBUHAN LELE (*Clarias sp.*) PADA TAHAP PEMBESARAN

Penelitian ini bertujuan untuk mengetahui pengaruh penambahan bakteri proteolitik *Priestia flexa* dalam pakan terhadap pertumbuhan lele (*Clarias sp.*) pada tahap pembesaran. Penelitian dilakukan menggunakan metode eksperimental dengan Rancangan Acak Lengkap (RAL) yang terdiri dari 4 perlakuan dan 3 ulangan. Perlakuan dosis yang diberikan yaitu 10^8 , 10^6 , 10^4 sel/g pakan dan tanpa penambahan bakteri sebagai kontrol. Ikan berukuran 9 – 12 cm dipelihara dalam bak fiber ukuran 50 x 50 x 60 cm selama 60 hari dengan padat tebar 100 ekor/m² dan pakan diberikan sebanyak 3% dari total biomassa ikan. Penambahan bakteri dalam pakan dilakukan setiap 3 hari sekali. Pengamatan parameter penelitian dilakukan setiap 2 minggu sekali. Data pertumbuhan, biomassa, sintasan, dan rasio konversi pakan dianalisis secara statistik menggunakan analisis sidik ragam ANOVA (*Analysis of Variance*) dengan tingkat kepercayaan 95%. Apabila hasil menunjukkan beda nyata, maka dilanjutkan dengan uji DMRT (*Duncan's Multiple Range Test*). Data kualitas air dianalisis secara deskriptif. Hasil penelitian menunjukkan bahwa penambahan bakteri proteolitik *Priestia flexa* dalam pakan berpengaruh nyata terhadap pertumbuhan mutlak, laju pertumbuhan spesifik, biomassa dan rasio konversi pakan ($p < 0,05$), tetapi tidak berpengaruh nyata terhadap sintasan ($p > 0,05$). Penambahan bakteri dengan dosis 10^8 sel/g pakan menghasilkan rerata pertumbuhan berat dan panjang mutlak paling tinggi sebesar 58,8 g dan 11,86 cm, laju pertumbuhan berat dan panjang spesifik sebesar 2,7%/hari dan 1,28%/hari, biomassa sebesar 1.916,5 g, dan rasio konversi pakan terendah sebesar 1,2. Sintasan yang diperoleh selama pemeliharaan berkisar antara 93 – 97%.

Kata kunci: bakteri proteolitik, lele, pertumbuhan, *Priestia flexa*, probiotik.

Abstract

EFFECT OF THE ADDITION OF PROTEOLYTIC BACTERIA *Priestia flexa* IN THE FEED ON THE GROWTH OF CATFISH (*Clarias sp.*) GROWING PHASE

This purpose of study determine effect of addition proteolytic bacteria *Priestia flexa* on feed to known the growth of catfish (*Clarias sp.*) at the growing phase. The experimental design used in this study was a Completely Randomized Design (CRD) consisting of 4 treatments and 3 replications. The treatment dose given was 10^8 , 10^6 , 10^4 cell/g feed and without the addition of bacteria as a control. Fish measuring 9 – 12 cm were reared in fiber tanks measuring 50 x 50 x 60 cm for 60 days with a stocking density of 100 fish/m² and feeded as much as 3% of the total fish biomass. The addition of bacteria in the feed is done every 3 days. Observation of research parameters is carried out every 2 weeks. Growth data, biomass, survival rate, and feed conversion ratio were analyzed using by analysis of variance with a 95% confidence level and followed by DMRT test. Water quality data were analyzed descriptively. The results showed that the addition of proteolytic bacteria *Priestia flexa* in feed had a significant effect on absolute growth, specific growth rate, biomass, and feed conversion ratio ($p < 0.05$), but had no significant effect on survival rate ($p > 0.05$). The addition of bacteria at a dose of 10^8 cell/g feed produced the highest absolute weight and length growth of 58.8 g and 11.86 cm, specific weight and length growth of 2.7%/day and 1.28%/day, biomass of 1.916,5 g and the lowest feed conversion ratio of 1.2. Survival rate obtained during maintenance ranges from 93 – 97%.

Keywords: catfish, growth, *Priestia flexa*, probiotics, proteolytic bacteria.