

Intisari

Pengaruh Pemberian Ekstrak Kasar Jamur Tiram dan Probiotik (*Lactococcus formosensis* JAL37) pada Pakan terhadap Imun Non-Spesifik Seluler Lele (*Clarias* sp.)

Penelitian ini bertujuan untuk menganalisis pengaruh suplementasi ekstrak jamur tiram dan probiotik *Lactococcus formosensis* JAL37 pada pakan terhadap sintasan dan imunitas non-spesifik seluler lele (*Clarias* sp.). Penelitian dilaksanakan dengan rancangan acak lengkap faktorial 2×2 dengan perlakuan penambahan probiotik, ekstrak jamur tiram, kombinasi keduanya pada pakan, dan kontrol selama dua bulan. Parameter imunitas non-spesifik seluler yang diamati meliputi jumlah leukosit, indeks fagositosis, aktivitas fagositosis, hematokrit, dan leukokrit. Hasil penelitian menunjukkan bahwa seluruh perlakuan dalam penelitian ini tidak berpengaruh terhadap sintasan, nilai hematokrit dan leukokrit darah lele. Hanya perlakuan probiotik yang meningkatkan indeks fagositosis ($p < 0,05$). Pemberian ekstrak jamur tiram dan kombinasinya dengan probiotik mampu meningkatkan total leukosit ($p < 0,05$). Penelitian ini menyimpulkan bahwa penambahan ekstrak kasar jamur tiram dan kombinasinya dengan probiotik *Lactococcus formosensis* pada pakan dapat meningkatkan total leukosit lele (*Clarias* sp.), sementara penambahan probiotik *Lactococcus formosensis* pada pakan dapat meningkatkan indeks fagositosis lele (*Clarias* sp.).

Kata kunci: ekstrak jamur tiram, probiotik, *Lactococcus formosensis*, imun nonspesifik, lele

Abstract

Effects of Oral Supplementation of Oyster Mushroom Crude Extract and Probiotic (*Lactococcus formosensis* JAL37) on Non-Specific Cellular Immunity in Catfish (*Clarias* sp.)

This study aimed to analyze the effect of oyster mushroom extract and probiotic *Lactococcus formosensis* JAL37 supplementation in feed on the survival and nonspecific cellular immunity of catfish (*Clarias* sp.). The study was conducted with a 2×2 factorial completely randomized design with the treatment of adding probiotics, oyster mushroom extract, a combination of both in feed, and a control group for two months. The parameters of nonspecific cellular immunity observed included the number of leukocytes, phagocytosis index, phagocytosis activity, hematocrit, and leukocrit. The results showed that all treatments in this study did not affect the survival rate, blood hematocrit, and leukocrit of catfish. Only probiotic treatment increased the phagocytosis index ($p < 0.05$). Administration of oyster mushroom extract and its combination with probiotics was able to increase total leukocytes ($p < 0.05$). This study concluded that the supplementation of oyster mushroom crude extract and its combination with *Lactococcus formosensis* probiotics in feed increases the total leukocytes of catfish (*Clarias* sp.). In contrast, the supplementation of *Lactococcus formosensis* probiotics in feed increases the phagocytosis index of catfish (*Clarias* sp.).

Keywords: oyster mushroom extract, probiotic, *Lactococcus formosensis*, nonspecific cellular immunity, catfish