

INTISARI

PEMBERIAN PROBIOTIK *Bacillus* spp., *Lactococcus raffinolactis*, *Saccharomyces cerevisiae* DAN IMUNOSTIMULAN GAMA ALGIN F PADA PAKAN UNTUK MENINGKATKAN KEKEBALAN NON-SPESTIFIK SELULER LELE (*Clarias* sp.)

Tujuan dari penelitian ini adalah untuk mengetahui pengaruh pemberian probiotik *Bacillus* spp, *Lactococcus raffinolactis*, dan *Saccharomyces cerevisiae*, serta imunostimulan Gama Algin F terhadap kekebalan non-spesifik seluler ikan lele (*Clarias* sp.). Penelitian dilakukan menggunakan Rancangan Acak Lengkap (RAL) Faktorial dengan satu perlakuan kontrol dan tiga perlakuan kombinasi masing-masing tiga ulangan. Perlakuan yang diberikan yaitu A0B0 (kontrol), A1B0 (suplementasi probiotik tanpa imunostimulan), A0B1 (suplementasi imunostimulan tanpa probiotik), dan A1B1 (suplementasi probiotik dan imunostimulan). Parameter yang diamati adalah aktivitas fagositosis, indeks fagositosis, diferensiasi leukosit, total eritrosit, total leukosit, hematokrit, dan leukokrit. Hasil menunjukkan bahwa pemberian probiotik dan imunostimulan mampu meningkatkan aktivitas fagositosis, jumlah monosit, dan jumlah trombosit, tetapi tidak mampu meningkatkan indeks fagositosis, jumlah limfosit, neutrofil, eosinofil, basofil, hematokrit, dan leukokrit. Signifikansi pada efek utama terdapat pada aktivitas fagositosis dan jumlah monosit. Signifikansi pada efek interaksi terdapat pada aktivitas fagositosis, jumlah limfosit, dan jumlah trombosit, sedangkan signifikansi pada efek sederhana terdapat pada aktivitas fagositosis, jumlah monosit, jumlah limfosit, dan jumlah trombosit. Total eritrosit dan leukosit yang dianalisis secara deskriptif menunjukkan berada pada kisaran normal. Berdasarkan hasil yang didapatkan, dapat diketahui bahwa suplementasi pakan dengan probiotik *Bacillus* spp., *Lactococcus raffinolactis*, dan *Saccharomyces cerevisiae*, serta imunostimulan Gama Algin F mampu meningkatkan kekebalan non-spesifik seluler ikan lele (*Clarias* sp.) dan perlakuan imunostimulan tanpa probiotik (A0B1) memiliki hasil paling efektif untuk meningkatkan sistem kekebalan non-spesifik seluler.

Kata kunci: *Clarias* sp.; fagositosis; Gama Algin F; probiotik; respon imun non-spesifik

ABSTRACT

ORAL ADMINISTRATION OF *Bacillus* spp., *Lactococcus raffinolactis*, *Saccharomyces cerevisiae* AND IMMUNOSTIMULANT GAMA ALGIN F TO ENHANCE NON-SPEISIFIC CELLULER IMMUNITY OF CATFISH (*Clarias* sp.)

The aims of this research were to determine the administration effect of probiotic *Bacillus* spp., *Lactococcus raffinolactis*, and *Saccharomyces cerevisiae*, and immunostimulant Gama Algin F on non-specific cellular immunity of catfish (*Clarias* sp.). The research was conducted using a Factorial Completely Randomized Design (FCRD) with one control treatment and three combination treatments with three replications. The treatments were A0B0 (control), A1B0 (probiotic supplementation without immunostimulant), A0B1 (immunostimulant supplementation without probiotic), and A1B1 (probiotic and immunostimulant supplementation). The parameters observed were phagocytic activity, phagocytic index, leukocyte differentiation, total erythrocytes, total leukocytes, hematocrit and leukocrit. The results showed that administration of probiotics and immunostimulants was able to increase phagocytic activity, the number of monocytes, and the number of thrombocytes, but was not able to increase the phagocytic index, the number of lymphocytes, neutrophils, eucinophils, basophils, hematocrit, and leukocrit, as well as total erythrocytes and leukocytes. The significance of the main effect is in phagocytic activity and monocyte count. The significance of the interaction effect was found in phagocytic activity, lymphocytes count, and thrombocytes count, while the significance of the simple effect was found in phagocytic activity, monocytes count, lymphocytes count, and thrombocytes count. Total erythrocytes and leukocytes analyzed descriptively showed in the normal range. Based on the results obtained, it can be seen that feed supplementation with probiotics *Bacillus* spp., *Lactococcus raffinolactis*, and *Saccharomyces cerevisiae*, and immunostimulant Gama Algin F was able to increase the non-specific cellular immunity of catfish (*Clarias* sp.) and treatment of immunostimulant without probiotic (A0B1) has the most effective to improve the non-specific cellular immune system.

Keywords: *Clarias* sp.; Gama Algin F; non-specific immune response, phagocytic; probiotic