INTISARI

PENGARUH PEMBERIAN DRYMUNE® SEBAGAI *FEED ADDITIVE* TERHADAP JUMLAH LEUKOSIT, DIFERENSIAL LEUKOSIT, DAN BERAT BADAN IKAN NILA (*Oreochromis niloticus*)

Achaddia Sweet Tanti
18/423956/KH/09581

Kombinasi mannan oligosakarida, betaglukan, dan *Lactobacillus plantarum* terbukti meningkatkan sistem imun bawaan humoral serta peningkatan kapasitas dan kemampuan resistensi penyakit pada ikan caspian salmon. Tujuan dari penelitian ini adalah untuk mengetahui pengaruh pemberian Drymune®, prebiotik yang mengandung betaglukan dan mannan oligosakarida, terhadap jumlah leukosit, diferensial leukosit, dan pertumbuhan berat badan ikan nila (*Oreochromis niloticus*). Sejumlah 100 ekor ikan nila dengan rata-rata bobot 31,42 gram dibagi dalam lima kelompok yang diadaptasikan selama seminggu dan dipelihara selama 30 hari. Masing-masing kelompok berisi 20 ekor. Kelompok II, III, dan IV diberi Drymune® sebagai *feed additive* dengan dosis 1, 2, dan 4 g/kg BB sedangkan kelompok I sebagai kontrol negatif tidak diberi Drymune® dan kelompok V sebagai kontrol positif diberi oksitetrasiklin 0,1 g/kg BB. Pada minggu ke 4 pemeliharaan, dilakukan penimbangan setiap individu ikan. Hari ke-30 dilakukan pengambilan sampel darah melalui vena kaudal dari 3 sampel setiap kelompok untuk pemeriksaan jumlah total leukosit dan diferensial leukosit. Data hasil penelitian dianalisis dengan *software* SPSS metode Anova dan Kruskal-Wallis serta grafik menggunakan Microsoft Excel. Hasil analisis data menunjukkan kelompok IV memiliki rata-rata jumlah leukosit, neutrofil, dan limfosit tertinggi yaitu 58,50±18,82 x10^3/µL, 15,00±11,32 x10^3/µL, dan 37,47±9,47 x10^3/µL. Kelompok I memiliki rata-rata jumlah eosinofil tertinggi yaitu 0,17±0,15 x10^3/µL. Kelompok III memiliki rata-rata jumlah monosit tertinggi yaitu 7,07±6,38 x10^3/µL. Kelompok V memiliki pertumbuhan berat badan terbesar yaitu 63,71%. Kesimpulan hasil analisis statistika dengan uji Anova dan Kruskal-Wallis menunjukkan pemberian Drymune® tidak memberikan pengaruh signifikan terhadap jumlah leukosit, diferensial leukosit, dan berat badan ikan nila.

Kata kunci: mannan oligosakarida, betaglukan, ikan nila, leukosit, diferensial leukosit, berat badan.

ABSTRACT

THE EFFECT OF DRYMUNE® AS FEED ADDITIVE ON TOTAL LEUKOCYTE, DIFFERENTIAL LEUKOCYTES COUNT, AND GROWTH PERFORMANCE IN NILE TILAPIA (*Oreochromis niloticus*)

Achaddia Sweet Tanti
18/423956/KH/09581

The combination of mannan oligosaccharide, betaglucan, and *Lactobacillus plantarum* improved humoral innate immune system, immune capacity and disease resistance ability in Caspian trout. This study intended to know the effect of Drymune®, prebiotic product which contains betaglucan and mannan oligosaccharide on leukocytes count, differential leukocytes count, and growth performance in Nile tilapia (*Oreochromis niloticus*). A hundred (100) fish with average body weight of 31,42 gram were divided into five groups then adapted for a week and treated for 30 days. Each group contained 20 fish. Group II, III, and IV was treated Drymune®, as feed additive, at doses of 1, 2, and 4 g/kg BW and in other hand group I, as a negative control, was not treated of Drymune® and group V, as a positive control, was treated oxytetracycline 0,1 g/kg BW. On the 4th week, fish were weighed individually. On the 30th day, blood fish of 3 of each group were sampled through caudal vein for leukocyte and differential leukocytes counting. Data were analyzed using SPSS, Anova and Kruskal-Wallis methode, and graphically using Microsoft Excel. Group IV revelaed highest of leukocyte, neutrophil, and lymphocyte count which was 58,50±18,82 x10^3/µL, 15,00±11,32 x10^3/µL, and 37,47±9,47 x10^3/µL. Group I revealed 0,17±0,15 x10^3/µL which was highest eosinophil count. Group III revealed 7,07±6,38 x10^3/µL which was highest monocyte count. Group V had 63,71% growth performance which was the highest among others. Based on data analysis, the administration of 1, 2, and 4 g/kg BW of Drymune® did not show a significant effect on leukocyte count, differential leukocytes count, and growth performance in Nile tilapia.

Keyword: mannan oligosaccharide, betaglucan, nile tilapia, leukocyte, differential leukocytes, growth performance.