

## ABSTRAK

### STATUS KESEHATAN IKAN LELE *Clarias gariepinus* (BURCHELL, 1882) YANG DIBERI PAKAN BERBASIS TEPUNG DAGING DAN TULANG DENGAN PENAMBAHAN *DISTILLERS DRIED GRAINS WITH SOLUBLES* (DDGS), TAURIN, DAN PROBIOTIK *Bacillus* sp. SEBELUM DAN SESUDAH INFEKSI *Aeromonas hydrophila*

Oleh  
Shinta Nur'Aini.AS

Permintaan tepung ikan sebagai bahan baku pakan terus meningkat. Hal ini dibutuhkan bahan baku pakan alternatif yaitu *Distillers dried grain with solubles* (DDGS) serta MBM dengan penambahan taurin. Ikan lele sering terserang penyakit *Motile Aeromonas Septicemia* (MAS). Penelitian ini bertujuan untuk menganalisis pengaruh pemberian pakan berbasis tepung daging dan tulang dengan penambahan DDGS, taurin, dan probiotik *Bacillus* sp. terhadap profil hematologi, efisiensi pakan, dan retensi protein ikan lele. Penelitian ini menggunakan rancangan acak kelompok (RAL) dengan 6 perlakuan dan masing-masing 3 ulangan: P1(DDGS 0%+ taurin 0%), P2 (DDGS 5%+taurin 0,5 %), P3 (DDGS 5%+taurin 0%), P4 (DDGS 10% +taurin 0,5 %), P5 (DDGS 15%+taurin 1%), dan P6 (DDGS 20%+taurin 1,5%). Pemberian probiotik *Bacillus* sp. pada semua perlakuan sebanyak 10 ml/kg pakan. Panjang dan berat rata-rata ikan adalah  $9,50 \pm 0,33$  cm dan  $5,77 \pm 0,69$  g dipelihara selama 60 hari. Ikan sebanyak 5 ekor disampling pengambilan darah sebelum dan setelah infeksi *A. hydrophila* dengan kepadatan bakteri  $10^6$  CFU/mL diambil pada H+1, H+3, dan H+5 setelah infeksi untuk dianalisis kesehatannya. Variabel penelitian yang diamati: total eritrosit, total leukosit, kadar hematokrit, aktivitas fagositosis, indeks fagositosis, efisiensi pakan (EP), retensi protein (RP), dan tingkat kelangsungan hidup (SR). Hasil penelitian menunjukkan bahwa perlakuan yang diberikan pada ikan memberikan pengaruh berbeda nyata terhadap total eritrosit, total leukosit, dan aktivitas fagositosis dan tidak memberikan pengaruh berbeda nyata terhadap EP, RP, kadar hematokrit, indeks fagositosis, dan SR. Penelitian ini membuktikan bahwa pakan yang berbasis tepung daging dan tulang, DDGS, taurin, dan probiotik *Bacillus* sp. dapat meningkatkan kesehatan ikan lele (*Clarias gariepinus*).

Kata kunci: *Aeromonas hydrophila*, ikan lele, pakan, *distillers dried grain with solubles*, *Bacillus* sp.

## ABSTRACT

### **HEALTH STATUS OF CATFISH *Clarias gariepinus* (BURCHELL, 1882) WHICH WAS FEED A FOOD BASED ON MEAT AND BONE MEAL WITH THE ADDITION OF *DISTILLERS DRIED GRAINS WITH SOLUBLES* (DDGS), TAURINE, AND PROBIOTICS *Bacillus* sp. BEFORE AND AFTER *Aeromonas hydrophila* INFECTION**

By  
**Shinta Nur'Aini.AS**

The demand for fish meal as a feed raw material continues to increase. This requires alternative feed raw materials, namely Distillers dried grain with solubles (DDGS) and MBM with the addition of taurine. Catfish are often attacked by *Motile Aeromonas Septicemia* (MAS). This study aimed to analyze the effect of providing meat and bone meal-based feed with the addition of DDGS, taurine, and probiotic *Bacillus* sp. on the hematological profile, feed efficiency, and protein retention of catfish. This study used a randomized block design (CRD) with 6 treatments and 3 replications each: P1 (DDGS 0% + taurine 0%), P2 (DDGS 5% + taurine 0.5%), P3 (DDGS 5% + taurine 0%), P4 (DDGS 10% + taurine 0.5%), P5 (DDGS 15% + taurine 1%), and P6 (DDGS 20% + taurine 1.5%). Probiotic *Bacillus* sp. in all treatments as much as 10 ml/kg feed. The average length and weight of the fish were  $9.50 \pm 0.33$  cm and  $5.77 \pm 0.69$  g maintained for 60 days. Five fish were sampled for blood sampling before and after *A. hydrophila* infection with a bacterial density of  $10^6$  CFU/mL taken on D+1, D+3, and D+5 after infection to analyze their health. The observed research variables: total erythrocytes, total leukocytes, hematocrit levels, phagocytosis activity, phagocytosis index, feed efficiency (EP), protein retention (RP), and survival rate (SR). The results showed that the treatments given to the fish had a significantly different effect on total erythrocytes, total leukocytes, and phagocytosis activity and did not have a significantly different effect on EP, RP, hematocrit levels, phagocytosis index, and SR. This study proves that feed based on meat and bone meal, DDGS, taurine, and probiotic *Bacillus* sp. can improve the health of catfish (*Clarias gariepinus*).

Keywords: *Aeromonas hydrophila*, catfish, feed, distillers dried grain with solubles, *Bacillus* sp.