SUPLEMENTASI BIOPEPTIDA ASAL CEKER AYAM TERHADAP SISTEM IMUN, DAN PERTUMBUHAN AYAM BROILER

ABSTRAK

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Keamanan produk unggas terutama dibidang ayam broiler dapat dinyatakan masih terbilang rendah. Hal tersebut berkaitan dengan penggunaan antibiotik yang akan mengakibatkan residu pada ternak. Antibiotic growth promotor (AGP) digunakan guna meningkatkan performa ayam dan menjaga imunitas. Pelarangan penggunaan AGP memicu inovasi bahan lain seperti bioepeptida. Biopeptida dapat dibuat dari bahan yang mengandung kandungan protein yang tinggi, contohnya limbah dari rumah potong ayam. Limbah yang dapat digunakan ialah ceker ayam, biopeptida yang dihasilkan dari hidrolitis protein memiliki sifat antioksidan dan antimikroba. Sifat tersebut yang dapat meningkatkan performa dan meningkatkan sistem imun ayam broiler. Tujuan penelitian untuk mengkaji suplementasi biopeptida asal ceker ayam terhadap sistem imun dan pertumbuhan ayam broiler. Materi penelitian berupa DOC ayam broiler sebanyak 200 ekor yang dipelihara selama 42 hari masa pemeliharaan. Pakan perlakuan adalah P0: pakan basal, P1 pakan basal + 2% biopeptida, P2: pakan basal + 4% biopeptida, P3: pakan basal + 6% biopeptida. Data yang terkumpul dianalisis menggunakan analisis variansi dengan uji lanjut orthogonal polinomial. Hasil penelitian menunjukkan bahwa suplementasi biopeptida asal ceker ayam berpengaruh nyata ($P<0,05$) terhadap total *E.coli*, bobot limpa, bobot *bursa fabricius*, pertumbuhan, dan efisiensi pakan ayam broiler. Hasil penelitian berpengaruh tidak nyata ($P>0,05$) terhadap bobot hati dan titer antibod AI ayam broiler. Uji lanjut orthogonal menginformasikan bahwa suplementasi biopeptida memberikan respon garis kubik. Berdasar pertumbuhan dan efisiensi pakan, persentase terbaik suplementasi biopeptida dalam pakan ayam broiler berada pada taraf 2,72%. Korelasi antara sistem imun dengan pertumbuhan dalam penelitian ini, semakin baik sistem imun semakin meningkatan pertumbuhan ayam broiler.

Kata Kunci: Broiler, Pakan, Biopeptida, imun, Pertumbuhan

SUPPLEMENTATION OF BIOPEPTIDE FROM CHICKEN FEET TO THE IMMUNITY SYSTEM, AND THE GROWTH OF BROILER CHICKEN

ABSTRACT

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The safety of poultry products, especially in the field of broiler chickens, can be stated to be relatively low. This is related to the use of antibiotics which will result in residues in livestock. Antibiotic growth promoter (AGP) is used to improve chicken performance and maintain immunity. The ban on the use of AGP triggers the innovation of other materials to replace the function of AGP. Biopeptide is one solution that can be used. Biopeptides can be made from materials with a high protein content, for example, waste from chicken slaughterhouses. The waste that can be used is chicken feet, biopeptides produced from hydrolytic proteins have antioxidant and antimicrobial properties. These properties can improve performance and improve the immune system of broiler chickens. The aim of the study was to examine the supplementation of biopeptides from chicken feet on the immune system and growth of broiler chickens. The research material was 200 DOC broiler chickens which were reared for 42 days of rearing period. The treatment feeds were P0: basal feed, P1 basal feed + 2% biopeptide, P2: basal feed + 4% biopeptide, P3: basal feed + 6% biopeptide. The collected data were analyzed using variance analysis with polynomial orthogonal test. The results showed that biopeptide supplementation from chicken feet had a significant ($P<0.05$) effect on total E.coli, spleen weight, *bursa fabricius* weight, growth, and feed efficiency for broiler chickens. The results of the study had no significant effect ($P>0.05$) on liver weight and AI antibody titers for broiler chickens. Orthogonal follow-up test informed that biopeptide supplementation gave a cubic line response. Based on growth and feed efficiency, the best percentage of biopeptide supplementation in broiler feed is at the level of 2.72%. The correlation between the immune system and growth in this study, the better the immune system the better the growth of broiler chickens.

Keywords: Broiler, Feed, Biopeptide, Imun, Growth