PENGARUH PEMBERIAN MIKROKAPSUL PROBIOTIK BAKTERI ASAM LAKTAT TERHADAP KEPADATAN SEL GOBLET PADA JEJUNUM DAN ORGAN IMUN AYAM BROILER

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INTISARI

Penelitian ini bertujuan mempelajari pengaruh pemberian mikrokapsul probiotik bakteri asam laktat terhadap kepadatan sel goblet pada jejunum dan organ imun ayam broiler. Sembilan puluh enam ekor *Day Old Chicks* jantan Strain New Lohmann secara acak dibagi menjadi empat kelompok perlakuan selama 21 hari pemeliharaan. Semua kelompok perlakuan diberikan pakan basal yang terdiri dari perlakuan kontrol (P0), dan secara berurutan P1, P2, dan P3 disuplementasi mikrokapsul probiotik bakteri asam laktat 0,5; 1,0; dan 1,5 g/kg pakan. Data yang diperoleh dalam penelitian ini dianalisis statistik menggunakan Analisis Variansi Rancangan Acak Lengkap pola searah dilanjutkan uji Duncan's new Multiple Range Test. Hasil penelitian menunjukkan bahwa suplementasi mikrokapsul probiotik bakteri asam laktat dengan level 1,0 dan 1,5 g/kg pakan meningkatkan bobot limpa dan bursa fabricius ayam broiler ($P<0,05$). Suplementasi probiotik 1,5 g probiotik/kg pakan memberikan pengaruh lebih baik dalam meningkatkan produksi sel goblet pada jejunum, jumlah folikel limfoid, dan ukuran folikel limfoid pada bursa fabricius ayam broiler. Dapat disimpulkan bahwa suplementasi mikrokapsul probiotik bakteri asam laktat meningkatkan sistem imun ayam broiler.

Kata kunci: probiotik, broiler, sel goblet, organ imun, histomorfologi.

THE EFFECT OF ENCAPSULATED PROBIOTICS INDIGENOUS LACTIC ACID BACTERIA ON GOBLET CELLS DENSITY IN THE JEJUNUM AND WEIGHT OF IMMUNE ORGANS OF BROILER CHICKEN

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ABSTRACT

The objective of this study was to determine the effects of supplementation of encapsulated probiotics indigenous lactic acid bacteria on goblet cell density in the jejunum and immune organ of broiler chickens. Total of 96 days old male New Lohmann broiler chickens were randomly assigned into four experimental treatments for 21 days rearing period. All experimental treatments were given corn-soybean basal diets, as follows: T0 was unsupplemented group, while T1; T2; and T3 were supplemented multi-strain encapsulated probiotics as much 0.5; 1.0; and 1.5 grams' probiotic/kg feed respectively. The data was analyzed to one way analysis of variance and followed by Duncan's new Multiple Range Test. Results showed that supplementation of 1.0 and 1.5 grams' probiotic/kg feed increased weight of lympha and bursa fabricius of broiler chickens ($P<0,05$). Supplementation of 1.5 grams' probiotic/kg feed increased goblet cell density in the jejunum, number of lymphoid follicles and enlarged the bursal lymphoid follicles area compared to those of other groups. These results indicate that supplementation of multi-strain encapsulated probiotics lactic acid bacteria improved the immune system of broiler chickens.

Keywords: probiotic, broiler, goblet cell, immune organ, histomorphology.