

ABSTRAK

PERBANDINGAN PROFIL HISTOMORFOMETRI *INTESTINUM TENUE* AYAM BROILER SETELAH PEMBERIAN NANOEMULSI EKSTRAK RIMPANG TEMULAWAK

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Penggunaan *feed additive* berjenis *antibiotic growth promoter* bagi pertumbuhan ternak broiler dapat menimbulkan berbagai jenis penyakit seperti resistensi terhadap bakteri patogen. Tanaman temulawak dipercaya dapat menjadi alternatif *natural growth promoter* karena memiliki kandungan *xanthorrhizol* dan *curcumin* yang memiliki fungsi antimikrobia. Penelitian ini bertujuan untuk mengetahui perbandingan profil histomorfometri panjang, lebar, dan tebal *intestinum tenue* ayam broiler setelah pemberian nanoemulsi ekstrak rimpang temulawak 2 mg/kgBB dan 4mg/kgBB.

Ayam broiler pada penelitian ini dibagi menjadi kelompok kontrol, *colistin*, nanoemulsi ekstrak rimpang temulawak 2 mg/kgBB dan 4 mg/kgBB. Setiap kelompok terdiri dari 18 ekor ayam. Selanjutnya dilakukan pengukuran panjang vili, lebar vili, dan tebal mukosa menggunakan software ImageJ. Analisis dilakukan dengan menggunakan SPSS uji Kruskal Wallis.

Hasil pengamatan secara mikroskopis pada segmen duodenum menunjukkan adanya gejala enteritis diikuti dengan erosi pada bagian ujung vili. Analisis data histomorfometri dengan uji Kruskal-Wallis menunjukkan penurunan yang signifikan ($P < 0,05$) pada beberapa segmen intestinum

Kata kunci: histomorfometri, *intestinum tenue*, nanoemulsi, rimpang temulawak

ABSTRACT

HISTOMORPHOMETRY COMPARISON OF INTESTINUM TENUE BROILER CHICKEN TREATED WITH NANOEMULSION OF JAVANESE GINGER

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The use of feed additives in the type of antibiotic growth promoter for the growth of broiler livestock can cause various types of diseases such as resistance to pathogenic bacteria. Javanese ginger is believed to be an alternative natural growth promoter because it contains xanthorrhizol and curcumin which have antimicrobial functions. This study aims to determine the comparison of histomorphometric profiles of length, width, and thickness of the intestine of broiler chickens treated with 2 mg/kgBW and 4 mg/kgBW nanoemulsion of javanese ginger.

The broiler chickens in this research were divided into a control group, *colistin*, nanoemulsion of javanese ginger 2 mg/kgBW and 4 mg/kgBW. Each group consisting of 18 chickens. Furthermore, villi length, villi width, and mucosal thickness were measured using ImageJ software. The analysis was carried out using the SPSS Kruskal Wallis test.

The results of microscopic observations of the duodenum segment showed symptoms of enteritis accompanied by erosion at the tip of the villi. Histomorphometric data analysis using the Kruskal Wallis test showed a significant decrease ($P < 0.05$) in several segments of the intestine.

Keyword : histomorphometric, *intestinum tenue*, javanese ginger, nanoemulsion