



## **PENGARUH PENGGUNAAN BAHAN *LITTER* YANG BERBEDA TERHADAP HISTOMORFOLOGI USUS HALUS AYAM BROILER**

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### **INTISARI**

Penelitian ini bertujuan untuk mempelajari pengaruh penggunaan bahan *litter* yang berbeda pada pemeliharaan ayam broiler terhadap histomorfologi usus halus ayam broiler umur 35 hari. Sebanyak 120 ekor ayam broiler strain Indian River jantan ditempatkan secara acak ke dalam lima kelompok perlakuan bahan *litter* berbeda, yaitu limbah penyulingan daun cengkeh (P1), kulit kacang tanah (P2), serutan kayu (P3), sekam padi (P4), dan limbah seduhan teh pada industri minuman teh (P5) dengan masing-masing ulangan sebanyak tiga kali. Data yang dikumpulkan berupa histomorfologi usus halus pada segmen *duodenum*, *jejunum*, dan *ileum*. Data yang didapatkan dianalisis dengan analisis variansi dari rancangan Acak Lengkap Pola Searah (*Completely Randomize Design*), kemudian dilanjutkan dengan uji beda menggunakan uji *Duncan's New Multiple Range Test* (DMRT) dengan aplikasi SPSS versi 16.0. Hasil penelitian menunjukkan bahwa panjang *villi* segmen *duodenum*, *jejunum*, dan *ileum*, kedalaman kriptas segmen *jejunum*, dan perbandingan antara panjang *villi* dengan kedalaman kriptas segmen *jejunum* dan *ileum* berbeda nyata ( $P < 0,05$ ) antar perlakuan. Panjang *villi* segmen *duodenum*, *jejunum*, dan *ileum* serta perbandingan antara panjang *villi* dengan kedalaman kriptas segmen *jejunum* dan *ileum* pada P2 paling rendah, sedangkan P3 dan P5 paling tinggi dibandingkan dengan perlakuan lain. Berdasarkan penelitian ini dapat disimpulkan bahwa perlakuan P3 dan P5 memberikan hasil histomorfologi usus halus ayam broiler yang paling baik dibandingkan perlakuan lain.

Kata kunci: Bahan *litter*, Histomorfologi usus halus, Ayam broiler



## THE EFFECT OF USING VARIOUS *LITTER* MATERIALS ON SMALL INTESTINE HISTOMORPHOLOGY OF BROILER CHICKEN

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### ABSTRACT

This research was aimed to study the effects of various *litter* materials on intestinal histomorphology broiler chicken at 35 day of age. A total of 120 male Indian River broiler strains were randomly placed into five treatment groups of different *litter* materials, namely clove leaf distilling waste (P1), peanut shells (P2), wood shavings (P3), rice husk (P4), and tea waste from the tea beverage industry (P5) with three replications each group. Data were collected from histomorphology of the small intestine in the *duodenum*, *jejunum*, and *ileum* segments. The data obtained were analyzed by analysis of variance from the Completely Randomized Design and it was continued with different tests using Duncan's New Multiple Range Test (DMRT) with SPSS version 16.0. The results showed that the length of *villi* in the *duodenum*, *jejunum* and *ileum* segments, the crypt depth of the *jejunum* segment, and the ratio between the length of the *villi* with the crypt depth of the *jejunum* and *ileum* segments were significantly different ( $P < 0.05$ ) between treatments. The length of *villi* in the *duodenum*, *jejunum* and *ileum* segments and the ratio between the length of *villi* to the crypt depth of the *jejunum* and *ileum* segments at P2 were the lowest, while P3 and P5 are the highest compared to other treatments. Based on this study it can be concluded that P3 and P5 gives the best intestinal histomorphology of broiler chicken compared to other treatments.

Key words: *Litter* material, small intestinal histomorphology, broiler