

## INTISARI

### **PERBANDINGAN HISTOMORFOMETRI INTESTINUM TENUE AYAM BROILER YANG DIBERI PERLAKUAN PREBIOTIK MULTIVIT®, PROBIOTIK EM4® DAN AGP STAMIX-20® SELAMA 38 HARI**

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Penggunaan *feed additive* seperti prebiotik, probiotik dan antibiotik sangat penting di industri peternakan ayam Broiler untuk mengoptimalkan nilai guna pakan. Penelitian ini bertujuan untuk membandingkan histomorfometri intestinum ayam Broiler yang diberi perlakuan MultiVit, EM4, dan Stamix -20. Ketiganya digunakan untuk melihat potensi terbaik yang dapat memicu pertumbuhan vili intestinum tenue.

Penelitian ini menggunakan 66 ekor ayam Broiler yang dibagi ke dalam empat kandang dan diberi perlakuan selama 38 hari. Kelompok I berisi 17 ekor tanpa perlakuan. Kelompok II berisi 17 ekor ayam Broiler yang diberi prebiotik Multi Vit® 20 mL /3 Liter air minum /hari. Kelompok III berisi 16 ekor ayam Broiler yang diberi probiotik EM4® 1 mL /1 Liter air minum /hari. Kelompok IV berisi 16 ekor ayam Broiler diberi Stamix® 20 gram/ 500 kg pakan /hari. Setelah 38 hari, hewan dinekropsi, bagian duodenum, jejunum, dan ileum diambil dan difiksasi dengan formalin 10% untuk dilakukan pemeriksaan histopatologis untuk pengukuran vili usus dengan menggunakan program OptiLab produksi PT. Miconos, Indonesia.

Hasil penelitian memperlihatkan bahwa pemberian imbuhan pakan berupa MultiVit, prebiotik EM4, dan AGP Stamix berpengaruh terhadap lebar vili atas jejunum pada kelompok yang diberi EM4 dan AGP ( $P<0,05$ ), dan ditemukan adanya perbedaan tebal mukosa duodenum pada kelompok yang diberi MultiVit dan EM4 ( $P<0,05$ ). Hal ini menunjukkan pemberian EM4 berpengaruh paling besar terhadap pertumbuhan vili dibandingkan MultiVit dan AGP.

**Kata Kunci :** Multi Vit®, EM4®, Stamix®, intestinum tenue, panjang vili

## **ABSTRACT**

### **HISTOMORPHOMETRY COMPARISON OF INTESTINUM TENUE IN BROILER CHICKEN GIVEN MULTI VIT® PREBIOTIC TREATMENT IN COMPARISON WITH EM4® PROBIOTIC AND STAMIX®**

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The use of feed additives such as prebiotics, probiotics and antibiotics is very important in the Broiler chicken farming industry to optimize the nutrition value of feed. The villous length of the intestine tenue determines the effectiveness of absorption of nutrients from food. This study aims to compare the intestinum histomorphometry of Broiler chickens treated with MultiVit®, EM4®, and Stamix-20®. All three are used to see the best potential that can trigger the villi growth of intestine tenue.

This research used 66 broiler chickens which were divided into four cages and treated for 38 days. Group I contained 17 animals without treatment. Group II contained 17 broiler chickens which were given prebiotics Multi Vit® 20 mL / 3 Liters of drinking water. Group III contained 16 broiler chickens that were given probiotics EM4® 1 ml / 1 Liter of drinking water. Group IV contained 16 broilers given 20 grams / 500 kg of Stamix® feed. After 38 days, Broiler chickens were necropsied for duodenal, jejunum, and ileal portions, then fixed with 10% formalin for histopathological examination to measure intestinal villi using the OptiLab program from Miconos Ltd., Indonesia.

The results showed that feed supplementation in the form of MultiVit, prebiotic EM4, and AGP Stamix affected the villi width of jejunum in groups given EM4 and AGP ( $P < 0.05$ ), and found differences in duodenal mucosal thickness in groups given MultiVit and EM4 ( $P < 0.05$ ). This shows that the EM4 treatment has the most influence on the growth of villi compared to MultiVit and AGP

**Keywords :** MultiVit®, EM4®, Stamix®, Intestinum tenue, villi length and width