

**Comparative Study on the Effect of Selected
Feed Acidifier & Antibiotic Growth
Promoter on Performance of
Commercial Broilers**

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Abstract

Antibiotic growth promoters (AGPs) are widely used in many countries for performance enhancement in commercial broilers. However, the quality of animal products has become an important public health issue and the consumers are demanding safe and healthy products especially those free of antibiotic residues. Acidification of feed with organic acids has been reported as one of the effective alternatives found to replace AGPs in poultry production at present. The principal objective of this study was to investigate the potential of blended organic acid mixture (ammonium propionate, ammonium formate, fumaric acid, butyric acid propionic acid) on improving the efficiency in commercial broiler performance compared with antibiotic growth promoter (AGP).

A total of 15,000 day-old Marshall MY broiler chicks were used in the experiment. A Randomized Complete Block Design (RCBD) was applied with three blocks (replicates). Each block (replicate) was divided into four units comprising 1,250 birds in which to accommodate three treatments and one control and those were identified as Treatment -1(T-1), Treatment -2(T-2), Treatment -3(T-3) and Control (C). Treatment -1 and Treatment -2 were prepared by mixing 1.5kg and 2.0kg of commercially available acidifier comprising ammonium propionate, ammonium formate, fumaric acid, butyric acid propionic acid per metric ton respectively to the basal diet. Treatment -3 was prepared by mixing of avilamycin (AGP) at the inclusion rate of 0.125kg/T. Statistical Analysis was done by using MINITAB 14.

It was revealed that the control and treatment groups were significantly differed each other in terms of feed intake, body weight, feed conversion ratio, production index, gut pH and gut microbial count ($P < 0.05$). Furthermore, there was no significant difference in terms of feed intake, body weight, feed conversion ratio, production index between acidifier-treated groups and antibiotic growth promoter treated group ($P > 0.05$). Significant differences were found in terms of gut pH and gut microbial count between acidifier-treated groups and antibiotic growth promoter treated group ($P < 0.05$). These findings suggest that the acidifiers are effective alternatives for antibiotic growth promoters to achieve target commercial broiler performances in order to minimize or eliminate the antibiotic residues in animal products and assuring consumer's safety.

Key words: *Antibiotic Growth Promoter ; Acidifiers ; Broilers ; Significant Difference*