

## News

# Diet Supplemented with Organic Acids or Antibiotics did not Improve the Broiler Performance

*Gajendra Sharma*

In chicken diets, antibiotics are frequently used to treat illnesses and promote growth. The antibacterial mechanism of organic acids differs depending on the organism and the environment.

Acidifiers are utilized on birds for their antibacterial properties. Haematology and blood chemistry are helpful diagnostic tools that help us understand the pathophysiological disorders that affect birds better.

An animal's blood count may be affected by its nutritional status as well as by its nutritional status, sex, age, habitat, reproductive status, breeding, certain trauma, the season, and environmental stress.

Consequently, the goal of this study was to assess how organic acids, an alternative to antibiotics, affected the growth performance and immune system of broilers.

The experiment was performed following the principles and regulations of the Ethics Committee on Animal Use-CEUA. Random distribution was used to distribute all 840 male Cobb chicks. With 30 birds in each box, these birds were split into seven replicates. Lactic acid made up 40% of the organic acid mixture, followed by propionic acid (5%), butyric acid (1%), and 8 kg of  $t^{-1}$ . The ratio between the beginning number of live birds and the final number of dead birds was used to calculate the mortality in each experimental unit. Using the General Linear Model option of the Statistical Analysis System, all generated data were subjected to a one-way analysis of variance (ANOVA).

When the birds were 1-7 and 1-14 days old, respectively, they demonstrated slight improvements in FCR and VB when fed an antibiotic-containing diet. From 1-21 days, it was noticed that the challenged birds performed worse on average than the unchallenged birds. When assessing the efficacy of antimicrobial compounds, the microbial challenge is critical. The interaction between microbial challenge and organic acids on the FCR and VB in meta-analytical research. The effects of alternative additives were anticipated to be comparable to or close to those of antibiotics during the study process. However, this was not noted in this study for broiler performance. The *Eimeria* challenge was probably higher than the microbial control supplemented with organic acids. With the administration of antibiotics compared to organic acids before and after inoculation, there was less total protein present.



However, it can be observed from the current study that the birds did not exhibit any of the traits even in low protein concentrations. Instead, performance data at this age show that birds, independent of treatment, maintained a solid zootechnical index.

Organic acid dietary supplements have little effect on the performance of broilers exposed to *E. acervulina*, *E. maxima*, or *E. tenella*. The detrimental effects of coccidiosis on the performance of broilers can only be managed by antibiotics. Due to the inoculation of *Eimeria* spp. and the addition of organic acids or antibiotics, few immunological alterations are seen.

#### Article Reference

Kelry Mayara da Silva, Robert Guaracy Aparecido Cardoso Araujo, Claudia Harumi Oka, Adriano Barbieri, Bárbara Fernanda da Silva Barbosa, Gabrieli Andressa de Lima, Paulo Henrique Yamada, Jaqueline Dalbello Biller, Alda Maria Back Noronha Madeira and Valquíria Cação Cruz-Polycarpo, 2021. Immunonutrition of broilers challenged with *Eimeria* spp. and fed with organic acids as an alternative to chemotherapeutics. Int. J. Poult. Sci., 20: 165-172.

#### KEYWORDS

Antimicrobial additives, broilers, butyric acid, immunology, lactic acid, propionic acid

