

**EFFECT OF DIFFERENT LEVELS OF  
COMMERCIALY AVAILABLE ACIDIFIER IN  
BROILER DIETS ON GROWTH PERFORMANCES,  
MEAT QUALITY AND *Escherichia coli* COUNT IN  
ILEUM OF BROILER CHICKEN**

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**by**

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## ABSTRACT

The study was conducted to investigate the effect of different levels of acidifier on performance, meat quality, *E. coli* count in ileum and organ weights of broilers. A total of 120 one-d-old male broilers were randomly assigned into four treatments. Each treatment comprised three replicates of 10 broilers each. Broiler chicks were randomly assigned to three acidifier levels (0.5, 1.0 and 1.5 ml/3L) as T<sub>1</sub>, T<sub>2</sub>, T<sub>3</sub> treatments and control group (T<sub>0</sub>) treated with normal water only. Broilers were fed basal diet adlibitum for 42 days in a complete randomized design (CRD). The highest ( $p < 0.05$ ) daily body weight gain (66.55g) was recorded from (T<sub>2</sub>). The lowest ( $p < 0.05$ ) FCR (1.48) was recorded from the (T<sub>2</sub>). Feed intake of broilers were not affected ( $p > 0.05$ ) with acidifier treatments. The lowest ( $p < 0.05$ ) *E. coli* count (7.323 log CFU/g) in ileum content was recorded from the birds treated with 1.5 ml/3L acidifier level and the highest (9.007 log CFU/g) *E. coli* count in ileum content was recorded from the control group. The lowest ( $p < 0.05$ ) cook loss (31%) was recorded from the control group and the highest ( $p < 0.05$ ) cook loss (39%) was recorded from the birds treated with 0.5ml/3L acidifier level. The highest ( $p < 0.05$ ) lightness (71.5  $\Delta L^*$ ) of broiler breast meat was recoded from the control group and the lowest ( $p < 0.05$ ) lightness (67.28  $\Delta L^*$ ) was recoded from T<sub>2</sub> treatment. The highest ( $p < 0.05$ ) redness (9.26  $\Delta a^*$ ) of broiler breast meat was recoded from the T<sub>2</sub> treatment and the lowest redness (7.29  $\Delta a^*$ ) was recorded from the T<sub>1</sub> treatment. The highest ( $p < 0.05$ ) relative weight of proventriculus (0.39%) was recorded from the T<sub>0</sub> treatment and the lowest (0.20%) proventriculus to was recoded from the T<sub>2</sub>. The highest ( $p < 0.05$ ) relative weights of duodenum (0.4%) and caeca (0.3%) were recorded from the T<sub>0</sub> treatment and the lowest relative weights of duodenum (0.22%) and ceca (0.19%) were recoded from T<sub>2</sub> treatment. The highest ( $p < 0.05$ ) relative weights of heart (0.67%) and pancreas (0.27%) were recorded from the T<sub>0</sub> treatment and the lowest relative weights of heart (0.42%) pancreas (0.09%) were observed from T<sub>2</sub> treatment. In conclusion, dietary supplementation of acidifier in 1ml/3L concentration has better effects on performance, *E. coli* count of ileum, organ weights of broiler chicken, low FCR and high body weight gain.