

**DETERMINATION OF GROWTH PERFORMANCE
AND MEAT QUALITY TRAITS OF BROILERS FED
DIFFERENT LEVELS OF DIETARY SALT**

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ABSTRACT

Addition of dietary salts in the feed can beneficially affect to maintain the acid-base equilibrium and ionic balance of animals. The aim of this study was to investigate the growth performance and meat quality traits of broilers fed different levels of dietary salt. A total of 750 one-day-old chicks (Cobb-500) were allotted for five treatments and three replicates according to completely randomized design. Feeding program consisted of three phases (1-14, 15-28, 29-35 days of age). Controlled treatment (T1) included only basal feed while other four treatments had different concentrations of dietary salt (0.45% and 0.55%) in short term (1st day to 28th day) and long term (1st day to 35th day) basis (T2: 0.45% for long term; T3: 0.55% for long term; T4: 0.45% for short term; T5: 0.55% for short term). The initial body weight, final body weight and daily feed intake were recorded and feed conversion ratio (FCR) was calculated. Birds were slaughtered at 35th day and used to estimate dressing percentage, organ weight – body weight ratio percentage and proximate analysis, meat quality parameters and sensory evaluation of their breast meat. Data were analysed by one – way analysis of variance using General linear model procedures of Minitab 17 software. The highest body weight gain, feed intake and dressing percentages were shown by broilers fed with T3 ($p < 0.05$). The lowest FCR was shown by broilers fed with T3 ($p < 0.05$). Broilers fed with T5 and T2 had the highest water holding capacity in their breast meat ($p < 0.05$). The highest a* value (redness) in breast meat was shown by broilers fed with T1 ($p < 0.05$). However, addition of dietary salt to broiler diet had no significant effect on organ weight - body weight ratio percentage, proximate analysis and sensory evaluation of breast meat ($p > 0.05$). It can be concluded that addition of 0.55% dietary salt for long term showed significantly high growth performances in broilers.

Keywords: Broilers, Dietary salt, Growth performance, Breast meat, Feed conversion ratio