



## **Determination of Optimum Dietary NaCl Requirement for Growth of Broiler Finishers using Choice Feeding Method**

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### **Abstract**

Choice feeding has been used to determine the requirements of some nutrients of poultry. This study adopted the choice feeding method to determine the optimum dietary NaCl level that maximizes the growth performance of broiler finishers. Forty days old broilers (n=60) were allocated into 15 floor pens. Each pen had two feeders and a drinker. Birds in treatment 1 were offered a broiler finisher diet containing 0.25% NaCl in both feeders while in treatment 2, birds were given 1% NaCl diet in both feeders. Birds in treatment 3 were offered 0.25% NaCl diet in one feeder and 1% NaCl diet in other feeder. Daily feed intake from each feeder and water intake were recorded from day 42 to 49. The data were analyzed as a completely randomized design. When both feeders contained similar levels of NaCl, feed intake from each feeder was not significantly different. When offered a choice of two dietary NaCl levels in two feeders, birds ate significantly more feeds from the feeder containing the diet with 0.25% NaCl (87g/d) than from the feeder containing the diet with 1% NaCl (28g/d). The total feed intakes being 126g, 80g and 115g for T1, T2 and T3, respectively were significantly different among treatments. Water intake and water:feed ratio were significantly different among treatments. When a choice of two feeds containing 0.25% and 1% NaCl was given, the level of NaCl in the ingested diet was 0.41%. However, broilers in that treatment were significantly heavier on day 49 and gained more weight than those in other two treatments. Broilers in T2 and T3 gave significantly better FCRs as well, than those in T1. Results of this study conclude that broilers can distinguish diets containing 0.25% and 1% NaCl and the dietary NaCl level that maximizes the growth performance is 0.4%.

**Keywords:** *Broiler chicken, Dietary feed intake, Sodium Chloride*

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