

Taniya Laphanuwat 2007: Effects of Dietary Cysteamine Supplementation on Broiler's Growth Performance and Carcass Quality. Master of Science (Animal Nutrition and Feed Technology), Major Field: Animal Nutrition and Feed Technology, Department of Animal Science. Thesis Advisor: Assistant Professor Seksom Attamangkune, Ph.D. 61 pages.

A study was conducted to elucidate the effects of dietary cysteamine supplementation on broiler's growth performance and carcass characteristics. Two thousands, day-old, Ross broiler chicks were randomly divided into 5 dietary treatments. The birds in each group were randomly fed one of those experimental diets during the periods of 1-17, 18-38 and 39-45 days of age as following: (T1) Control (without cysteamine), (T2) Control with 108 ppm of cysteamine and 100 Kcal/kg ME down-specification, (T3) Control with 108 ppm of cysteamine and 200 Kcal/kg ME down-specification, (T4) Control with 108 ppm of cysteamine and 100 Kcal/kg ME together with 1% CP down-specification and (T5) Control with 108 ppm of cysteamine.

During 1-17 days period, birds fed control diet with cysteamine (T5) were not significantly ($P>0.05$) different on feed intake, weight gain, feed gain ratio and mortality when compared to the control group (T1). However, the supplementation of cysteamine with 100 Kcal/kg ME down-specification (T2), 200 Kcal/kg ME down-specification (T3) and 100 Kcal/kg ME together with 1% CP down-specification (T4) showed the negative effects on weight gain and feed gain ratio. During 18-38 days period, birds in every dietary treatment showed no significant difference ($P>0.05$) on weight gain. The supplementation of cysteamine with 100 Kcal/kg ME down-specification (T2), 200 Kcal/kg ME down-specification (T3) and 100 Kcal/kg ME together with 1% CP down-specification (T4), however, increased the bird's feed intake ($P=0.0087$) and consequently increased bird's feed gain ratio ($P=0.0017$) when compared to the control group (T1). No significant difference among the dietary treatments was observed on broiler performance during 39-45 days and overall period (1-45 days). There was no significant ($P>0.05$) difference on uniformity of body weight among the dietary treatments in every period. No significant ($P>0.05$) difference on dressing percentage and abdominal fat were observed among the dietary treatments. Nevertheless, broilers in group 3 gave the lower production cost ($P<0.01$) comparing to the other groups.

Student's signature

Thesis Advisor's signature