

Performance and Carcass Characteristics of Broiler Chicks Fed Diets Supplemented with Commercial Zinc-Methionine

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ABSTRACT

*This work was conducted to study the effect of three levels of commercial organic mineral of zinc-methionine as commercial product in starter and finisher diets of broiler chicks. One hundred and ninety two unsexed Hubbard broiler chicks at three week of age were divided into four treatments (48 birds each), each treatment contained 4 replicates of 12 birds. **The experimental treatments were as follows:***

Treatment 1: *Chicks were fed the control diet.*

Treatment 2: *Chicks were fed the control diet + 0.3 g Zn + Mth /Kg diet.*

Treatment 3: *Chicks were fed the control diet + 0.4 g Zn + Mth /Kg diet.*

Treatment 4: *Chicks were fed the control diet + 0.5 g Zn + Mth /Kg diet.*

Chicks fed the diet supplemented with com. Zn Meth diet at the level of 0.5g Zn Meth./Kg diet had the highest values of live body weight (LBW) at 49 days of age (2473.2 g). Chicks fed the diet supplemented with 0.5 g Zn Meth./Kg diet had the heaviest live body weight gain (LBWG) during the periods from 21 to 49 days of age (1777.9 g). Chicks fed the diets supplemented with 0.3 g Zn Meth./Kg diet had the lowest feed intake (FI) during the period from 21 to 49 days of age (3531.5 g). Chicks fed the diet supplemented with 0.3 g Zn Meth./Kg diet had the best feed conversion (FC), crude protein conversion (CPC) and caloric conversion (CCR) during the period from 36 to 42 days of age (2.14, 0.384 and 6.65 g, respectively). Chicks fed the diets supplemented with 0.5 Zn Meth./Kg diet had the highest values of GR during the period 21-49 days (0.868). Chicks fed the diets supplemented with 0.3 g Zn Meth./Kg diet had the highest values of performance index (PI) during the period from 36-42 days (115.37) and chicks fed the diets supplemented with 0.5 g Zn Meth./Kg diet had the highest values of PI during the periods 21-28 and 43-49 days (49.26 and 115.8, respectively). No significant differences were found among dietary treatments in chemical composition of broiler meat and carcass traits. Chicks fed the diets supplemented with 0.4 Zn Meth./Kg diet had the highest values of GPT. Economical efficiency (EEF) value at 42 days of age was improved in chicks diets supplemented with Zn Meth. as compared with the control diet. Supplementing with 0.3 g Zn Meth /Kg diet gave the best economical and relative efficiency being 3.18 and 105.59 %, respectively followed by 0.4 g Zn Meth./Kg diet (3.17 and 105.04%, respectively) when compared with the control.

In conclusion, supplementing broiler with commercial Zn-met. at level 0.3 or 0.4 g Zn-met./ Kg diet significantly improved performance and economical efficiency.

Key words: Broiler, Zinc-Methionine, carcass characteristics.