ASSESSMENT OF DIETARY METHIONINE ISOMERS EFFECT ON WEIGHT GAIN AND FOOTPAD DERMATITIS IN BROILER CHICKENS

S. S. Wickramasuriya1, E. Kim1, T. K. Shin1, H. M. Cho1, W. H. D. S. P. Macelline1, H. J. Choi2 and J. M. Heo1\*

1Chungnam National University, Korea, 2CJ CheilJedang Corporation, Korea.

Methionine is indispensable amino acid in poultry diet as it directly effects on their productivity performance. Wound healing property of methionine was observed in previous researches. However, dietary methionine isomers and its relative effect on broiler is limited. Therefore, the impact of feed grade L-methionine or D-methionine isomers on daily gain and footpad dermatitis of broiler chickens were evaluated in a 35-day experiment. Hundred and twenty 1-day-old Ross 308 broiler chicks were randomly allocated to two dietary treatments (i.e., L-methionine vs. D-methionine isomers) to give 6 replicates per treatment with 10 birds per pen. Experimental diets were formulated based on Ross 308 nutrition specifications (Aviagen, 2014). Birds offered an experimental diet on an *ad-libitum* basis and management practices were performed according to the Ross 308 broiler management supplement. Weekly body weights were measured to calculate the weight gain. On day 35, randomly selected 5 birds per pen were subjected to assessment of footpad dermatitis using a 5-point scale. No weight gain difference (P>0.05) was observed in birds fed either L-methionine or D-methionine diets from hatch to 35 days of age. Nevertheless, higher incidence (P<0.05) of footpad dermatitis was observed with the birds fed D-methionine diet compared to L-methionine fed birds. The current study, therefore, indicated that L-methionine isomers would be better for maintaining growth performances together with the low incidence of foot pad dermatitis in broilers.