

Effect of Different Levels of Vitamin E and L-Carnitine on Performance of Broiler Chickens Under Heat Stress

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Abstract : This study was conducted to investigate the effect of different levels of vitamin E and L-carnitine on performance, blood parameters and immune responses of broilers under heat stress. For this purpose 396 one- day- old Ross 308 broiler chicks were randomly distributed between 9 treatments with 4 replicates (11 birds in each replicate). Dietary treatments consisted of three levels of vitamin E (0, 100 and 200 mg/ kg) and three levels of L-carnitine (0, 50 and 100 mg/ kg) that was done in completely randomized design with 3X3 factorial arrangement for 42 days. During the first three weeks, chickens were reared at normal temperature. From the beginning of the fourth week, all chickens were maintenance in a temperature range from 24-38 ° C for heat stress. Performance parameters including average feed intake, weight gain and feed conversion ratio were recorded weekly. The results showed that the levels of vitamin E had no significant effect on feed intake, weight gain and feed conversion ratio during the experiment. The use of L-carnitine decreased feed intake during the experiment ($P < 0/05$). But did not affect average daily gain and feed conversion ratio. Also, there was not significant interaction between vitamin E and L-carnitine for performance parameters except average daily gain during the starter period. The results of this study indicate that the use of different levels of vitamin E and L-carnitine under heat stress did not affected performance parameters of broiler chickens.

Keywords : broiler, heat stress, l-carnitine, performance

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