

EFFECT OF ADDING BETAINE TO IMPROVING THE PRODUCTIVE PERFORMANS OF COMMERCIAL LAYER HENS AT HIGH TEMPERATURE CONDITIONS IN IRAQ.

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ABSTRACT

This study was conducted at the field of Department of Animal Production of Agriculture College / University of Tikrit for the period from 18/7/2012 to 9/10/2012 . The aim of this study is to determine the effect of added Betaine to the diet to alleviation the negative effects of heat stress through studying some performance traits of laying hens during summer along the duration of the experiment. There hundred and sixty laying hens were used with 37-week-of age, As it has been distributed on the four treatments, Each treatment included, two replicates, the first treatment (B1) without Betaine in the diet (control treatment), The second treatment (B2) contains (0.5 g Betaine / kg feed). third treatment (B3) (1 g Betaine / kg feed) .The fourth treatment (B4) contains (1.5 g Betaine / kg feed) the results showed that: The addition of Betaine led to a significant increase ($P < 0.05$) in all treatments Betaine compared to the control treatment (without addition) in the rate of egg production (HD) , egg mass and the number of cumulative eggs during all whole production period (37-48 week) as compared to the control treatment (without Betaine), Significant improvement in feed conversion efficiency, while there were no significant differences in mortality rate of the birds of the different treatments.

Key words: Betaine , laying hens, heat stress .