The Correlation Relationship Between Serum Adenosine Deaminase (Ada) Level And Some Economic Traits In Local And White Leghorn Hens.

Eman H. Hadi Al-Anbari
Dept. of Animal Resources – College of Agriculture – Baghdad Univ.

ABSTRACT

This study was taken to figure out the relationship between serum adenosine deaminase (ADA) level and some economic traits in local and White Leghorn (WL) hens. An experiment was carried out employing three groups of birds at sexual maturity for 100 day period. The first group comprised of hens reared individually cages and inseminated artificially. The second group constituted of WL hens reared on liters and mated naturally, whereas, the third group comprised of local hens, reared on liters and mated naturally. The economic traits studied were: live body weight at sexual maturity, number of 100-day egg produced, weight of the first egg as well as the average of egg weight and mass. In the first group, the correlation coefficient (r) between ADA level and live weight at sexual maturity was significant (P< 0.05) namely 0.28, positive and highly significant (P< 0.01) with the number of 100-day egg produced 0.49, positive and significant (P< 0.05) with the weight of the first egg 0.12, while it was significant (P< 0.05) with the average of egg weight 0.01 and mass 0.52. In the second group, the (r) were positive and significant (P< 0.05) between ADA level and live weight at sexual maturity 0.29, positive and highly significant (P< 0.01) with the number of 100-day egg produced 0.65, significant (P< 0.01) with the weight of the first egg 0.37 and the average of egg weight 0.43 whereas, it was negative and highly significant (P< 0.01) with the average of egg mass -0.58. In the local hens (Group 3), (r) where positive and highly significant (P< 0.01) with the Five traits studied namely 0.74, 0.79,
0.87, 0.70 and 0.79 respectively. In conclusion, dissimilar correlation coefficient was found between ADA level and some economic traits in birds. This correlation was positive and highly significant in local birds as indication of high naturally genetic resistance in spite of low productive traits.