

**EFFECT OF SELECTION FOR PERCENTAGE OF ABNORMAL  
SPERMATOZOA AND NUMBER OF SPERMATOZOA ON CERTAIN  
BLOOD PLASMA COPONENTS IN INDIGENOUS BARRED  
CHICKENS.**

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**ABSTRACT**

This study has been conducted to determine the effect of genetic selection for percentage of abnormal spermatozoa and number of spermatozoa on some blood plasma components in groups of indigenous chicken flock . A total of 30 cocks and 35 hens , 50 weeks old from the indigenous Barred flock were used in this study . These birds represented the first generation that selected by divergent selection on the basis of number of spermatozoa per ejaculate and percentage of abnormal spermatozoa as follows : Genetic group 1: First generation which produced from selection for high number of spermatozoa per ejaculate. Genetic group 2: First generation which produced from selection for low number of spermatozoa per ejaculate. Genetic group 3: First generation which produced from selection for low percentage of abnormal spermatozoa . Genetic group 4: First generation which produced from selection for high percentage of abnormal spermatozoa and Genetic group 5: Control group which maintained the mean of foundation stock for the two traits. However, blood plasma components included in this study were plasma glucose , protein , calcium , phosphorus , cholesterol and GOT , GPT and alkaline phosphatase activities .

Results revealed that groups of cocks and hens in the offspring of cocks that selected for low number of spermatozoa per ejaculate ( Group 2 ) and for high percentage of abnormal spermatozoa ( Group 4 ) recorded the lowest means as regards concentration of all plasma metabolites that included in the present study compared with other groups . On the other hand , groups of cocks and hens that represent the offspring of cocks that selected on the basis of high number of spermatozoa per ejaculate ( Group 1 ) and of low percentage of abnormal spermatozoa ( Group 3 ) recorded the means that similar or near the values of means observed for control group ( the group that maintained the mean of foundation stock for the two traits ) regarding the concentration of all plasma metabolites .

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