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Improvement of growth of Japanese Quails (*Couturnix couturnix)*

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The poultry industry in the world is mainly dominated by chicken. However, there are some other miscellaneous poultry species, which can successfully supplement animal protein requirement and improve the variability among food items. However, the place and value of alternative poultry species are yet to be investigated specially in Asian Region Farming System. The present study was conducted in order to find out the effect of selection on the growth of Japanese quails.

Random bred 106 Japanese quails at Mawela Field experiment station were used as the base population for the study. Out of them 75 birds were selected on their body weight at 7^{th} week and the breeding flock was established. The body weight of base population at the 7^{th} week of age and body weight at 16^{th} week were measured separately for males and females. Body weights of 51 offspring birds were taken in weekly interval up to 16^{th} week. Selection differential (S), response to selection (R), and heritibility (h^2) were calculated. In addition, the effect of sex on body weight and growth rates were estimated and compared.

According to the result, the selection differential was restricted to 11 g as considerable number of birds had to be included in breeding flock. The mean body weight of offspring population was higher than the expected maximum response, and the value of heritibility was over estimated. This can be attributed to the change of management regime during critical period of growth in base population. There was significantly higher ($P<0.05$) body weight of females, than that of males. When the growth rates were considered, the mean growth rate of breeding stock was lower than that of offspring up to the 7^{th} week. After which the breeding flock showed higher mean growth rate than their offspring indicating the effect of changing management at early stage of their life.

According to the results, the response of Japanese quails to selection and proper management condition was remarkably high. There was a significant influence of sex on body weight of quails.

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