SELECTION DIFFERENTIAL, INTENSITY OF SELECTION AND EXPECTED RESPONSE TO SELECTION IN BODY WEIGHTS IN THIRD GENERATION IN SHORT TERM SELECTION FOR DIFFERENT AGES IN JAPANESE QUAIL

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Meat type Japanese quail were subjected to three different methods of individual phenotypic selection viz., high two week body weight, four week body weight and high four week body weight coupled with low relative body weight gain between 4-6 weeks of age. Selection was carried out for three generations and the respective populations were designated as SWL, FWL, LWL lines and a control line (COL) was also maintained without adopting any selection with random pairing. In third generation (S₃), selection differential at two weeks of age for SWL, FWL and LWL males were 7.55, 5.92, and 5.39 g, respectively. The same at four weeks of age were 8.53, 11.85 and 12.02 g, respectively. The corresponding values for females were 7.84, 4.97 and 5.61 g at two and 6.89, 12.08 and 9.15 g at four weeks of age. The intensity of selection (i) for males at two weeks of age was 0.73, 0.48 and 0.51 for SWL, FWL and LWL lines. The same at four weeks were 0.55, 0.77 and 0.69, respectively. In females, the corresponding figures were 0.67, 0.41 and 0.43 at two weeks, 0.35, 0.73 and 0.53 at four weeks of age. Expected response to selection in males at two weeks i.e. SWL, FWL and LWL lines were 0.06, 1.51 and 2.00 g, respectively, while the same at four weeks of age were worked out to be 3.35, 1.97 and 4.16 g. In females the respective expected response was 1.21, 0.55 and 1.10 g two weeks and 3.05 in SWL at four weeks of age.