

Effect of Breeding Strategies to Increase Productivity of Indigenous Chicken *in-situ* in Bangladesh

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ABSTRACT: Data on age at sexual maturity (ASM), body weight at sexual maturity (BWM), body weight at one year of age (BWY), eggs per clutch (EGC), clutches per year (CLY), hatchability on set eggs basis (HAT) and survivability of baby chicks up to sexual maturity (SUR) were collected from a total of 1392 birds reared in four rural villages under traditional scavenging system during December 2010 to June 2013. The birds covered three generations (G_0 , G_1 and G_2) and three alternate breeding strategies (BS_1 , use of only pure and superior indigenous mature cocks, BS_2 - use of pure and superior indigenous mature cocks and mature hens and BS_3 , use of existing or random indigenous cocks and hens) with a view to test the effect of breeding strategies on the productivity of Indigenous chicken *in-situ*. In G_2 , the ASM of male (159.60 ± 2.81 days) and female (168.50 ± 1.12 days) birds were lower in BS_1 , than BS_2 but higher BWM and BWY of male (1200.00 ± 19.99 ; 1779.63 ± 27.20 gm) and female (994.48 ± 10.86 ; 1350.38 ± 14.46 gm) birds were observed in BS_2 than BS_1 and BS_3 . However, in G_2 the highest EGC (14.97 ± 0.20), CLY (4.53 ± 0.05) and HAT (89.79 ± 0.96 %) were observed in BS_1 but the highest SUR (51.15 ± 2.36 %) was documented in BS_3 . Present study revealed that use of superior Indigenous mature cocks alone and exercising cock rotation program can help to increase egg production, hatchability and decrease ASM of female birds of progressive generations in rural low input system. On the other hand, use of both superior indigenous mature cocks and hens at a time at farmers end and exercising cock rotation program can help to improve both body weight and egg production in rural low input systems.

Keywords: Bangladesh, breeding strategies, indigenous chicken, productivity *in-situ*

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