

Egg quality parameters of local chicken genotypes in crop and livestock-based diversifications

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A study was carried out to analyse the egg quality parameters of local chicken genotypes such as village chicken and naked-neck chicken under crop and livestock based diversification systems. The results of the study revealed that all selected egg quality parameters of both chicken population was significantly differed ($P < 0.05$) in all diversification systems. Significantly better results found in crop based diversification system for both village and naked neck genotypes in egg weight (49.16 ± 1.07 and 51.43 ± 1.97 respectively), egg shape index (75.23 ± 1.32 and 75.33 ± 1.36 respectively), specific gravity of egg (1.15 ± 0.01 and 1.18 ± 0.001 respectively), egg hatchability (89.24 ± 1.67 and 89.22 ± 2.09 respectively), albumin weight (28.62 ± 1.64 and 30.70 ± 1.87 respectively), yolk weight (17.17 ± 1.05 and 17.64 ± 1.22 respectively) and egg shell weight (17.17 ± 1.05 and 17.64 ± 1.22 respectively). The egg fertility (80.11 ± 2.73 and 75.74 ± 2.13 respectively) and egg shell thickness (0.312 ± 0.003 and 0.317 ± 0.001) were significantly higher in the livestock based diversification system for both village and naked neck genotypes. The calculated yolk: albumen ratio for village chicken was significantly highest (0.62 ± 0.01) ($P > 0.05$) under livestock-based diversification system while in naked-neck chicken it was significantly higher (0.57 ± 0.02) in crop-based diversification system. From the results, it was concluded, both the population performed well in crop based diversification systems in terms major egg quality traits.

Key words: Naked-neck chicken, village chicken, diversification and genotypes

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