

## EGG QUALITY PARAMETERS OF FRIZZLE AND NAKED-NECK FRIZZLE CHICKEN GENOTYPES UNDER DIFFERENT FARM MANAGEMENT SYSTEMS

Subalini\*, E. and Thanuejah, S.  
*Faculty of Agriculture, Eastern University of Sri Lanka*  
\*subalinit23@yahoo.com

A study was carried out to analyse the egg quality parameters of local chicken genotypes such as frizzle chicken and naked-neck frizzle chicken under different farm management systems including extensive, semi intensive and intensive farm management systems. The results of the study revealed that egg quality parameters such as egg fertility, egg hatchability, egg shell weight and egg shell thickness of both chicken population were significantly differed ( $P < 0.05$ ) in all three management systems. Significantly better results found in extensive farm management system for both frizzle and naked neck frizzle genotypes in egg weight ( $48.47 \pm 1.33$  and  $51.48 \pm 0.78$  respectively), egg shape index ( $74.64 \pm 1.37$  and  $76.12 \pm 1.37$  respectively), specific gravity of egg ( $1.15 \pm 0.01$  and  $1.17 \pm 0.02$  respectively), egg shell weight ( $10.25 \pm 0.15$  and  $10.83 \pm 0.78$  respectively) and egg shell thickness ( $0.42 \pm 0.001$  and  $0.47 \pm 0.001$  respectively). The egg fertility ( $78.55 \pm 2.31$  and  $79.16 \pm 0.79$  respectively) and egg hatchability ( $83.45 \pm 2.79$  and  $85.17 \pm 2.11$ ), albumen weight ( $25.37 \pm 0.64$  and  $26.43 \pm 1.92$  respectively) and yolk weight ( $14.31 \pm 1.33$  and  $14.22 \pm 1.12$  respectively) were significantly higher in the intensive management system for both frizzle and naked neck frizzle genotypes. The calculated yolk: albumen ratio for frizzle chicken was comparatively highest ( $0.57 \pm 0.02$ ) ( $P > 0.05$ ) under semi intensive management system while in naked-neck frizzle chicken it was significantly higher ( $0.65 \pm 0.01$ ) in intensive system. From the results, it was concluded, both the population performed well in extensive and intensive management systems for many egg quality traits. However, it is essential to select the cost of production before selecting a suitable management system for both frizzle and naked neck frizzle chickens.

**Key words:** Frizzle chicken, Naked-neck frizzle chicken, genotypes and hatchability