

Genetic Evaluation of Egg Production Traits in $P_{11} \times \sim \} II$ Cross Bred Chickens in South Western Nigeria

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Abstract

The study was titled "Evaluation of Egg Production Traits in $P_{11} \times \sim \} II$ Cross Bred Chickens in South Western Nigeria". The study was conducted to evaluate the effect of genotype on egg production traits. The egg production traits monitored were age at first egg, body weight at first egg, weight at first egg, egg number and egg weight, Hen-day egg production, Hen-house egg production, egg number/hen/year and laying period throughout the experimental period. Genotype significantly ($P < 0.01$) affected all production traits. Age at first egg was lowest in White Leghorn (138.24 ± 1.86 days), followed by Giriraja, B-Alpha, Local and Nera I, with the corresponding means of 160.76 ± 2.35 , 177.00 ± 1.31 , 188.73 ± 1.12 and 190.93 ± 4.14 days respectively. Giriraja had the highest body weight at first egg (217.00 ± 4.0 g) while White Leghorn had the lowest (1259.62 ± 9.83 g). However, Nera I had the highest weight of first egg (48.52 ± 0.52 g) compared with 33.11 ± 0.1 g by White Leghorn which was the lowest. Mean values for egg number per bird per week, Hen-day egg production (%), egg number per hen per year and percent laying mortality, were highest in White Leghorn, while weight of egg per bird per week, Hen-day egg production (%) was highest in Nera I. The $P_{11} \times \sim \} II$ cross in terms of hybrid vigour exhibited by the parents (N and L) however, suggested that the genetic potential of the Nigerian indigenous chickens could be effectively exploited by crossing with improved exotic strains to increase laying performance.

Key words: Egg production, age, body weight, genotypes