

Breeding and promotion of Black Velvet Silky chicken ⁽¹⁾

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Abstract

In this experiment, appearance and egg production performance of black velvet silky chickens (*Gallus gallus domesticus*) were selected to breed the high egg production silky chicken strain for industrial production of eggs of black silky chickens. Black silky chickens were pedigree selected and bred in a small population. The birds had individual wing tags and kept reproducing new generations of high egg production silky chickens. The egg weight and body weight at the first egg, and the number of eggs laid, the average egg weight and body weight at 40 weeks of age were collected. The body weight of males over the average weight of the population at 16 weeks of age was required. A total of 1,528 males and 2,237 females were tested for 11 generations. In generation 11 (G11), the results showed that the average body weight of males and females at 16 weeks of age was 1,667 and 1,253 g, respectively. The results of egg production performance showed that the age, egg weight and body weight at the first egg were 142 days, 29.7 g and 1,596 g, respectively. The body weight, average egg weight and egg number at 40 weeks of age were 2,111 g, 45.1 g and 102, respectively. In G11, at 40 weeks of age, the phenotypic cumulative value of egg production number was 32. Breeding value was increased from 0.26 of G1 to 24.2 of G11. The estimated improvement of cumulative genetic value of egg production number in G11 of 40 weeks of age was 23.9. The eggshell color L* value, a* value and b* average values were 76.9, 7.0 and 19.6, respectively. Egg shape index, eggshell strength and eggshell thickness were 75.1%, 3.4 kg/cm² and 0.33 mm, respectively. The black velvet silky chickens can provide for the improvement of laying performance of silky chickens in the industry.

Key words: Egg production performance, Selection and breeding, Silky chicken.

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