Feathering rate impact on growth and slaughter traits of Japanese quail

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ABSTRACT

A total of 1180 1-day-old Japanese quail (Coturnix japonica) chicks were used to investigate the effect of feathering rates on growth and slaughter traits. Feathering rates were classified based on the results of stepwise regression using numbers and lengths of both primaries and secondaries and tail length at 7 and 10 days of age as predictors. At 7 and 10 days old, number of primary feathers had phenotypically positive low correlations (rps) with body weight (BW), whereas number of secondaries had positive medium rps with BW at different ages. Lengths of primary, secondary and tail feathers had highly positive rps with BW traits at different ages. Results of stepwise multiple regressions indicated that BW at 14, 21 and 28 days of age can be predicted using lengths of secondary and tail feathers at 10 days old, number of secondaries at 7 days old and length of secondaries at 7 days old, respectively. Body weight at 35 days of age can be predicted using number of primaries, lengths of second- aries and tail at 10 days of age and number of secondaries at 7 days of age. Higher BWs were obtained in the fast-feathering class from 21 up to 35 days of age than in other groups, whereas the slow-feathering class had the lowest BW. Significant class differences were found for carcass weight, feather weight and dressing% favouring the fast- over the slow-feathering class. Therefore, early feathering rates improved BW at later ages and slaughter traits in Japanese quail.

Key words: Body weight, fast-feathering rate, slaughter traits and slow-feathering rate