

PRODUCTIVE PERFORMANCE OF HYBRID ROSS-308 AS A FUNCTION OF POPULATION DENSITY (WELFARE NORMS) AND GROWING SEASON

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Abstract

Poultry practice shows that climatic variations influence production costs in extreme periods of the year through the additional expenses generated by maintaining environmental factors in the physiological comfort zone. Starting from this state of facts, the present study aimed at a comparative evaluation of the performance of broiler chickens raised in accordance with the welfare norms of the E.U. in two different seasons. In each of the considered seasons (winter vs. spring), 61,880 chicks belonging to the Ross-308 hybrid were used, divided into three batches differentiated by the population density: in batches Lc-1 and Lc-2, 19 chicks/m², in the Lexp-1 and Lexp-3 batches, 17 chicks/m², and in the Lexp-2 and Lexp-4 batches, 16 chicks/m². The obtained data showed that stocking at a low density (16 heads/m²) allowed the achievement of higher slaughter weights by 2.69–3.13% compared to the version with 17 heads/m² and by 3.98–4.83% compared to the one with 19 heads/m², of a lower mortality by 0.20–0.25% and, respectively, by 0.39–0.43%, as well as a lower conversion index by 8.76–8.88% and, respectively, by 19.67–26.10%. Compared to chicks reared in the winter season, those from the spring season achieved 10.31–11.11% higher body weights, 0.20–0.25% lower mortality, and lower conversion rates by 6.7–14.11%. These differences were also validated by the resulting scores for the European Efficiency Index and the European Broiler Index, respectively. In conclusion, it can be stated that the application of higher welfare standards for broilers (16 heads/m²) facilitates the achievement of higher production indicators than other density standards, only that their level is also influenced by the growing season, an aspect that must be taken into account in the annual forecasting of economic efficiency.

Key words: density, welfare, season, broiler, productive indicators