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Abstract

This study was carried out on 150 cockerel chickens each of Harco Black and Novogen strains to determine their performance, carcass yield and meat composition on free range and deep litter production systems. The birds were brooded for 4 weeks and thereafter allotted to the different production systems for a period of 12 weeks. Each production system was allotted 150 chicks (75 chicks per strain) with three replicates of 25 chicks. The birds on deep litter production system were fed ad libitum while each bird on free range was fed 50 % of its daily feed requirement. On the 84th day, a total of 36 birds were randomly selected for analysis of the carcass yield and meat composition. The data generated were subjected to a two-way analysis of variance in a 2 × 2 factorial experimental arrangement. Novogen strain consumed less feed ($P < 0.05$) on free range and had the best feed/gain (2.72). A higher ($P < 0.05$) shear force value (3.74 N) was obtained in the thigh muscle for birds on free range. The tibia proximal length and breadth, and tibia distal length and breadth were significantly ($P < 0.05$) affected by the production systems and strains. On free range, Harco black had more meat (85.69 g) than bone (18.07 g) in the breast while Novogen had the lowest meat/bone (2.38). Conclusively, Novogen strain should be raised on free range for a better performance in terms of feed/gain, but for higher meat composition, Harco black is a better strain.