Trop Anim Health Prod
DOI 10.1007/s11250-012-0213-2

ORIGINAL RESEARCH

Free range and deep litter poultry production systems: effect on performance, carcass yield and meat composition of cockerel chickens

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Accepted: 4 June 2012

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 dat generated were subjected to a two-way analysis of variance i a 2×2 factorial experimental arrangement. Novogen strai consumed less feed ($P<0.05$) on free range and had the be feed/gain (2.72). A higher ($P<0.05$) shear force valu (3.74 N) was obtained in the thigh muscle for birds on fre range. The tibia proximal length and breadth, and tibia dist length and breadth were significantly ($P<0.05$) affected by th production systems and strains. On free range, Harco blac had more meat (85.69 g) than bone (18.07 g) in the brea while Novogen had the lowest meat/bone (2.38). Conclusive ly, Novogen strain should be raised on free range for a bett performance in terms of feed/gain, but for higher meat com position, Harco black is a better strain.

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