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Comparison of egg composition of village chicken and brown leghorn breeds

A study was carried out to compare eggs of Village Chicken (VC) and Brown Leghorn (BL) breeds in terms of fresh and dry weights of whole egg and its components (yolk, albumin, and shell). Protein, fat and ash (minerals) contents of yolk and albumin were measured. All chicken were managed intensively under the same formulated feed ragime. Random samples of sixty eggs of VC and 20 eggs of BL were cleaned and weighed. After separation, fresh and dry weights of yolk, albumin and shell (with shell membrane) were measured individually. Protein, fat and mineral contents of yolk and albumin of eggs were chemically determined using the standard AOAC analytical procefures. All mean comparisons between the two breeds were performed using pooled t-test at 95% significance level.

Mean egg weight of VC (44.87g) was significantly lower than that of BL (55.82g). On fresh basis. BL eggs had a significantly higher albumin content (57.60%) than VC eggs (54.55%). However yolk and shell contents of BL eggs (31.53% and 10.87%, respectively) were significantly lower than those of VC eggs (33.09% and 12.36% respectively). On dry basis, the two breeds were similar in proportions of those contents. On dry basis, protein% and ash% of albumin and protein% and fat% of yolk of VC 994.95,3.05,43.71, and 53.82, respectively) were significantly different from those of BL (93.56, 4.24,38.20 and 59.45, respectively). With the higher protein:fat ration VC eggs appear to be a healthier choice than BL eggs.