S10– 0002 Effect of bio-security management intervention on meat quality of different broiler farming in Bangladesh

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The study was undertaken to determine the quality of meat through proximate analysis of broiler farming carried out with and without bio-security management intervention in Rajshahi, Pabna and Kishorgonj districts of Bangladesh. A total of 36 broiler meat samples were collected from broiler farmers with considering bio & non bio-secured managed farms during summer and winter between June, 13 to December 13 and having 18 meat samples in each season. Categories of farm (bio-secured & non bio-secured) were identified by using measures of bio-security standard which were based on marks. As per bio-security standard of broiler farm, the farms those got above 60 marks treated as bio-secured farms and below 60 marks treated as non-bio-secured farms (out of 100 marks). Data were analyzed using SPSS 11.5 (2003) program and comparisons of results were made between farms with & without bio-secured intervention. No significant differences were found in moisture, crude protein, ash, crude fiber and either extracts in both seasons among the broiler farm locations. But, between of the two management intervention during summer and winter seasons had a significant effect on proximate parameters. CP, moisture, ash, EE and CF were found higher in bio-secured managed farm in comparison with non bio-secured farm in both seasons. Average proximate parameters of broiler meat samples in both seasons showed the following composition: moisture 76.09%, CP 20.07%, ash 1.07%, CF 0.033% and EE 1.05% respectively considering as fresh basis. Overall relatively better meat quality was found in bio-secured managed farms than those of non bio-secured managed farms. Moreover, between the two seasons, in terms of meat quality, CP, ash and EE were found higher in winter in comparison with summer. It was concluded that satisfactory improve meat quality is achievable from small and medium scale broiler farming at rural households of the farmers if bio-security management intervention is practiced.

Keywords: bio-security, non bio-security, meat quality, winter, summer

S10– 0004 Comparison of nutrient composition and sensory quality of meat of Indian desi-chicken and commercial broilers

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An experiment was conducted to compare the nutritional and sensory quality of Indian desi-chicken and commercial broilers. A total of 20 commercial broilers and 20 Indian desi-chicken were obtained from an organized poultry farm and slaughtered by humane method. Proximate composition by standard protocol and fatty acid composition meat samples were analyzed by gas chromatography using a fused silica capillary column at Animal Feed Analytical and Quality Assurance Laboratory at Namakkal, India and statistical analysis was done by using t-test. The sensory quality was assessed taste panel and the results were recorded on a nine point hedonic scale and statistical analysis was done by using Kruskal - Wallis K - sample non - parametric test. Indian desi-chicken showed significantly (P<0.01) higher crude fiber values where as commercial broiler meat samples showed significantly (P<0.01) higher fat content than Indian desi-chicken. Thigh muscles of Indian desi-chicken showed higher ash content (P<0.05). Calcium content of breast and thigh muscles of Indian desi-chicken showed significantly (P<0.01) higher values than commercial broilers. The saturated fatty acids contents were higher in Indian desi-chicken, whereas total omega-3 fatty acids contents were significantly (P≤ 0.05) higher in commercial broilers. The samples received from Indian desi-chicken had significantly (P<0.01) lower values of sensory scores such as juiciness, tenderness and overall acceptability, whereas meat samples of commercial broilers showed significantly (P≤0.01) higher overall acceptability sensory scores. It is concluded that Indian desi-chicken had higher values of crude fiber, calcium and saturated fatty acids where as commercial broilers had higher values of fat, polyunsaturated fatty acids especially total omega-3 fatty acids and overall acceptability of sensory score.

Keywords: nutrients, omega-3- fatty acids, sensory quality of Indian desi-chicken meat