# SEASONAL EFFECT ON PERFORMANCE OF BROILER AT DIFFERENT MANAGEMENT REGIME AND ITS IMPACT ON FARMERS PROFITABILITY

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## Extended Summary

Gradual expansion of broiler production and increasing cost of construction materials, farm owners have a tendency to increase stocking densities for broiler production. More over feeding regime and seasons are not considered here. So, broiler farmers need urgently a specific guideline on season-wise stocking density and feeding regime for broiler management. Thinking these, effect of four different stocking densities viz 8 birds/$m^2$ ($D_1$), 10 birds/$m^2$ ($D_2$), 12 birds/$m^2$ ($D_3$), 14 birds/$m^2$ ($D_4$) and three feeding regimes viz mash ($F_1$), crumble ($F_2$) and pellet ($F_3$) on the production performance of broiler chicken were evaluated in summer (S), rainy (R) and winter (W) seasons with a total of fifteen-hundred and eighty four (1584) day-old straight run Cobb-500 broiler chicks for a period of six weeks at Sher-e-Bangla Agricultural University Poultry Farm, Dhaka, Bangladesh during 2010-2011. Parameters examined for production performance were feed consumption (FC), Water consumption (WC) live weight (LW), feed conversion ratio (FCR), mortality, benefit cost ratio (BCR) and dressing percent (DP). Almost all the parameters were significantly ($P<0.05$) affected by stocking density and feeding regime in different seasons.

In general feed consumption (FC) decreased as stocking density increased. The FC was higher in pellet and crumble fed broilers than mash fed birds. The FC was highest in winter and lowest in summer. The live weight (LW) increased as stocking density increased up to $D_3$ (12 birds/$m^2$). The higher LW was found in crumble and pellet group of birds. The LW was highest in rainy season and lowest in summer. The FCR value decreased as stocking density increased. The best FCR value was found in the highest stocking density. The crumble feed showed the best FCR value followed by pellet and mash feed. The best FCR was found in the rainy season and worst in summer. The WC decreased as stocking density increased. The mash and pellet groups of birds consumed significantly ($P<0.05$) higher amount of water than crumble group of birds. The WC was highest in summer and lowest in winter. Mortality was not affected by stocking density, feeding regime and seasons.

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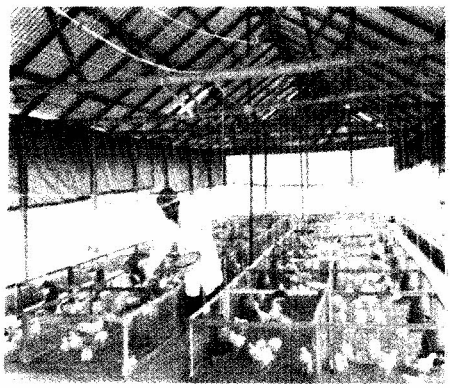
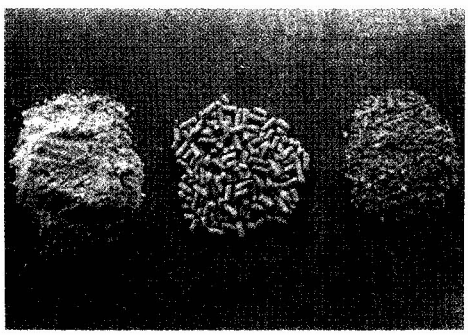


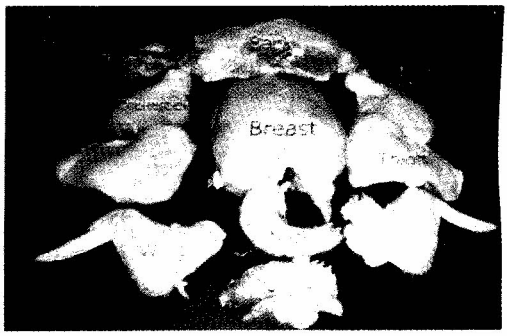
Chicks in different treatments


12 birds/m$^2$ with mash feed

The dressing percent (DP) was affected ($P<0.05$) by stocking density feeding regime and seasons. The highest DP was found in rainy season, followed by winter and summer. Lowest density gave maximum DP. The DP was unaffected ($P<0.05$) by feeding regime.



Mash, Pellet and Crumble Feeds




Dressing parts of broiler

Higher density showed ($P<0.05$) higher benefit cost ratio (BCR). The highest BCR was found in crumble fed birds and lowest in mash fed birds. The highest BCR was found in the rainy season followed by winter and summer. The highest benefit cost ratio was achieved at $D_3F_2$ (12 birds/m$^2$ x crumble feed) combination group in summer and rainy season; $D_4F_2$ (14 birds/m$^2$ x crumble feed) group in winter season. Irrespective of seasons highest BCR was found in $D_3F_2$ (12 birds/m$^2$ x crumble feed) combination.

The higher stocking density 12 birds/m$^2$ fed on crumble feed is suggestive for commercial broiler production in summer and rainy seasons in Bangladesh condition rearing up to 6 weeks of age. But 14 birds/m$^2$ also fed on crumble feed is suggestive for commercial broiler production in winter rearing up to 6 weeks of age.