Effect of Dietary Substitution of Maize Meal With Finger Millet Meal on Fat Deposition on Broiler Meat

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Abstract

The aim of this study was to investigate the effect of a finger millet-based broiler feed on the meat quality of chicken. Proximate nutrient composition was analyzed on the finger millet meal and a feed formulated with finger millet as the main energy source. The feed was formulated on percent crude protein (CP) basis using Pearson square method. An experiment was designed and conducted on Ross Hybrid chickens to determine the effect of the feed on lean tissue development. A two-tailed t-test statistical analysis was conducted at a significance level of 5% to determine the effect of the feed on fat deposition and lean tissue development in broiler muscle. The finger millet feed increased mean lean tissue mass by 3.47%. This study showed that use of finger millet feed reduced the fat deposition and favored protein deposition in broiler muscle (increased leanness). This study also showed that finger millet feed significantly enhanced broiler growth performance. We concluded that finger millet has the potential to replace maize meal in broiler feed formulation in order to produce lean and healthier meat for consumers.