

Fat deposition in broilers as affected by their age, sex and different brands of feeds marketed in Sri Lanka

Broiler meat production in Sri Lanka is playing a major role in the livestock production sector. It has become highly commercialized and competitive. Therefore, the reduction of cost of production and improvement of the quality of final product are very important factors, which affect the sustainability of the industry through maximizing profit. The present study was conducted to find out the effect of different commercially available feeds, age and sex on fat deposition in broilers.

A broiler feeding experiment (n=100, r=3) was conducted at Nimco Farm at Bingiriya. Separate batches of Arbo-acre broilers were fed with 5 brands of commercially available broiler feeds (both starter and finisher) manufactured by 5 feed millers to evaluate fat deposition. Birds were slaughtered at the age of 38, 39, 40, 41 and 42 days and abdominal fat weights were estimated. Five feed samples from each starter and finisher (Feed 1, 2, 3, 4, & 5) and abdominal fat samples were analyzed to find out their composition. The metabolized energy to crude protein ratios of both starter and finisher of different five feeds (Feed No. 1- 5) were 140.6 & 148.8, 140.6 & 151.4, 135.2 & 135.7, 134.8 & 142.7 and 134.0 & 151.7 respectively. The ratio varied according to feed No. 2>1>5>3>4. Feed no. 1 showed the highest energy level which was 3250 kcal / kg in both starter and finisher. The least crude protein levels in the broiler starter and finisher were observed in feed No.4 and 2 respectively. There was a significant difference (p<0.05) in abdominal fat deposition in broilers fed with respective feed. Actual fat content of abdominal fat tissues varied in between 82.17% to 96.18% on wet weight basis. Feed No. 1 showed the highest abdominal fat deposition and it varied according to following order of feed No. 1>5>2>3>4. According to the results, with the increasing metabolized energy to crude protein ratio in the diets increased the fat deposition of the birds. Female Arbo-acre broiler showed higher fat deposition than that of males. Also, the fat deposition increased significantly (p<0.05) with the age of birds. According to the results slaughtering at the age of 38 days possessed comparatively low level of abdominal fat, which is considered as good quality parameter and higher carcass recovery percentage.