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**Effect of complete replacement of fish meal from a sesame meal free diet on growth performance of broilers**

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Both fish meal (FM) and sesame meal are among the most important feed ingredients used in broiler feeds. The price of fish meal and sesame meal are increasing and sesame meal has been not available in the local market during recent years, making the feed formulators to look for alternatives. In this study, using a linear model based computer software, two sesame-meal-free least cost broiler rations with 0% or 5% FM were formulated. Subsequently, broiler chicks (n=300) in 12 pens were fed one of the above two diets (FM- or FM+) from day 21 to 35 and growth performances, feed and water intakes were compared. The cost of FM+ and FM- formulations were 64 and 58 Rs/kg, respectively. The removal of FM increased the dietary soy bean meal levels from 19% to 30%, while reducing the coconut poonac content from 9.2% to 21.9%. The feed and water intake values and the feed to water ratio were not significantly different between the two groups of birds. Though not significant, growth performance parameters such as live weight on day 35 (1553±35), weight gain (772g) and feed conversion ratio (2.37) of the birds given FM- feed were inferior to those of the birds given FM+ feed (1612±35g, 838g and 2.06±0.2, respectively). The total feed cost from day 21 to 35 reduced from Rs. 111.15 to Rs. 107.09 when FM was completely replaced. However, the feed cost per 1 kg of live weight gain from day 21 to 35 of the birds fed FM+ (Rs. 133.33) was tended to be lower (P=0.06) than that of the birds fed FM- feed (Rs. 138.71). It was concluded that complete replacement of FM from a sesame meal free broiler finisher diet increased the feed cost per kg of live weight gain, though the general growth performance was not significantly reduced.

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