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Tomato pomace: Alternative feed resource for poultry

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Consumption of poultry meat has consistently increased globally over the years. Poultry is one of the fastest growing segments of the agricultural sector in India today. Such growth in the poultry industry is having a profound effect on the demand for feed and raw materials. With increasing feed cost the poultry sector is searching for alternative feed resources to conventional feeds, especially agricultural and industrial by-products. The wastes from fruit and vegetable industry can be used as a potential source of newer cheap feed resources. With a view to investigate the nutritional efficiency, growth performance and carcass characteristics of broilers fed on diets containing different levels of dried tomato pomace (DTP) with or without enzyme supplementation the study was carried. Two hundred and forty Vencob day-old male broilers were fed broiler starter (0-4) and finisher iso-caloric and iso-nitrogenous diets with 0, 5, 10 and 15 per cent levels of DTP without (T1, T3, T5 and T7) and with (T2, T4, T6 and T8) enzyme supplementation. There was no significant difference in body weight gain and feed intake between different levels of DTP inclusion and with enzyme supplementation. The feed efficiency decreased significantly ($P<0.01$) with increase in level of DTP inclusion from 5 to 15 per cent (2.04 to 2.14). The per cent nitrogen utilization significantly ($P<0.01$) decreased with increase in DTP inclusion from 5 to 15 per cent and significantly ($P<0.01$) increased with enzyme supplementation in both the phases of growth. The serum cholesterol level decreased significantly ($P<0.05$) with increase in level of DTP inclusion. The LDL cholesterol level significantly decreased ($P<0.01$) with increase in level of DTP inclusion. The enzyme supplementation has shown significant ($P<0.05$) increase in serum LDL cholesterol level. The breast and thigh muscle cholesterol levels significantly ($P<0.05$) decreased with increase in level of DTP inclusion. There was significant ($P<0.05$) increase in breast and thigh muscle cholesterol level with enzyme supplementation. The breast muscle cholesterol (41.15 mg / 100 g of meat) and thigh muscle cholesterol (99.34 mg / 100 g of meat) contents were found to be the least in the birds fed on diets containing 15 per cent DTP inclusion without enzyme supplementation. Feed cost per kg gain showed significant ($P<0.01$) decrease with increase in the level of DTP inclusion. The feed cost/kg gain (Rs.16.09) was found to be the least in the birds fed diets containing 15 per cent DTP with lower serum and muscle cholesterol levels. There were no deleterious effects in the birds fed diets containing DTP even up to 15 per cent level. The study indicates that DTP can safely be included up to 15 per cent level in broiler diets for economical growth and to produce meat with low cholesterol.

Biography

Kavitha Pathakamuri is working as Assistant Professor in the Department of ILFC, College of Veterinary Science, Sri Venkateswara Veterinary University, India since two years. She has two gold medals (Andhra Bank Gold Medal and Nestle Purina Gold Medal) for achieving highest OGPA during MVSc. She has 4 research publications and many popular articles.

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