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# Influence of Canola Oil and Lysine Supplementation Diets on Growth Performance and Fatty Acid Composition of Meat in Broiler Chicks

**Authors :** Ali Kiani, Seyed Davod. Sharifi, Shokoufeh Ghazanfari

**Abstract :** A study was conducted to evaluate the effects of diets containing different levels of lysine and canola oil on growth performance and fatty acid composition of meat of broilers chicks. 240-day old Ross broiler chicks were used in a 3×2 factorial arrangement with canola oil (1, 3, and 5%) and lysine (recommended, and 25% more than recommended by Ross broiler manual) in completely randomized design with four replicates and 10 birds per each. The experimental diets were iso-caloric and iso-nitrogenous. Feed intake and body weight gain were recorded at the end of starter (10 d), grower (24 d) and finisher (42 d) periods, and feed conversion ratio was calculated. The results showed that the weight gain of chickens fed diets containing 5% canola oil were greater than those of birds fed on other diets (P<0.05). The dietary lysine had significant effect on feed intake and diets with 25% more than recommended, increased feed intake significantly (P<0.05). The canola oil×lysine interaction effects on performance were not significant. Among all treatment birds, those fed diets containing 5% canola oil had the highest meristic acid and oleic acid content in their meat. Broilers fed diets containing 3 or 5% canola oil possessed the higher content of linolenic acid and lower content of arachidonic acid in their meat (P<0.05). The results of the present experiment indicated that the diets containing canola oil (5%) and lysine at 25% higher than requirement, improve the growth performance, carcass and breast yield of broiler, and increase the accumulation of Omega-3 fatty acids in breast meat.

**Keywords :** broiler, canola oil. lysine, fatty acid
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