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## Effects of Dietary Black Cumin Seeds (*Nigella sativa*) on Performance, Carcass Traits and some Blood Parameters by Broiler Chickens

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### Abstract

This experiment was carried out at the faculty of agriculture and veterinary medicine, department of animal production in Thamar University, Yemen. As known, the use of antibiotics as growth promoters is banned in many countries due to the residual side effects and growing resistance to antibiotics of disease caused by bacteria by animals and human. So, feed additives of plant origin such as essential oils or extracts of aromatic plants have received considerable attention as alternatives to the traditional antibacterial feed additives. Thereby it was conducted to examine the effects of black cumin seeds (*Nigella sativa*) on growth performance (average body weight, weight gain, feed intake, feed conversion), carcass traits and some blood parameters (glucose, cholesterol, total protein, albumen) in broiler chickens. A total of 144 seven-days-old Hubbard strains were divided into four treatment groups with three replicate pens per treatment group (12 birds each). The dietary treatments were a control diet without black cumin seeds (T1) or with 1.5 % (T2), 2.5 % (T3) or 3.5 % (T4) of grounded black cumin seed (BCS) in the diet. The study lasted for 35 days.

It was found that BCS in the diet improved the final body weight compared to the control diet. Significant differences ( $p < 0.05$ ) were observed between treatment T3 (2.5 % BCS) and T1 (control). The feed intake was increased ( $p < 0.05$ ) for birds receiving T3 or T4 as compared to T1. On the other hand there were no significant effects of BCS among all treatments regarding the feed conversion ratio. Also, no significant effects ( $p > 0.05$ ) of dietary BCS were observed on the dressing percentage and the percentage of the edible inner organs. Serum total protein and albumin were increased by BCS feeding and was significantly higher by birds receiving T3 and T4, whereas cholesterol and glucose were decreased significantly ( $P < 0.05$ ) by increasing the BCS in the diet. It can be concluded that feeding of BCS tended to improve body weight by increasing feed intake and also the BCS increased the serum total protein.

**Keywords:** Black cumin, blood parameters, broiler, performance