

Growth performance, carcass attributes, blood hematology and biochemical constituents of growing rabbits supplemented with cinnamon and clove powder.

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ABSTRACT

A two-way experimental design, comprising a total of 180 growing commercial cross-bred 30-day-old rabbits were assigned to five groups (36 kits in each group equally distributed between the sexes, with twelve replicates of 3 rabbits) was adopted to investigate the effects of dietary treatment (cinnamon and cloves supplemented at 150 and 250 mg/kg diet each) and sex on rabbit growth performance, carcass characteristics, hematological and biochemical indices. The first group was given a basal diet with no supplements as the control, the second and third groups were given cinnamon at 150 and 250 mg/kg diet, respectively. In turn, the fourth and fifth groups were administered cloves at 150 and 250 mg/kg diet, respectively. Treatment with cinnamon and clove powder supplements significantly increased live body weight (LBW), live body weight gain (LBWG) and feed consumption (FC). Also, it significantly increased red blood cell count (RBC), white blood cell count (WBC), plasma total protein, albumin and globulin levels. The treatment with both supplements led to a significant decrease in feed conversion ratio (FCR), as well as levels of glucose, cholesterol, triglycerides, aspartate aminotransferase (AST) and alanine aminotransferase (ALT). Rabbits fed 250 mg cinnamon/kg diet had the highest LBW, LBWG, FC, dressing percentage, meatiness and plasma total protein, but had lowest levels of glucose, cholesterol, triglycerides, AST and ALT compared to the other groups. It was concluded that cinnamon supplement at 250 mg /kg diet may be an effective method to improve growth, carcass characteristics and health in both sexes of growing rabbits thanks to its advantageous effect on blood picture and biochemical constituents and consequently may be the primary factor promoting abundant production.

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