عنوان مقاله:

Effect of Shirazi thyme on oxidant status and absorptive surface area of the intestine in cold-induced pulmonary hypertensive broiler chickens

محل انتشار:

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خلاصه مقاله:

The effect of Shirazi thyme as a medicinal plant on oxidant status (lipid peroxidation, protein oxidation, total antioxidant capacity and catalase activity) and absorptive surface area were measured in three segments of small intestine in cold-induced pulmonary hypertensive chickens. Birds were reared at ۴ groups (thyme ۰, ۰.۲۵, ۰.۵ and ۱ % of diet) for ۴۲ days. To induce pulmonary hypertension, the temperature was gradually decreased. The body weight was increased in thyme-۰.۲۵% birds in compared to control ones while it was decreased in thyme-۱% birds. The feed consumption was only increased in thyme-۱% birds. The feed conversion ratio was lower in thyme-۰.۲۵% birds and higher in thyme-۱% birds than control ones. The duodenal and jejunal villus surface area was lower in thyme-۱% birds than control ones while it was greater in the thyme-۰.۵% birds. The ileal villus surface area and duodenal laminae properia thickness was also greater in thyme-۰.۵% birds. Lipid peroxidation was only decreased in the duodenum and ileum of thyme-۰.۵% birds compared to control ones, whereas it was increased in the duodenum and jejunum of thyme-۱% birds. Catalase activity was only elevated in the duodenum and jejunum of thyme-۱% fed chickens. Total antioxidant capacity was increased in the duodenum, jejunum and ileum of thyme-۰.۵% birds. It is concluded that

Shirazi thyme has beneficial effects on growth performance, intestinal absorptive surface area / secretory system and pulmonary hypertension response at low doses (۰.۲۵ and ۰.۵% fed) whereas high dose of this plant may be toxic (۱% fed).

کلمات کلیدی:
Broiler chicken, Oxidant status, Pulmonary hypertension, Shirazi thyme