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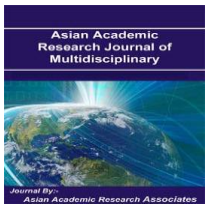

ORGANIC ZINC FOR BROILERS UNDER HEAT STRESS

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Abstract

The objective of this study was to evaluate the effect of levels of zinc in organic form in diets for broilers subjected to cyclic heat stress under natural conditions from 22 to 42 days on their performance, yield and chemical composition of the carcass, serum biochemical parameters, and histomorphometry of the bursal and thymic cortexes. 400 broilers — half of each sex — were underwent the experimental design completely randomized, with four treatments and five replicates. Treatments consisted of supplementing the diet with organic zinc at different levels (30, 60, and 90 mg/kg) plus an unsupplemented control treatment. Supplementation of organic zinc in diets for broilers from 22 to 42 days, in conditions of stress from cyclic heat, improves the feed intake of the form linear without affecting the other performance parameters; it didn´t also influences the yield of carcass, relative weight of the main cuts, and abdominal fat of birds. The ether extract in the carcass, the relative weight of the gizzard, and the concentration of total proteins in the blood serum increase proportionally with the increase in organic zinc supplementation in the diet; however, supplementary zinc levels lead to worse deposition of protein in the carcass. Regarding the immune system, the supplementary organic zinc levels influence the percentage of thymic cortex positively of the form linear. It is concluded that, supplementing organic zinc in diets for broilers aged 22 to 42 days no influence performance but had effect significant chemical composition of the carcass and improved their immune response.

Key words: Biochemical parameters. Carcass characteristics. Immune response. Poultry production. Productive performance.

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