

Changes in Some Biochemical Parameters and Body Weight of Chicken Exposed to Cadmium

Authors : Khaled Saeed Ali

Abstract : This study was conducted with 3 week old domestic chicken to determine the effect of supplementation of cadmium to dietary. 10 mg/kg Cadmium chloride added to maize- sesame cake meal diet for 4 weeks. The additional cadmium to the diet induced a decreasing body weight and changes in biochemical parameters of chicken. Chicken were divided into two groups. The first group was given a diet containing the concentration of 10 mg cadmium /kg daily for a period of 30 days and the second group was given diet without cadmium and used as a control group. The result revealed decrease in the body weight of treated chicken by 12.7 % compared to control group, whose body weight increased. The plasma glucose concentration, creatinine, aspartate aminotransferase (AST), and alanine aminotransferase (ALT) were increased significantly ($P < 0.05$) in Cd treated chicken in comparison to the control group. Cadmium accumulation was observed in the intestine, kidney, liver and bone. The accumulation of cadmium was markedly higher (3-4 times) in cadmium-treated animals compared to the control.

Keywords : cadmium, biochemical parameters, body weight, chicken

Conference Title : ICEES 2015 : International Conference on Environmental and Earth Sciences

Conference Location : Venice, Italy

Conference Dates : April 13-14, 2015