VII. REFERENCES


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VIII. ABSTRACT

Comparative pathology of ochratoxicosis and citrinin toxicosis was studied by feeding diets containing 1 ppm OA and 12.5 ppm CTN either alone or in combination from day one to five weeks of age to broiler chicken. The clinical signs of inappetance, dullness, ruffled feather, poor growth and diarrhoea were observed in mycotoxin fed birds. There was significant reduction in body weight gain and feed consumption in the mycotoxin fed groups. Anaemia, hypoproteinaemia, hypoalbuminaemia, hypoglobulinaemia, hypoglycaemia were recorded in all the toxin treated groups. The serum values of ALT, AST, ALP, BUN, creatinine and Uric acid were found to be elevated in toxin fed birds. In addition, hypocalcaemia, hypophosphoreemia, hyponatraemia, hypokalaemia and hypertriglyceridaemia were also evident in the mycotoxin fed birds. Significant increase in the weight of liver, kidneys and spleen and decrease in weight of bursa of Fabricius and thymus was observed in the mycotoxin fed groups. The lesions observed in liver included degenerative changes in hepatocytes, periportal fibrosis, periductular mononuclear cell infiltration, fatty changes and focal necrosis. The other lesions included degeneration and necrotic changes in the tubular epithelial cells of kidneys, myocardial degeneration, hyaline degeneration of muscle, hyperplasia of crop mucosa, proventriculitis, ventriculitis, catarrhal enteritis, pancreatitis, lymphoid depletion in the spleen, bursa of Fabricius and thymus in the mycotoxin fed birds from second to fifth week of age. These changes were also supported by EM studies. Stray collection of lymphoid cells in skin was observed in mycotoxin fed birds 72 hours after application of DNBC. The HI and ELISA titre against ND and IBD vaccination were significantly low in all the mycotoxin fed birds. Findings of the present study pointed out that effect of combined toxicity was more pronounced in target organs than the individual toxicity.