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PATHOLOGY OF EXPERIMENTALLY INDUCED SUBACUTE AND SUB-CHRONIC ZIRAM TOXICITY IN KADAKNATH CHICKENS

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To Study the pathomorphological and haemato-biochemical alterations in ziram-induced subacute and sub-chronic toxicity in Kadaknath chickens. Dithiocarbamate fungicides are widely used across the globe for various crops, primarily because of their effectiveness in managing plant fungal diseases and their relatively low acute toxicity to mammals. Ziram, a specific dithiocarbamate, is utilized to combat various fungal diseases affecting potatoes, nuts, certain fruits and grains. The current study was conducted from May to October 2024 at the college poultry farm unit and the Department of Veterinary Pathology, COVSc., MHOW, aimed to study the pathomorphological and haemato-biochemical alterations in the ziram-induced subacute and sub-chronic toxicities in Kadaknath chickens. The clinical signs of toxicity included lethargy, loss of appetite, huddling, ruffled plumage, muscle weakness, uncoordinated gait and oedema in the crop. Weight gain and overall live weight were significantly lower in the experimental groups compared to the control group. Haematological changes included decreased haemoglobin, TEC, PCV and lymphocytes, with increased leucocyte count and heterophils. Biochemical analysis showed increased AST, ALT, creatinine and globulin levels, while total protein and globulin decreased. Zinc levels were significantly elevated, while copper showed no significant change. Gross pathology revealed liver congestion with necrotic foci, dark red spleen, hyperaemic intestines and atrophied bursa of Fabricius and thyroid. Histopathological findings included liver oedema, necrosis, spleen

haemorrhages, intestinal necrosis and kidney degeneration. The study highlighted the toxic effects of ziram on various organs in Kadaknath chickens.