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← Pak Vet J, 2017, 37(2): 135-138 →

Effect of Sub Lethal Doses of Thiamethoxam (A Pesticide) on Hemato-Biochemical Values in Cockerels

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Abstract

The objective of the current study was to find out the toxic effects of sub lethal doses of thiamethoxam on adult poultry birds. For this purpose, a total of 40 cockerels having an age of about 14 weeks were procured from local market and divided into five equal groups. Birds were kept in wire cages under standard management conditions. Birds were given Thiamethoxam @ 250, 500, 750 and 1000mg/kg BW to group A, B, C and D, respectively. Group E served as a control. Blood and serum samples were collected at 15th and 30th day of experiment and analyzed for the various hematological (TEC, TLC, Hb and PCV) and biochemical parameters (total proteins, albumin, globulin, creatinine, blood urea, ALT and AST). The data thus collected were subjected to ANOVA through M-Stat software. Results thus obtained indicated that the sub lethal doses of thiamethoxam reduced significantly ($P \leq 0.05$) the hematological values including TEC, Hb, PCV and TLC in a dose dependant manner. The biochemical parameters like total proteins, albumin and globulin were significantly affected by the thiamethoxam. As the dose of the thiamethoxam was increased, these parameters decreased significantly as compared to control group. On the other hand, the values of enzymes ALT and AST were significantly higher in treated groups.

Key words: Cockerels, Enzymes, Hematology, Thiamethoxam, Total proteins



ISSN 0253-8318 (PRINT)
ISSN 2074-7764 (ONLINE)

