Effect of Linseed oil supplementation on Hematological Parameters and Economics of Feeding in Broiler Chicks

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Abstract: To assess the effect of using linseed oil as a replacer of sunflower oil, on the performance and carcass quality in broiler chicken a study of six weeks duration was conducted. Three hundred commercial broiler chicks were randomly distributed in five treatment group's viz. T1, T2, T3, T4 and T5, with six replicates of ten birds each. The study involves recording the observations viz. periodic growth, feed efficiency, energy and nitrogen retention, carcass characteristics, fatty acid profile of meat , blood & serum parameters and cost of rearing broilers under different dietary treatments. The control group (T1) was offered basal diet as per BIS (2007) specifications having sunflower oil, while in treatments groups T2, T3, T4 and T5; 25, 50, 75 and 100% sunflower oil of control was replaced with linseed oil , respectively. The linseed oil inclusion had no effects on hematological parameter whereas the haemoglobin concentration increased significantly ($P<0.05$) in 100% linseed oil group. Serum triglycerides, cholesterol level were significantly lower at 100% replacement of sunflower oil and LDL level was significantly decreased in all group having linseed oil inclusion than the control group. Serum profile was also improved in terms of reducing total cholesterol, triglycerides and low density lipoproteins. Also the economics of feeding regime did not differ significantly, so we can conclude the cost of production was similar to that of feed containing linseed oil.

Key words: Linseed oil, Broiler, LDL, Cholesterol, triglycerides, haemoglobin.