

## **Haematology and Serum Biochemistry of Laying Hens fed Red Pepper (*Capsicum annum* L.) as feed additive**

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### **Abstract**

The hematology and serum biochemistry of ISA brown laying hens fed red pepper (*Capsicum annum* L.) as feed additive in their diet was studied. Sixty (60) laying birds (in their 32<sup>nd</sup> week) were randomly allotted to four different dietary treatments with graded levels of red pepper (*Capsicum annum* L.) as additive. The treatments, T1, T2, T3, and T4 contained red pepper at 0g, 0.5g, 1.0g and 1.5g per kg feed respectively included in a layers mash containing 16.5% crude protein, 5.00% fat, 6.00% crude fibre, 3.50% Ca, 0.4% P and 2500Kcal/Kg. The design of the experiment was the completely Randomized Design (CRD). Each treatment contained 5 replicates and each replicate had three birds. Feed and water were given ad libitum and routine activities were carried out. At the end of the eight weeks experimental period, blood samples were collected for hematological and serum analysis. Haemoglobin concentration (Hb), packed cell volume (PCV), red blood cell (RBC), white blood cell (WBC) and the erythrocytes indices were not significantly affected by *Capsicum annum* L. inclusion. Some serum electrolytes examined, such as potassium (K), calcium (Ca), sodium (Na), cholesterol and triglyceride were significantly ( $P < 0.05$ ) affected by the inclusion of *Capsicum annum* L. while chlorine (Cl) was not significantly ( $P > 0.05$ ) influenced by the inclusion of the red pepper. Based on the result from this study, it was concluded that laying hens can tolerate the inclusion of *Capsicum annum* L. as a feed additive in diet up to 1.5g/kg feed with reduction in serum cholesterol and triglycerides.

**Keywords:** haematology, serum, laying hens, red pepper/p>

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**Target Audience:** Small Poultry Farmers, Animal Scientists, Poultry Nutritionists