

## **PERFORMANCE AND SERUM METABOLITES OF BROILER CHICKS FED HULLED SUNFLOWER SEED CAKE DIETS**

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### **ABSTRACT**

The replacement value of hulled—sunflower seed cake protein (HSFSCP) at 0,25,50,75 and 100% for soybean cake protein (SBCP) was assessed using 225 day-old broiler chickens. The diets were isonitrogenous and isocaloric with 23 and 20% crude protein as well as 2.95 kcal/g and 2.85 kcal/g metabolisable energy at the starter and finisher phases respectively. At the starter phase highest ( $P < 0.05$ ) live weight of 625.00g, protein efficiency ratio of 1.63 and 2.92 mg/dl creatinine concentration were obtained with 25% HSFSCP and poorest feed efficiency ratio of 3.65 and 51.30 mg/dl of urea were obtained with 100% HSFSCP, while highest glucose concentration of 30.96 which did not significantly differ ( $P > 0.05$ ) from value obtained with 75% HSFSCP was obtained with 50% HSFSCP diet. At the finisher phase HSFSCP reduced ( $P < 0.05$ ) nitrogen and ether extract retentions, lowest values of 54.71 and 96.94% were obtained with 100% and 50% HSFSCP respectively. Creatinine and glucose concentrations were increased ( $P < 0.05$ ) except for 3.37 mg/dl with 75% and 120.20 mg/100ml for 0% respectively, which did not differ ( $P > 0.05$ ) from value obtained with 25%. At the overall (starter and finisher) live weight, feed and protein utilizations of 75% did not differ ( $P > 0.05$ ) from values obtained with 0% HSFSCP. This study suggested that for efficient growth and protein utilization HSFSCP could replace 75% of SBCP in broiler chicken diets.

**Keywords:** Broiler, growth, hulled sunflower cake, protein.