

## **Growth Performance and Blood Characteristics of Broilers Chicken Fed on Diet Containing Brewer Spent Grain at Finisher Phase**

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**Abstract :** This study was conducted to investigate the effects of brewer spent grain (BSG) on growth performance and serum biochemistry characteristics of blood of broilers chickens. Three hundred and fifteen (4 weeks old) Oba - Marshall Broilers were used for the experiment. Five experimental diets were formulated with diet 1 (T1) containing 100% soya bean meal as the control, Diet 2, 3, 4 and 5 had BSG as replacement for soya bean meal at 0%, 36%, 57%, 76% and 100% respectively. The birds were allocated into each dietary group in a completely randomized design with 63 chicks in 3 replicates of 21 chicks each. The birds were offered these diets ad libitum from four weeks old to nine weeks old (35 days). Feed intake, body weight, weight gain, and feed conversion ratio (FCR) were assessed. Blood samples were also collected to examine the effect of BSG waste on hematology and serum biochemistry of broilers. Result indicated that BSG did not significantly ( $P>0.05$ ) affect feed intake and weight gain. However, FCR and final weight of finishing broilers differs significantly ( $P<0.05$ ) among treatments. The blood hematology and serum biochemistry indices did not follow a particular trend. Cholesterol concentration reduced with increasing level of BSG in the diet. Hb, RBC, WBC, neutrophils, lymphocytes, heterophiles and MCHC were significant ( $P<0.05$ ) while MHC and MVC were not significantly ( $P>0.05$ ) affected by BSG in diets. serum total protein, albumin, and cholesterol concentration also showed significance ( $P<0.05$ ) difference. Thus, BSG can replace soya bean meal up to 14% in the broiler finisher diet without deleterious effect on the growth, hematology and the serum biochemistry of broiler chicken.

**Keywords :** broilers, growth performance, haematology, serum biochemistry

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