

## **Comparative Analysis of Growth Performance and Economic Benefits of West African Dwarf Goat Fed With Diets Incorporation Treated Rice Husk as a Substitute for Wheat Bran**

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### **Abstract**

The study was conducted to find out effects of treated rice husk as a replacement for wheat bran supplement on the growth performance of West African Dwarf (WAD) goats. Twenty (20) WAD goats were subjected to five dietary treatments in a Completely Randomized Design (CRD) with four (4) animals per treatment and each serving as a replicate. The treatments are: 0% RH (T1), 25% RH (T2), 50% RH (T3), 75% RH (T4) and 100% RH (T5). The animals were fed 5% of their body weight. The result showed that T2 and T1 are relatively high in crude protein, low in crude fiber, moderate in crude fat and high in carbohydrate. They equally had the lowest values of ADF, ADL and NDF among the treatments. The total weight gain (TWG), average daily weight gain (ADWG), total daily feed intake (TDFI) and feed conversion ratio (FCR) were all significantly ( $P < 0.05$ ) influenced by the dietary treatments. The goat, T1 had the highest TWG, ADWG and TDFI values among the goats. The goat fed 25% RH replacement level (T2) converted and utilized feed better and had better growth performance comparable to goats fed T1. In conclusion, at 25% level of treated rice husk as replacement of wheat bran gave better growth performance in the goats. The result demonstrated the qualitative benefits and financial returns of using treated rice husk to replace wheat bran diets for WAD goats. Thus, the use of treated rice husk up to 50% in the diet of WAD goats is recommended for appreciable growth performance and better economic benefits.

**Key Words:** *Treated rice husk, West African Dwarf goat, Weigh gain, Feed conversion ratio, Feed intake*