

## **GROWTH PERFORMANCE AND SOME BLOOD PARAMETERS OF BUFFALO CALVES AS AFFECTED BY FEEDING SILAGE OR ALFALFA RATIONS**

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### **ABSTRACT**

The present study was carried out at the Experimental Farm of Animal Production Department, Faculty of Agriculture, South Valley University, Qena. Twelve buffalo male calves, averaged  $102.33 \pm 0.9$  kg of body weight and aged 6-7 months old were used to investigate the effect of feeding corn or sorghum silage compared to fresh alfalfa on some blood parameters and growth performance of growing buffalo male calves. Calves were divided into three equal groups (four in each), and were fed the following experimental treatments (T1): contained 52% concentrate mixture + 48% fresh alfalfa, (T2) contained 52.35 % concentrate mixture + 47.65% maize silage and ( T3): contained 52% concentrate mixture + 48% sorghum silage. The feed efficiency value and the economical efficiency were calculated. Blood samples were collected to determine serum glucose, total protein, albumin, globulin, total lipids, cholesterol, triiodothyronine and thyroxin .

The results revealed that there is a significant ( $P < 0.05$ ) difference in the nutritive value in terms of TDN and DCP, among the three different treatments. The nutritive values are 61.12, 66.00 and 64.12 for TDN and 9.63, 6.76 and 6.24% for DCP in T1, T2 and T3, respectively. Average daily DM intake / calf was significantly different among the three treatments (4.82, 4.78 and 4.83 for T1, T2 and T3, respectively). The average daily gain of calves after period (180 days) illustrated that the lowest gain was in T1 (96.75 kg) and the highest in T2 (117 kg) followed by T3 (105 kg). The calves in groups T2 or T3 were more efficient in feed utilization than those in group T1. The results showed that there was a significant difference among treatments in some of blood components (glucose, total protein, albumin, triiodothyronine and thyroxin). The highest of glucose level was in treatments T2 and T3, while the highest value of protein and albumin treatment was in T1. The highest value of serum thyroid hormone concentrations were in group T2.

It could be concluded that using corn silage and sorghum silage for buffalo calves can be more successfully used for feeding without any adverse effect on productive performance and physiological responses.

**Keywords:** buffalo calves, blood parameters, growth performance, silage.