

## **NUTRITION & HUSBANDRY**

### **PERFORMANCE OF GOATS FED RATIONS CONTAINING WHOLE SUNFLOWER SEEDS**

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#### **ABSTRACT**

This study include a comparative milk productin trial and digestability trials to evaluate the effect of inclusion of whole sunflower seeds in goat's ration. Thirty Zaraibi goats of 4-5 years old and  $41.04 \pm 1.19$  kg average body weight were used for milk production assessment and 9 Zaraibi bucks were used for digestability trials. Animal were randomly distributed into three groups where all fed 50% concentrate feed mixture + 50% berseem hay. Goats in group 1 served as a control group (G1); goats in G2 and G3 were fed the control ration while whole sunflower seeds (*Halianthus annuus*) replaced 5% and 10% of the concentrate feed part, respectively. The digestion coefficients of DM, CP and NFE are slightly increased by adding sunflower but the differences were not significant among treatment groups. There were no significant differences between groups in ruminal pH,  $\text{NH}_3\text{-N}$  and TVFA's values as a result of experimental treatment during the same collected time. Milk yield was higher ( $p < 0.05$ ) in G2 and G3 than in G1 . Addition of sunflower seeds in the goats' rations increased ( $p < 0.05$ ) milk fat, protein and total solids while decreased lactose percent. Addition of 10% sunflower seed showed higher serum total lipid, triglyceride than those of 5% sunflower seed or control with significant differences ( $P < 0.05$ ) during suckling and lactation periods. The concentration of serum chlesterol was significantly lower in treated groups than control group espesially with 10 % sunflower. The goats in control group had nearly the same mean serum glucose level compared to the other two groups, while the serum glucose concentration was slightly higher in suckling period than lactation period in all groups.

**KEYWORDS: Goats, Sunflower, Digestbility, Milk**