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Water Intake and Influence of Ambient Temperature on Carcass Characteristics of Savannah Brown Goats Fed Graded Levels of Maize Cob Diets Supplemented with Cowpea Husk

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Abstract : This study investigated water intake and influence of ambient temperature on carcass characteristics of Savannah Brown goats fed graded levels of maize cob diets. A total of sixteen (16) Savannah Brown goats aged between 8-12 weeks with an average body weight of 10.19+0.19 kg were used. The goats were randomly allotted to four (4) dietary treatments, T1 (0 % maize cob diet), T2 (10% maize cob diet), T3 (20% maize cob diet) and T4 (30% maize cob diet) respectively. The goats were also fed cowpea husk as supplement. A complete randomized design was used. Each treatment was allotted four (4) goats and replicated twice with two (2) goats per replicate. The goats were kept under feedlot management and were allowed 7 days adjustment period during which the animals were dewormed using albendzole and treated with antibiotics against any sign of disease(s). The goats were each offered 500 g of experimental diet between 7.00 am-8.00 am daily and the supplement was given to them between 4.00 pm-5.00 pm daily. The goats were offered three (3) litters of water daily without restriction. The experiment lasted for nine (9) weeks. Two (2) goats were randomly selected from each treatment and slaughtered for carcass characteristic and sensory evaluation. The result showed that ambient temperature had significant ($P<0.05$) correlations with water intake and feed intake among the treatment groups. There was a strongly positive significant ($P<0.01$) correlations between feed intake, water intake and ambient temperatures. The result on carcass characteristics showed significant ($P<0.05$) differences among all the treatment groups. The goats fed 20% maize cob performed significantly ($P<0.05$) better in most carcass cuts than those fed 0% inclusion level. Also, the result on sensory evaluation showed that colour, tenderness, juiciness and flavor for both cooked and fried meat were significantly ($P<0.05$) different among all the treatment groups. It can be concluded that 20 % inclusion of maize cob in the diet of Savanna Brown goats will improve meat yield and water intake. Therefore, inclusion of maize cob into the diet of Savanna Brown goats up to 20% is here by recommended.

Keywords : water intake, ambient temperature, savannah brown goats, carcass
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