

Growth performance of Sudan Baggara bulls fed diets containing Hibiscus (Karkade) seeds as a nonconventional protein source

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Abstract

Fifty-five bulls of Sudanese Baggara cattle type were used for this study. Bulls were divided into five treatment groups each of eleven animals. Five iso-caloric, iso-nitrogenous diets 0HS, 25HS, 50HS, 75HS and 100HS were formulated to contain different levels of Karkade seeds protein to replace 0%, 25%, 50%, 75% and 100% of groundnut cake protein. The diets were randomly distributed among the animal groups. The feeding trial extended for eighty-four days starting with an adaptation period that lasted in two weeks. No significant differences were observed between the treatment groups in slaughter data. Although, animals of group 0HS showed the best results in slaughter weight, empty body mass, hot carcass weight and chiller shrinkage, but not for dressing percentage where animals of group 75HS attained the highest value. Weight of loin joint was significantly ($P < 0.05$) different between group 25HS and 75HS, and group 50HS and 75HS, where the later group showed the highest weight. Muscle, bone, fat and trimmings weights were not significantly different between the treatments; while muscle-to-bone ratio was the highest in group 0HS and the least in group 50HS. Conversely, group 100HS showed the highest muscle-to-fat ratio and group 0HS attained the least ratio. The difference was only significant ($P < 0.05$) between group 0HS, 25HS and 100HS. no significant differences were observed in body components between the treatment groups, except for hide weight, mesentery and omental fat. It is concluded that general growth performance of the experimental groups was improved as inclusion level of Karkade seeds increased up to 75%. Meat quality attributes were also enhanced with inclusion of Karkade seeds protein.

Keywords: *Baggara, growth, Karkade, protein*