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Carcass Characteristics and Meat Quality of Finished Lambs Born to Supplemented Hamari Ewes under Range Conditions, Sudan

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Abstract

This study focused on carcass characteristics and meat quality of finished lambs to concentrate supplemented ewes on the open range of Kordofan state, Sudan. The concentrate diet was offered to the dams on group at a rate of 500 gm/ewe/day. Ninety ewes of similar age and weight were divided into three groups (A), (B) and (C) with 30 animals each. (A) was given the supplement for 30 days before and after mating, (B) was given the supplement for 30 days before mating and (C) was left without supplement. Sixteen weaned lambs born to concentrate supplemented ewes and another equal number left to graze naturally was used for concentrate supplementation. Group (A) and (B) each contained eight lambs, while (C) contained sixteen lambs which were divided into two groups (C) and (D). All lambs were allowed to graze naturally. Lambs were given the diet for 60 day free choice, except lambs of group (D) was allowed to graze on natural pasture only (control). Carcass characteristics, meat chemical composition and quality were studied on five lambs from each group. Statistical analysis indicated that there were no significant differences in slaughter, hot, cold and half carcass weights and empty body weight, among supplemented groups, but were significantly ($p < 0.05$) heavier compared to the control. No significant differences were found in dressing percentage and whole sales cuts between all groups. Only genital organs and fat depots were significantly ($p < 0.05$) heavier in supplemented groups than those on control. Carcass composition showed that concentrate supplementation resulted in significant ($p < 0.001$) increase in muscle, fat, and trim percentages than in control. Meat Chemical composition showed higher protein and fat percentage and the reverse was true for moisture in supplemented groups than in the control. Meat quality attributes indicated that cooking loss decreased significantly ($p < 0.001$) while water holding capacity improved in meat of supplemented groups than in the control. It was concluded that concentrate supplementation of grazing lambs born to supplemented ewes enhanced lamb carcass weight and improved meat quality. Thus it is recommended to adopt concentrate supplementation of lambs to improve their carcass yield and their meat quality.

Keywords: Carcass, Hamari Ewes, Meat, Range conditions