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Determination of using appropriate ratio of whole beet (Beta vulgaris L.var.Crassa) silage in fattening lamb's ration

Research worker: Abdolhamid Karimi

Abstract

In this study, the possibility of replacing fodder beet silage in proportions of zero, 25, 50 and 75% based on dry matter in the concentrated part of fattening diet of Gray Shirazi male lambs (forage: concentrates in the ration 60:40 per cent) were investigated. The experiment was performed in a completely randomized design with 4 experimental treatments and 8 replications. The fattening trial period was 90 days (include: 15 days for adaptation and 75 days for main experimental period). Physical characteristics, appearance and chemical composition of silages were evaluated. Also, effects of experimental diets on lambs performance, feed conversion ratio and carcass traits were investigated. According to the Fleig-point (100), pH (3.9) appearance (4), smell (13) and color (2) the silage of fodder beet silsge had proper quality. The chemical composition of silage including dry matter, ash, crude protein, crude fat, neutral detergent fibr (NDF) and acid detergent fibr (ADF) Were 25, 16, 12.7, 1, 41 and 29%, respectively. The average of initial weight, final weight, average daily gain and feed efficiency were not significantly different among the treatments ($p>0.05$). The daily dry matter intake in the treatments that consumed fodder beet silage in compared to the control treatment was significantly reduced ($p<0.05$), but did not show any difference between them. Feed conversion ratio (FCR) in group 3 (50% replacement of fodder beet silage) showed a significant decrease compared to the control treatment ($p<0.05$), but treatments of 25 and 75% replacement of fodder beet with control treatment and also with treatment of 50% fodder beet were not significantly different ($p>0.05$). The use of different ratios of fodder beet silage (25, 50 and 75%) in feeding male fattened male lambs of Shiraz on carcass characteristics and its parts did

not show a statistically significant difference with the control treatment ($p>0.05$). The results of this study showed that the use of fodder beet silage in feeding fattening lambs up to 75% of dietary concentrate is possible without reduction in yield.

Keywords: fattening Lamb, Fodder beet, Silage, Gray Shirazi