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Effect of completed feed Citrus palp silage on growth performance of Zel female lamb

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Abstract

The aim of this study was to determine the effect of completed feed Citrus palp silage on Zel female lamb's economic efficiency and growth performance. For this purpose, sixty-eight female lambs, averaging 150-180 days of age and live body weight 20.65 ± 3.71 (SD) kg in National Gavdasht Research Station of Mazandaran province selected and were randomly divided into two groups. Two isoenergetics and isonitrogenous diets were formulated based on Zel lamb's requirements on corn silage (control) and Citrus palp silage (treatment). For prepare the completed feed Citrus palp silage, all of ingredients were mixed and then ensiled with custom way, but for control diet, corn silage was mixed to another ingredient. The diets were randomly assigned to treatments. The lambs were fed with diets 120 days and feed intake and daily gains were recorded at during the experiment. Serum samples were collected from the jugular vein of 5 animals assigned to each treatment at final week of experiment. The pH and Ammonia-N of rumen liqueur samples were recorded in final day of experiment.

Results showed that dry matter intake (DMI) of lambs fed control diet was 1067 gr and for lambs fed Citrus palp silage 924 gr. There was no significant between average daily gain (ADG) of lambs that fed with control diet (86 gr) and those fed Citrus palp silage diet (91 gr). There was no significant between serum glucose and total protein of treatments, but concentration of serum Ammonia-N and cholesterol of lambs fed with control diet, 80.5 and 47.1 mg/dl were higher than lambs fed Citrus palp silage diet, 65.5 and 22.8 mg/dl respectively. The ruminal pH concentration was lower in lambs fed to control diet (6.7) as compared to other group (7.4), but the Ammonia-N concentration of lambs fed to Citrus palp silage diet, was lower compared to lambs fed to control diet. While the income of lamb's weight gain in control group was higher than experimental group, but because of less feed cost, the benefit of experimental group was more than other group. It concluded that using Citrus palp silage in sheep diet, could increase the stockman's income.

Keywords: Citrus palp silage, Zel sheep, growth performance, benefit-cost.