



MINISTRY OF JIHAD-E-AGRICULTURE
Agricultural Research, Education and Extension Organization
Agriculture and Natural Resources Research and Education Center of Fars

The Effect of Fodder Silages of Triticale (*Triticosecale wittmack*) and Vetch (*Vicia Sativa*) on the Fattening Performance of Grey Shirazi Male Lambs

Research worker: Abdolhamid karimi

Abstract

In this study the effect of using silage of triticale fodder, vetch and their mixtures on the fattening performance, carcass traits and blood metabolites of grey Shirazi male lambs was investigated. Thirty-two male lambs with an average weight of 27.86 ± 0.49 kg and an age of 130 ± 14 days were randomly divided into four experimental groups with 8 replications (lambs) per treatment. The experiment was performed for 75 days in a completely randomized design. Lambs were fed according to daily requirement in the NRC (2007). The mentioned silages were evaluated in terms of physical characteristics and their chemical composition. Dietary experimental treatments were include: 1- Control (contains fodder corn silage); 2- Treatment containing triticale fodder silage; 3- Treatment containing forage vetch silage and 4- Treatment containing triticale and vetch fodder silage. At the end of experiment, the lambs were weighed and slaughtered. Daily feed intake, weight gain, feed conversion ratio, blood metabolites as well as economic efficiency were determined. The highest amount of crude protein (14%) and the lowest amount of neutral detergent fiber (44%) were observed in vetch silage ($P < 0.01$). The highest feed intake was observed in control group (1.89 kg) and the lowest in Treatment containing triticale fodder silage (1.32 kg) ($P < 0.01$). Final weight, average daily gain (ADG) of lambs and feed conversion ratio in the present study were not affected by experimental diets. Blood albumin concentration of lambs receiving control (3.50 g/dl) and Treatment containing forage vetch silage (3.58 g/dl) were significantly higher than other treatments ($P = 0.01$). The use of silages of triticale, vetch and mixture reduced blood cholesterol ($P < 0.01$). The highest amount of triglyceride was observed in lambs receiving treatments triticale fodder silage (2) and forage vetch silage (3). Live weight at slaughter, hot carcass weight, Carcass Dressing Percentage, cold carcass weight and percentage of cold carcass weight to live weight showed no significant difference between the experimental groups ($P < 0.05$). The percentage of crude protein and crude fat of meat, showed a significant difference between the experimental treatments ($P < 0.05$). Income and income percent per kg

live weight gain, increased with the use of low-water forage silages. Due to drought conditions, these forages have good potential and suitable usage in the diet of ruminants.

Keywords: Triticale, Vetch, silage, Fattening Performance, Carcass characteristics, Grey shirazi Lamb