

Partial Replacement of Barley Grains and Soybean Meal by Fleabane (*Conyza bonariensis*) in Diets of Fattening Awassi Lambs

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Abstract:

Effects of partial substitution of barley grain and soybean meal with fleabane (FB) *Conyza bonariensis* on growth performances and body composition on twenty four male local Awassi lambs were studied. All lambs were male with an average body weight of 20.3 kg (S.D. = 2.0 kg) at the beginning of the experiment. Animals were randomly divided into four groups of six lambs each. Lambs in each group received individually their cereal-soybean based total mixed rations (TMR) with levels of FB: 0, 50, 100 and 150g/kg DM diet which replaced similar values of barley and soybean meal. All rations were isonitrogenous and isocaloric. The fattening experiment lasted 9 weeks, after which all lambs were slaughtered. The composition of nutrients in the *Conyza bonariensis* were 89.6, 20.0, 62.0, 38.0 and 10% for organic matter, crude protein, neutral detergent fiber (NDF), acid detergent fiber (ADF) and lignin, respectively. At the end of the experiment, lambs fed 100 and 150g FB/kg DM diets gained more weight ($P < 0.05$) than those fed the control and 50g FB/kg DM diets. Dry matter (DM) intake was not affected by the inclusion of FB. Diet content of FB had significant effect ($P < 0.05$) on empty body and carcass weights, dressing percentage, liver and gut among all animals. However, FB had no effects on lambs' external (skin, head and feet) and thoracic organs (lungs and heart). Muscle, bone and adipose tissue mean weights were increased by the increase of FB. Animals given FB at the levels of 100 and 150 g FB/kg DM diets had relatively more muscle, bone and fat ($P < 0.05$) than those fed 0 and 50 g FB/kg DM diets. Fleabane had no effect on omental and mesenteric fat. However, FB at the highest two levels resulted in more ($P < 0.05$) total body and carcass fat compared to that in animal fed the control and the low FB levels.

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