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Utilizing Regano® for internal parasite control and increased feed efficiency in organic lamb production

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Young lambs are exceedingly vulnerable to internal parasites due to their underdeveloped immune system. In order to ascertain an alternative to commercial anthelmintics, Regano® was administered to lambs (n=24) from weaning through their early growth period. More specifically, to investigate the impacts of oral administration of Regano® as an anthelmintic and to increase feed efficiency, weanling lambs (n=24; 6 weeks of age) were randomly assigned to be fed a grower ration containing the recommended dosage of 100mg of Regano® per pound of body weight (TRT) or the same ration without Regano® (CON) for 60 days. Both TRT and CON groups had equal numbers of males and females. Both groups were allowed to graze together for 8 hours following their morning feeding, then penned by group each night when fed. Additionally, CON lambs were given a standard, commercial anthelmintic (Valbazen®) on Days 1 and 31. This is concomitant with basic production practices of growing lambs. For baseline levels of internal parasites, fecal and blood samples were collected at Day -7 and 0. Following administration of either Regano® or Valbazen® on Day 1, both blood and fecal samples were collected and FAMACHA scores were assessed. Immediately following weekly collections, fecal samples were analyzed to determine concentrations of *Haemonchus contortus*, *Moniezia sp.*, *Trichuris ovis*, and *Eimeria spp.* and hematocrit levels were analyzed. Furthermore, lambs were weighed weekly to adjust daily rations according to standards set by the National Research Council. Weights were also utilized to calculate average daily gain of each lamb. There was no difference ($P>0.05$) in levels of *Haemonchus contortus* of TRT and CON lambs on Days 0, 14, 28, 35, 42, 56, or 61. However, CON lambs did have significantly ($P<0.05$) lower levels of *Haemonchus contortus* than TRT lambs on Day 21. Similarly, there was no difference ($P>0.05$) in total levels of internal parasites (*Haemonchus contortus*, *Moniezia sp.*, and *Trichuris ovis* combined) on Days 0, 14, 28, 35, 42, 56, or 61. However, there were significantly ($P<0.05$) lower levels of total internal parasites on Day 21 in CON compared to TRT lambs. Likewise, no difference ($P>0.05$) was seen in levels of *Eimeria spp.* between groups on Days 0, 14, 28, 35, 42, 56, or 61 but CON lambs did have significantly ($P<0.05$) lower levels of *Eimeria spp.* than TRT lambs on Day 21. There was no difference ($P>0.05$) in average daily gain of CON compared to TRT lambs throughout the duration of the trial. Lastly, FAMACHA scores were associated with hematocrit (packed cell volume) weekly, which did not differ ($P>0.05$) between groups. Results from this study suggest that oral administration of Regano® through daily feedings may serve as an anthelmintic for producers focused on decreasing the use of medications in their flocks. It also decreases the need to frequently handle, and subsequently stress, lambs.