

عنوان مقاله:

Effects of fiber sources in lamb starter feed on performance, chewing behavior, and blood energy metabolites

محل انتشار:

دوفصلنامه علوم و فناوری دامداری، دوره 7، شماره 2 (سال: 1398)

تعداد صفحات اصل مقاله: 7

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خلاصه مقاله:

In this study, the effects of partially replacing cereal grains (corn and barley) by forage (straw) or non-forage (beet pulp) source in lamb starter diets were investigated on performance, chewing behavior, nutrient digestibility, and blood energy parameters. Thirty Ghezel lambs (body weight of 5.3 ± 0.5 kg) from 2 to 65 days of age were assigned to 3 starter feeds: 1) with no fiber source [NF, 16.3 % neutral detergent fiber (NDF), 48.7% starch], 2) containing 7 % wheat straw (WS, 20.5 % NDF, 43.7% starch), and 3) containing 15 % beet pulp (BP, 19.7 % NDF, 39.1 % starch). Lambs were free to suckle their dams until d 30 and were then pair-housed and allowed to suckle at night until weaning on d 45 of age. Lambs had free access to starter creep feeds during pre- and postweaning periods. The results showed that offering both fiber sources improved starter intake by 15%. Feeding BP decreased total tract dry matter (DM) digestibility from 77.6 to 70.1%, but NDF digestibility was similar across the treatments. Postweaning body weight (27.5 kg), average daily gain (341 g/d), and postweaning feed efficiency (0.41) were not affected by the treatments. Further, dietary treatments did not affect serum concentrations of cholesterol, total protein, albumin, and globulin, but WS inclusion increased triacylglycerol, glucose, and beta-hydroxybutyrate concentrations. Eating (221 vs. 174 min) and ruminating (383 vs. 278 min) activities were also greater in lambs on WS as compared with lambs on NF or BP. These results indicated that decreasing starch content in the starter with the inclusion of a fiber source, in particular WS, did not negatively affect the growth performance, but appeared to be associated with better chewing activity and rumen metabolic development.

کلمات کلیدی:

suckling lamb, rumen development, wheat straw, beet pulp

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