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PSX-26 Levels of forage and narasin inclusion on rumen fermentation in feedlot lambs

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Abstract

The objective of this study was to determine the effects of forage levels and narasin inclusion in diets on the rumen parameters in feedlot lambs. Forty-four lambs were allotted in a randomized complete block design, defined by initial body weight, in a 2x2 factorial arrangement. The first factor was forage inclusion (10 or 20% of coastcross hay, DM basis) and the second factor was narasin (0 or 13 ppm). The experimental diets were isonitrogenous (17.4%, DM basis). At the end of the experimental period, the lambs were slaughtered without fasting, and the rumen fluid was collected to determinate pH and short chain fatty acid (SCFA). Data were analyzed using the MIXED procedure of SAS and the LSMEANS option was used to obtain the means. The effects were considered significant when $P < 0.05$. There was an interaction between hay and narasin on the molar proportion of propionate ($P = 0.02$) and the acetate:propionate ratio ($P < 0.01$). Narasin inclusion in diets containing 20% forage increased propionate (25.4 vs 37.1 mM/100mM; $P = 0.02$); however, there was no effect in diets containing 10% forage (35.9 ± 1.75 mM/100Mm). Consequently, the narasin decreased acetate:propionate ratio in diets containing 20% forage (2.57 vs 1.42; $P < 0.01$), and no effect was observed 10% forage diets (1.40 ± 0.14). The inclusion of narasin increased the total SCFA (86.2 vs 115.4 mM; $P < 0.01$), ruminal pH (6.26 vs 6.49; $P = 0.05$) and decreased acetate (55.6 vs 47.6

mM/100mM; P < 0.01). The inclusion of 20% forage increased acetate when compared with 10% hay (54.99 vs 48.19 mM/100mM; P < 0.01) and the pH ruminal (6.25 vs 6.49; P = 0.04). The experimental diets did not affect the butyrate. In summary, the narasin inclusion and forage levels content change rumen parameters in feedlot lambs.

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