

## Effects of forage type and dietary level of sodium bicarbonate in feeding behaviour, rumen Ph and fatty acids of the rumen content of lambs

XXI Congresso Nacional de Zootecnia, Universidade Évora, 19 a 21 de Setembro de 2019

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**ABSTRACT:** Twenty eight crossbred Merino Branco lambs were used to evaluate the effects of the type of forage (alfalfa vs ryegrass) and the dietary level of sodium bicarbonate (SB) (0.5 vs 2.0%) in the feeding behavior of lambs, rumen pH and fatty acids (FA) of rumen content. Alfalfa resulted in higher intake of dry matter and the intake of total fat, *c*9-18:1, *c*11-18:1, 18:2 n-6 and 18:3 n-3 depended of the forage and of the level of SB and was higher for the diet with alfalfa and 0.5% SB. Lambs fed ryegrass spent more time on feeding and ruminating activities and presented higher rumen pH than those fed with alfalfa. Forage type had the major influence in rumen content FA composition. Alfalfa resulted in higher proportions of *c*9-18:1, 18:2 n-6, 18:3 n-3, *t*11-18:1, total of *cis* monounsaturated FA and polyunsaturated FA. Ryegrass resulted in higher 18:0, saturated FA and *t*10/*t*11 ratio. The level of SB had only minor effects on rumen FA composition. Despite the positive effects of ryegrass as forage source in ruminal function and metabolism, the use of alfalfa in the diet of growing lambs was more benefic to the synthesis and accumulation of *t*11-18:1 in rumen.