

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

INFLUENCE OF FEED RESTRICTION AND SEX CLASSES ON FEEDING BEHAVIOR OF SANTA INES SHEEP

Monalisa Eva Santos EVANGELISTA*¹, Elzania Sales PEREIRA¹, Ana Cláudia Nascimento CAMPOS¹, Carla Renata Figueiredo GADELHA¹, José Antônio Delfino BARBOSA FILHO¹

*corresponding author: monalisaeva@hotmail.com

¹Universidade Federal do Ceará, Fortaleza, Ceará, Brasil

This study was carried out to evaluate the effects of feed restriction and sex classes on the feeding behavior of Santa Ines sheep. Thirty animals (13.00 ± 1.49 kg initial body weight (BW) and approximately two months old), were allocated in a factorial design with diet restriction levels (*ad libitum*, 30% and 60% feed restriction) and sex classes (castrated and non-castrated males). The total experiment period was 100 days. Lambs were fed twice a day (at 08:00 am and 16:00 pm) with the diet of roughage:concentrate ratios 60:40. Animal behavior was observed for 24 h on two consecutive days of each sampling week. On the first day, observations were made at five minute intervals for 24 h, to evaluate the time spent feeding, rumination and idle. On the second day, animals were observed during 3 periods of 2 h (08 am to 10 am, 14 pm to 16 pm and 18 pm to 20 pm). There was no effect ($P > 0.05$) on the sex classes or interaction among sex classes and feed restriction level on feeding behavior data. The spent time to feeding was greater ($P < 0.001$) in animals fed *ad libitum*, which also spend the least time idling ($P < 0.001$). The spent time rumination was similar among *ad libitum* and 30% feed restriction groups and were greater ($P < 0.001$) that 60% restriction group. The rumination efficiency expressed in grams of dry matter h^{-1} (DM h^{-1}) and grams of neutral detergent fibre h^{-1} (NDF h^{-1}) and total chewing time were greater for the *ad libitum* group. The number of ruminal bolus and chews by day were lower ($P < 0.001$) at the level of 60% feed restriction, however they presented greater ($P < 0.05$) chewing time by ruminal bolus. There was no difference among groups to number chew by bolus ($P = 0.79$). The feeding efficiency expressed in g DM h^{-1} and g NDF h^{-1} were similar among 30% and 60% feed restriction groups and were greater ($P < 0.05$) that *ad libitum* group. It is concluded that animals under feed restriction conditions spend less time of day feeding and ruminating. However, it is believed that by spending more time ruminating each regurgitated bolus, they are more efficient in reducing the particles, providing a greater area of surface available to microbial adhesion and enzymatic action.

Keywords: fed levels, lambs, nutrition, rumination efficiency

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