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Sisal silage addition to feedlot sheep diets as a water and forage source

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Highlights

- Sisal pulp silage (SPS) is a considerable source of water for sheep
- Increasing SPS in the diet does not decrease dry matter intake
- Nutrient digestibility increases when Tifton hay is substituted with SPS.
- The inclusion of SPS in the diets does not affect productive performance
- Feeding lambs with SPS does not affect meat characteristics

Abstract

The objective of this study was to evaluate the water and nutrient intake, apparent digestibility, productive performance and carcass traits of sheep fed diets containing levels of sisal pulp silage (SPS) in substitution of tifton hay. Forty Santa Ines lambs (average initial body weight of 22 ± 3.4 kg) were randomly distributed among four diets containing 0, 167, 333, and 500 g/kg of SPS in the total dietary dry matter (DM), containing 500 g/kg of concentrate. The experimental period lasted 72 days, after 21 days of adaptation to the diets. Linear and quadratic effects of SPS levels were analyzed using orthogonal contrast. Intake of DM and OM were not affected by the substitution of tifton hay with SPS ($P>0.05$). Intake of crude protein (CP), ether extract (EE), neutral digestible fiber (NDF) and acid digestible fiber (ADF) decreased linearly as SPS increased ($P < 0.05$). The inclusion of SPS in the diets decreased linearly the voluntary water intake ($P < 0.05$). Apparent digestibility of nutrients increased linearly with increasing dietary SPS levels, except for non-fibrous carbohydrates. Productive performance and carcass