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# Intake and digestibility in lambs fed with diets containing Spineless cactus in association with increasing levels of urea

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Drought is a reality in the Brazilian Northeast that results in a scarcity of resources, leading to the search for alternative foods that meet the animals' needs and are financially viable. Spineless cactus is rich in non-fibrous carbohydrates (NFC), has good palatability, and has a high moisture content; however, it has low levels of crude protein (CP) in its composition, requiring the use of a protein source in the diet. In this sense, urea when associated with a source of rapidly fermentable carbohydrates, such as those found in the spineless cactus, provides nitrogen (N) for the production of microbial protein and has a moderate value compared to soybean meal. The objective is to analyze the association of spineless cactus with urea at increasing levels of use (0; 7.3; 14.6 and 21.9 g/kg DM) replacing soybean meal, observing the effects of this interaction on consumption and digestibility. 40 non-castrated Santa Inês lambs, approximately four months old, averaging 22.2 ± 2.1 kg were used in a completely randomized design (CRD), undergoing four treatments, each with 10 replicates. Dry matter intake was calculated as the difference between the offered diet and the leftovers in the feeder. Apparent digestibility (AD) trial was conducted using the total feces collection method with the use of collecting bags in the sixth week of the analysis period, over six days, with two days for adaptation and four for collection. Both the leftovers and the faeces at the end of the 24-hour collection were homogenized, identified, weighed, sampled, and stored in a freezer at -20°C. After each sample thawing, the leftovers and faeces were separated into individual composites. At the end of the analysis, it was observed that increasing levels of urea in forage spineless cactus-based diets did not influence (P>0.05) dry matter intake (DMI), organic matter intake (OMI), neutral detergent fiber (aNDFap), total digestible nutrients (TDN) (g/day), and DMI (%BW), possibly due to the cactus mucilage and its mix with the rest of the diet directly in the feeder, reducing food selection and the bitter taste of urea. There was an increase (P<0.05) in DMI (%BW), intake (g/day) of crude protein (CP), ether extract (EE), and non-fibrous carbohydrates (NFC), without influencing (P>0.05) the apparent digestibility coefficients of dry matter, organic matter, CP, EE, aNDFap, and NFC. It can be concluded that increasing levels of urea in spineless cactus-based diets can partially or completely replace soybean meal in the diet of confined lambs without altering dry matter intake, total digestible nutrient intake, apparent digestibility of dry matter and nutrients.

**Keywords: food intake, Opuntia stricta, protein, ruminants, Native sheep breed**

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