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Ingestive behavior of grazing sheep in crop-livestock system in the Caatinga biome

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Sheep farming is a productive activity that can be favored with the use of crop-livestock integration systems in the Caatinga. Considering the dietary selection habits of sheep, it is important to study their behavior on pasture and verify the efficiency of the system. Thus, the aim of present study was to assess the ingestive behavior of grazing sheep in crop-livestock system in the Caatinga biome. The experimental period was carried out over two subsequent years (2022 and 2023). The experiment was conducted at the Federal Rural University of Pernambuco, Serra Talhada Academic Unit, in a thinned Caatinga site composed of Mororó tree (*Bauhinia cheilantha* Steud Bong) and enriched with Buffel grass (*Cenchrus ciliaris* L.) and Urochloa grass (*Urochloa mosambicensis* Salm-Dyck). The treatments were three crop-livestock systems implanted in the Caatinga, comprised of the sheep livestock integrated with (i) bean crop, (ii) maize crop, and (iii) herb-cotton crop. The control treatment was composed of sole Caatinga rangeland. Twenty non-castrated male lambs (Santa Inês × Dorper crossbreed) aged six months old were used in the study, and they had an initial average weight of 24.64 ± 2.95 kg. The experimental design utilized was a completely randomized with four crop-livestock systems and five animals per treatment were utilized. All variables were subjected to the analysis of variance followed by the Tukey test, using the GLM procedure of Statistical Analysis Systems. The ingestive behavior was assessed by simultaneous obser vation of animals by the punctual instant sweep method dur ing 24 h every 10 min. The variables analyzed were as follows: feed intake total time, rumination total time, chewing total time, and idleness total time. The chewing total time, in its turn, refers to the sum of the feed intake time and rumination time. The integrated systems did not significantly affect the rumination total time, chewing total time, and idleness total time ($P>0.05$). However, there was significant effect for feed intake total time ($P<0.05$), showed values of 715ab min/day to the treatment with only Caatinga, 690b min/day to herb-cotton crop, 850a min/day to maize crop, and 825b min/day to bean crop.The Ingestive behavior of grazing sheep is influenced by Integrated crop-livestock systems in the Caatinga biome.

Keywords: chewing time; integrated systems; rumination time; semi-arid ecosystem

Animal Experimentation Ethics Committee of the Federal Rural University of Pernambuco (approval no. 2436310322).

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