



## I-INTERNATIONAL MEETING OF ANIMAL SCIENCE IN SEMI-ARID REGIONS

Universidade Federal do Agreste de Pernambuco – UFAPE  
July 03<sup>rd</sup> to 05<sup>th</sup>, 2024, Garanhuns-PE

Área do trabalho: Pastagem e Forragicultura

### **Physical features of Elephant grass cv. BRS Capiaçú silage with different levels of crushed corn inclusions**

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Elephant grass cv. BRS Capiaçú is a Brazilian grass launched in 2015, developed by an elephant grass genetic improvement program conducted by the Brazilian Agricultural Research Company (Empresa Brasileira de Pesquisa Agropecuária – EMBRAPA Gado de Leite). Due to the high productivity of biomass depending on management during the rainy season, BRS Capiaçú forage can be used in the ensiling technique, a great tool for preserving forage, which can be fed to the animals during the dry season. We aimed with this work to evaluate the physical, visual and olfactory aspects of BRS Capiaçú silages with three levels (0, 5 and 10%) of crushed corn inclusion. The study was carried out at the Federal University of Alagoas (UFAL) – Campus Arapiraca, at the Animal Science Experimental Development Center (CEDEZOO). The elephant grass cultivar BRS Capiaçú (*Pennisetum purpureum* Schum) was cut manually on the Agropecuária Exuberante do Agreste property, located in the rural area of Arapiraca, Alagoas, Brazil after 91 days, without receiving any type of soil fertilization. The grass averaged 1.7 m in height at the harvest and was chopped into 2 to 3 cm particles using a stationary forage harvester and divided into the respective treatments: 0, 5 and 10% corn inclusion, with 9 replications each, totaling 27 experimental silos. The experimental silos were made up of buckets with lids (lids adapted with a Bunsen valve), with a capacity of 15 L, where 4.055 kg of sand was added. The chopped material was separated from the sand by two layers of screen, preventing contact between the grass and the sand and allowing the passage of effluent. After the ensiled and compacted material was assembled, buckets were sealed and identified according to each opening projection. At the opening of each bucket, sand and screen were weighed to obtain the effluent, that is, the final bucket, sand and screen was weighed and compared to the initial bucket, sand and screen; in addition, weighing was carried out when closing and opening the buckets for quantifying gas losses and dry matter recovery index. The data were subjected to analysis of variance at 5% probability, using the Tukey test to compare treatment means. Statistical analyzes were performed using the SAEG software. The results obtained for pH and temperature presented averages of 3.66 and 27.1°C, respectively, with no significant difference, both parameters within the standards of good quality silage. The characterization of physical aspects was olfactory and visual. The predominance of smell was acetic-like for the three levels, which can be considered good fermentation efficiency. The color that predominated was dark yellow at levels 0 and 5%, which corresponds to poor quality silage, and light yellow at the 10% level. Silage with 10% crushed corn has all the physical characteristics consistent with good quality silage.

**Keywords: smell, color, pH, temperature, preserved forage.**

Acknowledgments: Agropecuária Exuberante do Agreste, Arapiraca, Alagoas, Brazil.