

**DRY MATTER AND AEROBIC STABILITY OF ORA-PRO-NÓBIS (PERESKIA
ACULEATA) MIXED SILAGES WITH DEHYDRATED MULBERRY (MORUS
NIGRA)**

Cornélio Afonso Cornélio Machungo (corneliomachungo@gmail.com)

Juliana Aparecida De Assis (julianassis05@gmail.com)

Patrick Schmidt (patrickzootec@gmail.com)

Marco Antonio Previdelli Orrico Junior (marcojunior@ufgd.edu.br)

The ora-pro-nóbis cactus is considered a promising alternative feed resource for ruminants, particularly in semiarid regions, due to its high crude protein content and its strong adaptation to the edaphoclimatic conditions of these areas. However, because of its high moisture content, its use for silage production requires the inclusion of dry feed ingredients with higher dry matter content in order to adjust the moisture level of the ensiled mass, minimize fermentative losses, and ensure adequate conditions for the ensiling process of this forage species. The aim of this study was therefore to evaluate the Dry matter parameters and aerobic stability of mixed silages containing ora-pro-nóbis (*Pereskia aculeata*) and dehydrated mulberry (*Morus nigra*). The design was entirely randomized with three treatments: M0% (100% ora-pro-nóbis); M4% (4% mulberry + 96% ora-pro-nóbis) and; M8% (8% mulberry + 92% ora-pro-nóbis); all with 5 replications each. Fifteen experimental polyvinyl chloride silos equipped with a device for determining gravimetric losses of DM by gases

and effluents and fitted with a Bunsen valve were used and stored for 37 days at room temperature. The variables evaluated were subjected to analysis of variance and the means were compared using the Tukey test at a 5% significance level. After opening, the dry matter and aerobic stability of the silages were assessed through pH and temperature during 10 days of evaluation. There was a significant effect of treatments for all evaluated variables. The inclusion of dehydrated mulberry promoted a linear increase in the dry matter (DM) content of the silages, with values of 15.98, 19.36, and 22.26% for treatments M0%, M4%, and M8%, respectively. Regarding pH, the silages composed exclusively of ora-pro-nóbis showed the lowest value (3.92), followed by treatment M4% (4.07), while the highest value was observed in treatment M8% (4.14). Despite the increase in pH with mulberry inclusion, the values remained within the range considered adequate for silage preservation. For maximum temperature, treatment M0% differed significantly from the treatments containing mulberry inclusion, showing a lower value (23.5 °C) compared to treatments M4% and M8%, which recorded temperatures of 24.0 and 24.2 °C, respectively. No increases greater than 0.5 pH units or 2 °C above ambient temperature were observed, indicating adequate aerobic stability of the silages. However, treatment M0% showed unpleasant odor and mold growth during the last two days of evaluation, suggesting the onset of aerobic deterioration. In contrast, silages containing dehydrated mulberry showed better preservation and stability throughout the air exposure period, demonstrating the positive effect of mulberry inclusion on the fermentative profile and conservation of the silages.

Palavras-chave: keywords: alternative forages; fermentative profile; semi-arid region; silage.