

THEME 5 | GRASSLANDS AND FORAGES

Changes in botanical composition of native pastures as affected by grazings heights

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Native pastures form a complex, dynamic and multifunctional ecosystem where it is possible to reconcile animal production with the preservation of biodiversity. The lack of knowledge about the species that compose native pastures and inadequate system management can lead to degradation of pastures and reduction of animal productivity. The aim of this study was to verify possible short-term changes in botanical composition of a native pasture submitted to different grazings heights and under intermittent stocking method. The experiment was carried out at the EPAGRI / Lages, SC, in an area of natural pasture with predominance of *Andropogon lateralis*. Pastures were grazed at four different heights (12, 20, 28 and 36 cm), based on the height of predominant species, and grazed down to 60% of pre-grazing height. The experimental design was a randomized complete block design with four replications. The number of species was determined according to the Botanal method (Thothill et al. 1992), in 16 frames of 0.25 m² per experimental unit, arranged along four transects. Analysis of variance was performed and the means were compared by the Fisher test (LSD) with a level of significance of 5%. In the initial evaluation (Spring 2015), the condition was homogeneous for all pastures, with an average number of 33 species. Just one year after the beginning of experiment (Spring 2016), it was already observed the effect of grazing management on the number of species ($P = 0.0392$), with a lower number in the management with 36 cm (28 species) in relation to the others grazings heights (on average, 35 species). In the botanical evaluation it was identified 85 species, 35 of which belonging to *Poaceae* family and 3 to *Fabaceae*, all of them with interest as forage plants. The second family with the largest number of species was the *Asteraceae* (19). The management was determinant of the botanical composition and, in a short time, favored the development of species of prostrate growth in the lower grazings heights (12 and 20 cm) and of erect growth in the higher management heights (28 and 36). The reduction in the number of species in higher management results from the greater competitive ability of erect forming species, and demonstrates the importance of grazing in maintaining the richness of vegetal species in native pastoral ecosystems.

Keywords: *Andropogon lateralis*, Botanal, grazing intensity, specie richness, vegetation dynamics

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