

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

HERBAGE ACCUMULATION IN A MIXED PASTURE OF *Pennisetum clandestinum* AND *Festuca arundinacea* SUBMITTED TO GRAZING MANAGEMENT STRATEGIES

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The grazing management strategy influences canopy leaf area index (LAI) what can lead to changes in herbage accumulation in pastures. This experiment tested the hypothesis that a high defoliation intensity performed in the Autumn promotes an increase in herbage accumulation in mixed pastures composed by kikuyu grass (*Pennisetum clandestinum*) and tall fescue (*Festuca arundinacea*). The objective was to evaluate the herbage accumulation and botanical composition of a mixture of these pastures along two years. The experiment was conducted at Santa Catarina State University, located in Lages, SC, Brazil (27°84'S, 50°18'W, 960 m a.s.l.) from December 2015 to October 2017. The treatments consisted of five grazing management conditions mimicking a continuous stocking method (mob-grazing). In three of those treatments, the canopy heights were consistently maintained at seven, 12 and 17 cm and the other two treatments were maintained at 12 and 17 cm height but with a strategic defoliation to seven cm performed only once in the Autumn of each year. The nitrogen fertilization (250 kg ha⁻¹ yr⁻¹) was applied only in Autumn and Winter. The experiment was conducted according to a complete randomized block design with three replicates. Herbage accumulation was estimated by using the exclusion cage technique. Herbage accumulation was similar in all grazing management conditions (≈11,500 and 9,500 kg DM ha⁻¹ year⁻¹ in 2016 and 2017, respectively) but varied among seasons of the year. In 2016 the herbage accumulation was higher in Winter/Spring, whereas in 2017 it was higher in Summer and Winter/Spring. Similarly, in both years, it was observed that the strategic defoliation in Autumn reduced the aerial biomass in the following Winter/Spring, however, there was an increase in 30% and 21% (in 2016 and 2017, respectively) in the proportion of leaves in defoliated treatments when compared to those not defoliated canopies (12 and 17 cm). Strategic defoliation in Autumn does not increase the herbage accumulation in a mixed sward composed by kikuyu grass and tall fescue.

Keywords: cool season grasses, defoliation, perennial grasses, warm season grasses

Acknowledgments: The authors thanks to financial support of the Fundação de Amparo à Pesquisa e Inovação do Estado de Santa Catarina (FAPESC – Grant Number TR 676).

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