



## FORAGE AVAILABILITY AND BOTANICAL COMPOSITION OF UROCHLOA PASTURES AFTER INTERCROP WITH CORN FOR ENSILAGE AND OVERSOWING OF YELLOW OAT

DISPONIBILIDADE DE FORRAGEM E COMPOSIÇÃO BOTÂNICA DE PASTAGENS DE UROCHLOA APÓS O CONSÓRCIO COM MILHO COLHIDO PARA ENSILAGEM E SOBRESSEMEADURA DE AVEIA-AMARELA

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In the integrated crop-livestock system, the pasture establishment can be performed with intercrop of grains crops and tropical forages. This study was conducted during two growing seasons in Botucatu, São Paulo, Brazil, evaluating the effect of two cutting heights of corn for ensilage in intercrop with palisade grass cv. Marandu (*Urochloa brizantha* cv. Marandu), palisade grass cv. Piatã (*Urochloa brizantha* cv. BRS Piatã) and sole-corn crop with regrowth of signal grass (*Urochloa decumbens* Stapf cv. Basilisk) and oversowing of yellow oat on the forage availability and botanical composition of pasture. The soil of experimental area is Typic Haplorthox. The experimental design was a randomized block, in split-plot, arranged in factorial scheme with four replications. Treatments consisted in the plots of three cropping systems (sole-corn crop with signal grass regrowth; corn and palisade grass cv. Marandu intercropped; corn and palisade grass cv. Piatã intercropped); two cutting heights of corn for ensilage (0.20 and 0.45 m); two growing seasons (2010/2011 and 2011/2012 crop years); and in the subplots, the absence or oversowing of yellow oat (*Avena bysantina* cv. São Carlos). The sowing of simple corn hybrid (2B587 HX) was spaced at 0.45 m. The seeds of grasses were mixing with fertilizer and deposited at depth of 0.08 m. The amount of fertilizers followed the recommendations to silage corn and applied reduced doses of post-emergence herbicides (Nicosulfuron and Atrazine). After the mechanical harvest of corn for ensilage, the oversowing of yellow oat was spaced at 0.17 m. After, all subplots were fertilized with 60 kg/ha of N. From August to November, the pastures were used to lamb's grazing under continuous stocking with fixed stocking rate (133 lambs with average live weight of 30 kg/ha) during 70 days and the animals were supplemented with concentrate and silage from the same treatment. Over lamb's grazing was collected forage at ground level in the pasture. The samples were separated botanically, dried and the amounts extrapolated to kg ha<sup>-1</sup> of dry mass. The results were submitted to analysis of variance by test F ( $P \leq 0.05$ ) and means, were compared by test LSD ( $P \leq 0.05$ ). The best climate conditions in the second growing season increased the forage availability in the first 42 days of grazing by lambs. The corn harvest to ensilage at 0.45 m resulted in less damage to the apical buds and thus showed better recovery with greater forage availability over 70 days of lamb's grazing, mainly in the pasture of palisade grass cv. Marandu. From 43 days of lamb's grazing, the harvest of corn for ensilage at 0.20 m reduced the availability of signal grass forage, reaching values below 400 kg/ha of dry mass between 57 and 70 days of lamb's grazing. In both growing seasons, the availability of yellow oat was restricted to the first 28 days of lamb's grazing, however, increased the forage availability for lamb's grazing. The palisade grass cv. Marandu presents higher competition with yellow oat, mainly in relation to signal grass. However, the sum of both crops increased the forage availability. The ensilage of corn in the cutting height at 0.45 m intercropped with palisade grass cv. Marandu, and oversowing of yellow oat is the most viable option to pasture formation and lamb's grazing in integrated crop-livestock system.

Keywords: cutting height for ensilage, integrated crop-livestock, lamb's grazing.

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