

SPECIES FOR PASTURE PRODUCTION AND SOIL PROTECTION

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In central region of Brazil, agriculture and livestock are the basis of the economy. However, most farms develop these separately. The crop-livestock integration (CLI) is able to provide greater benefits for farmers. The intercropping of forage species with annual crops is an important step in starting one CLI system. Using legumes crop, as *Crotalaria*, could increase the protein content in animal feed. The aimed of this study was to identify annual and perennial species with greater potential productive in the beginning of autumn and winter. For this, an experiment was established in Nova Andradina City, MS, Brazil, in a dystrophic Red Latosol, sandy texture, with sowing done without chemical fertilization on 02/16/2017, after soybean harvest. The experimental design was in Streep test with three replicates, and seven treatments: *Brachiaria ruziziensis*, *Panicum maximum* cv. Mombaça, cv. BRS Zuri, cv. BRS Tamani, and the intercropping of Tamani with *Crotalaria Juncea*, *C. ochroleuca* and *Pennisetum glaucum*. On 04/6/2017 samples of 0.5 m² of plants were cut to the ground, weighed, oven dried at 60°C for 72 hours to determine dry mass yield. The data were submitted to analysis of variance and the averages were compared by the Tukey test ($p < 0.05$). The species sowed lonely did not differ among themselves and produced an average of 3,214 kg ha⁻¹ of dry mass. The total dry mass yield of Tamani grass decreased when intercropped with *crotalaria*. When intercropped was made with *P. glaucum*, the yield increased by 59%. Although *crotalaria* has inhibited the development of Tamani grass, it is necessary to study if there is a significant improvement in the nutritional value of the forage produced, since these legumes have a high percentage of crude protein. Intercropping cultivation of a perennial and an annual species may be useful to anticipate the first grazing and increase soil cover.

Keywords: forage production, intercropping, soil cover.

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