

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

PRODUCTIVE CHARACTERISTICS OF *Brachiaria Brizantha* CULTIVARS INTERCROPPED WITH *Stylosanthes* cv. CAMPO GRANDE IN DIFFERENT FORAGE SYSTEMS

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Grass-legume intercropping is important for providing sustainable nitrogen sources for pastures for animal production. Therefore, evaluate the productive characteristics of cultivars of *Brachiaria brizantha* intercropped with *Stylosanthes* cv. Campo Grande in different forage systems, in different seasons of the year, and over a 2-year period. The experiment was conducted in the Goiano Federal Institute, Rio Verde Campus. The experimental design was a randomized complete block design with three replications. The treatments consisted of the following forage systems: Piata palisadegrass, Paiaguas palisadegrass, *Stylosanthes* cv. Campo Grande, row intercropping of Piata palisadegrass with *Stylosanthes*, mixed intercropping of Piata palisadegrass and *Stylosanthes*, row intercropping of Paiaguas palisadegrass and *Stylosanthes*, and mixed intercropping of Paiaguas palisadegrass and *Stylosanthes*. Evaluations were performed in each of the four seasons of the year on the same plots over a 2-year period. For dry matter (DM) one sample of 1 m² was collected per plot. Following each cut, the number of tillers per linear meter was counted. For determination of the leaf:stem ratio, plants were manually separated into leaves and stems, and weighed. The variables were submitted to the analysis of variance, through the R program version R-3.1.1, using the ExpDes package. The means were compared by the Tukey test at 5% probability. The variables productive characteristics of forage systems, were influenced ($p < 0.05$) seasons of the year and year evaluated. These was highest DM production, number of tillers and leaf:stem ratio they were obtained in summer and lowest in winter for all forage systems. These results are is associated with the higher rainfall, temperature, and light occurring during this in summer, which favor the growth of forage plants. Row intercropping, resulted in a higher the dry matter production, number of tillers and leaf:stem ratio. This may be related to the higher N input due to higher presence of *Stylosanthes* in the system, favoring the vegetative growth of forage grasses and increasing the productive characteristics. In this case, row intercropping was more efficient at maintaining high proportions of legume plants.

Keywords: climate conditions, season, nitrogen fixation and legumes.

Acknowledgments: Research Support Foundation the State of Goiás (FAPEG)

Promoção e Realização:



Apoio Institucional:



Organização:

