

THEME 5 | GRASSLANDS AND FORAGES

Seedlings development of *Arachis pinto* cv Belmonte and Mandobi in consortium with Mombaça guineagrass

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The introduction of legumes into established pastures is usually done using seedlings. However, some species have limited seed production or seed costs difficult the legume introduction into the system. Legumes, as well as *Arachis*, had being propagated by seedlings. In this context, this study aimed to evaluate development and persistence of seedlings of *Arachis pinto* in an established Mombaça (*Panicum maximum*) pasture. The experiment was carried out in Terra Nova do Norte, Mato Grosso, Brazil. The experimental design was in randomized blocks with three replications. A 2x2 factorial arrange was used: two cultivars (Belmonte and Mandobi) and two plant spacing (1x1 m and 2x1 m), totaling 4 treatments. The experimental period was from January 8, 2016 to February 27, 2017, when were evaluated: seedling survival [percentage of surviving seedlings in relation to the total number of seedlings implanted in the area]; and plant vigor [visual aspect of the seedlings, which were graded from 0 (died) to 5 (excellent)]. The data were analyzed using the method of mixed models with special parametric structure in the covariance matrix, through MIXED procedure of the statistical software SAS. In order to choose the covariance matrix, the Akaike information criterion was used. The means of the treatments were estimated through the “LSMEANS” and the comparison between them was performed using the probability of difference (“PDIF”) at a significance level of 10%. There was interaction plant spacing x cultivar (P=0.0733) for seedling survival. Belmonte arranged in 1x1 m spacing presented seedling survival of 91.1% and arranged in 2x1 m was 54.4%. Mandobi did not differ between planting spacing (2x1 or 1x1 m) with, an average, 61.1%. Plant vigor was not affected by cultivars (P=0.2437) or planting spacing (P=0.1241). Mandobi and Belmonte showed plant vigor of 2.58 and 3.11, respectively. Considering seedling survival, 1x1 m spacing is the best option for established a consortium with peanut seedlings. It is important that plant vigor of seedlings been observed to guarantee the correct establishment. *Arachis pinto* cv. Belmonte had higher survival, what can increase the successes chances of achieve a consortium pasture.

Keywords: guineagrass, *Panicum maximum*, plant vigor, seedling survival

Acknowledgments: Unipasto and Embrapa (for funding).