



Variability of seedling development of *Paspalum* accessions belonging to Virgata group

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The genus *Paspalum* is considered as one of the most important from Poaceae family in Brazil. Its species stand out among the native grasses with forage potential, occurring in all herbaceous communities in different ecosystems, and many of these formations are dominant and responsible for the largest portion of the native available forage. The importance of *Paspalum* species as cultivated pastures has been evidenced due to genetic vulnerability caused by monoculture on large areas with a small number of cultivars, especially when they become contiguous and cover unsuitable environments, bringing great disappointment for producers and large losses on a national scale. The Virgata group of *Paspalum* is characterized by perennial species with caespitose habit and robust appearance. These species present a fasciculated root system and sometimes present short rhizomes, and the leaves are long, thin and not petiolate. The aim of this study was to analyze the genetic variability among accessions belonging to the group Virgata from the *Paspalum* Germplasm Bank located at Embrapa Southeast Livestock, in São Carlos - SP, a place with an average elevation of 860 meters, and the geographical coordinates 21° 57' 42" S and 47° 50' 28" W. The experiment was conducted in a greenhouse and 10 accessions of Virgata group were evaluated (five *Paspalum conspersum* and five *Paspalum regnellii*) along with three controls (*Brachiaria brizantha* cv. Marandu, *Panicum maximum* cv. Tanzânia and *Paspalum atratum* cv. Pojuca). Sowing was carried out in September 2013 and the evaluations were carried out until the end of February 2014. The experiment was carried out with the completely randomized design with seven replications, each plot was represented by a pot with 60 cm height and 25 cm in diameter, containing four seedlings each one, arranged crosswise. During the development of the seedlings, the variables measured were dry matter production (g.pot^{-1}), evaluated with four cuts at intervals of thirty days and at 20cm height, plant growth (cm.day^{-1}) and number of tillers (number.day^{-1}). The results show differences among the species for the three variables. In general, the cultivar Tanzânia showed the best plant growth (2.30 cm.day^{-1}) and dry matter production ($303.47 \text{ g.pot}^{-1}$), while the cultivar Marandu showed the best tillering (1.17 .day^{-1}). Genetic variability among the *Paspalum* accessions were observed for the three variables evaluated. On average, by contrasts analysis, the accessions of *P. regnellii* were similar to those of *P. conspersum* for plant growth and distinct results considering the dry matter production and the number of tillers. Some accessions were similar to the cultivar Tanzânia (0.75 .day^{-1}) for tillering (*P. regnellii* BRA-22811 (0.85 .day^{-1}), *P. regnellii* BRA-22357 (0.81 .day^{-1}), *P. regnellii* BRA-9890 (0.81 .day^{-1}) e o *P. regnellii* BRA-19186 (0.72 .day^{-1})) and similar to the cultivar Pojuca ($197.56 \text{ g.pot}^{-1}$) for production of dry matter (*P. regnellii* BRA-19186 ($174.70 \text{ g.pot}^{-1}$) e o *P. conspersum* BRA-12793 ($167,18 \text{ g.pot}^{-1}$)). Although the evaluations were conducted in a greenhouse, the results enabled the ranking of the accessions. We emphasize that this material will still be analyzed for bromatological quality.

Keywords: germplasm, sustainability, forage breeding

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