SELECTION OF *Brachiaria humidicola* FAMILIES FOR AGRONOMIC PERFORMANCE

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The forage breeding program seeks to select increasingly adapted plants, with good agronomic performance and nutritional value. In *Brachiaria humidicola* (syn. *Urochloa humidicola*) crosses the sexual plants are used as female parents while apomictic plants are used as pollen donors. The aim of this study was to select full-sib families (FIC) of *B. humidicola* resulting from hybridizations between apomictic and sexual parents to obtain the best individuals. Crosses were made between 10 apomictic and 9 sexual parents totaling 71 FIC. 611 individuals of these families plus the parents and BRS Tupias checks were evaluated in an experiment in an incomplete block design at Embrapa Beef Cattle Research Center, Campo Grande - MS, Brazil. The plots were submitted to seven cuts and the following agronomic traits were measured: total dry mass yield (TDM, Kg.ha-1), regrowth capacity (REB), percentage of leaves (F%) and leaf dry mass yield (MSF, Kg.ha-1). Data analysis was performed by a mixed model approach using SELEGEN-REML / BLUP software. From the predicted breeding values on the analysis of cuts the best families were selected (i = 15%) and the best individuals (i = 10%). The accuracy ranged from 60.9% (REB) to 85.3% (MSF), indicating good accuracy. Heritability was satisfactory for evaluated traits with values between 37.1% (REB) to 72.8% (MSF). There was significant genetic variation for all traits by the likelihood ratio test at 1% probability. The families H05064xH05146, H05064xH05088 and H05064xH05030 were in the top ten for all evaluated traits. Selection gains (GS%) were significant for all traits ranging from 10.7% (%F) to 68.6% (MSF). Of the 10% best selected individuals, it was found that 66.7% (%F), 96.7% (REB, MSF) and 100% (MST) came from the top 10 families. The results show the possibility to obtain superior hybrids from the selection of the best families.

Acknowledgement and financial support: Embrapa Beef Cattle, Unipasto, CAPES, FAPEMIG

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