ESTIMATION OF GENETIC PARAMETERS IN *Brachiaria decumbens* HYBRIDS

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The objective of this study was to estimate genetic parameters for agronomic and nutritional value traits in intraspecific hybrids of *B. decumbens*, produced by recurrent selection on specific combining ability, a cyclic breeding strategy designed to obtain superior hybrids. Crosses between 75 sexual tetraploid plants and the apomictic cultivar Basilisk were performed in a crossing block and full sib progenies were produced (1st year). The seeds were germinated and 1,415 hybrids were produced. These progenies were evaluated in field plots at Embrapa Beef Cattle in Campo Grande/MS/Brazil, with seven clippings to estimate field green weight (FGW); total dry matter (TDM); speed of regrowth (SREG); tiller regrowth density (DREG); regrowth ability (REG); crude protein (CP); in vitro organic matter digestibility (IVD); neutral detergent fiber (NDF) and lignin (LIG) in order to select superior genotypes (2nd year). The statistical analyses were carried out using mixed models methods, using the SELEGEN REML/BLUP software. The genotypic variance, variance of the genotype x clipping interaction (σ^2_{gc}), heritability among progeny means (h^2_m), accuracy (*Acgen*) and genetic correlation amongst traits were estimated. Genetic variability was detected for all traits ($p < 0.01$) and estimates of h^2_m were of medium to high magnitude, ranged from 0.51 (IVD) to 0.79 (FGW), indicating the possibility of gains with selection. The accuracy estimates ranged from 0.71 (IVD) to 0.89 (FGW), which are considered moderate to high values. The σ^2_{gc} was highly significant ($p < 0.01$) for all traits evaluated, indicating that the performance of hybrids was not the same across harvests. Significant genetic correlations were observed between FGW and TDM (0.99), TDM and SREG (0.81), TDM and IVD (-0.71), TDM and LIG (0.71) and CP and IVD (0.70), showing that indirect selection or selection indices to consider these associations can be used in the breeding program. Further evaluations for other traits like resistance to spittlebugs are currently been done and need to be considered before selecting the superior progenies for recombination (3th year) in the recurrent selection program. Superior apomictic hybrid once identified will proceed to the next phase of the breeding program for cultivar development.

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