

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

EVALUATION OF AGRONOMIC TRAITS IN *Sorghum bicolor* HYBRIDS FOR SELECTION OF GENOTYPES ADAPTED TO SEMIARID CONDITIONS

Luíce Gomes BUENO*¹, Fábio Mendonça DINIZ¹, Diego Barcelos GALVANI¹, José Avelino Santos RODRIGUES², Begevane Cunha RODRIGUES³, Antonieta Alexandrina de JESUS⁴, Luzianna Macedo FONSECA⁵, Ana Karina de Lima CHAVES⁵

*corresponding author: luice.bueno@embrapa.br

¹ Embrapa Caprinos e Ovinos, Sobral, Ceará, Brasil

² Embrapa Milho e Sorgo, Sete Lagoas, Minas Gerais, Brasil

³ Instituto Federal de Educação, Ciência e Tecnologia do Ceará, Sobral, Ceará, Brasil

⁴ Universidade Federal do Piauí, Teresina, Piauí, Brasil

⁵ Universidade Estadual Vale do Acaraú, Sobral, Ceará, Brasil

The native flora of the Caatinga Biome is the main forage source used for animal production in the Brazilian semiarid region. However, this native pasture generally is insufficient to provide nutritional requirements for animals during the dry season. Sorghum (*Sorghum bicolor* L. Moench) has been shown to be an excellent alternative for forage production, especially in regions more susceptible to climatic stresses. The objective of this study was to perform an agronomic characterization of *Sorghum bicolor* hybrids in a semiarid environment in order to identify potential genotypes adapted to this condition and possibly advance in the Sorghum breeding program. The experiment was conducted from March to June 2017, at Embrapa Caprinos and Ovinos, in Sobral, Ceará State. Twenty-five genotypes were evaluated, being 22 experimental hybrids and 3 controls (BRS Ponta Negra, BRS 655, and Volumax). The experimental design was a randomized complete block with three replicates. The final plant stand varied strongly among the evaluated genotypes, ranging from 46 to 102 plants per plot (7.5 m²). Plant height also presented a great variation among genotypes, with averages ranging from 1.72 to 3.80 m. Total green matter production (PMV) reached an overall average of 35.95 ton ha⁻¹. The most productive genotype was BRS Ponta Negra (56.33 ton ha⁻¹), followed by Sb-CO8 (50.89 ton ha⁻¹) and Sb-CO3 (49.54 ton ha⁻¹); the difference was statistically significant (P>0.05). Noticeable for Sorghum hybrids Sb-CO15 and Sb-CO20, which presented PMV near to those of control genotypes, 49.03 ton ha⁻¹ for Sb-CO15 and 41.90 ton ha⁻¹ for Sb-CO20. Forage regrowth potential was the greatest for all control genotypes. Genetic variability exists among Sorghum genotypes evaluated for the expression of the agronomic traits in the Brazilian semiarid region. In addition to BRS Ponta Negra, the Sb-CO8 and Sb-CO3 hybrids also have great potential for adaptation and cultivation in semiarid regions.

Keywords: breeding program, BRS Ponta Negra, forage production, forage regrowth potential

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