

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

AGRONOMIC EVALUATION OF HIGH SEED YIELD GENOTYPES OF *Stylosanthes guianensis* FOR CLAYEY SOILS IN CERRADO

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Few options of tropical forage legumes are available to animal production systems, despite the greatest species diversity, including native, and germplasm variability to edafoclimatic adaptation. Nowadays, the cv. Campo Grande (seed mix of *Stylosanthes capitata* and *S. macrocephala*) has the greatest relevance in the market. However, your agronomic performance is lower in long dry season and/or clayey soil environments. In these cases, *S. guianensis* germplasm is more broadly adapted, but outstanding forage genotypes or cultivars (e.g. cv. Mineirão) are, in general, lower seed producers with higher seed costs. So, focusing in cheap seeds, mainly, reassessed germplasm (CPAC-4171, CPAC-1368) and breded lines (GC-1463, GC-1480) were evaluated (monoculture) by two years at Embrapa Cerrados (Planaltina-DF, 15°S, 47°W, 1.000 m, Oxisol, 62% clay) for soil coverage, forage yield components, pests and diseases foliage attack, dry season leaf retention, and plant longevity. The control treatments were cvs. Mineirão and Campo Grande. The experimental design was randomized complete blocks (four repetitions) and plots measured 3x4 m. Because slow plant growth and short live cycle, only three cycles of evaluation were possible. In the establishment phase, the genotypes GC-1463, GC-1480, CPAC-1368 showed higher ($P<0.05$) forage yield ($5.3-5.9 \text{ Mg ha}^{-1}$) and soil cover (89-94%), overcoming the controls ($1.2-2.8 \text{ Mg ha}^{-1}$; 51-79%). Embracing all periods, in relation to accumulated forage yield, only the cv. Campo Grande and CPAC-4171 ($4.6-5.2 \text{ Mg ha}^{-1}$) differed ($P<0.05$) from the other outstanding genotypes ($11.2-14.7 \text{ Mg ha}^{-1}$). The same lower performance was observed to branch and leaf yield, soil cover, and plant height. Notably, CPAC-4171 was very affected by foliar diseases. Available forage reduction (-51% to -77%) during dry season was more pronounced ($P<0.05$) in genotypes CPAC-4171 and CPAC-1368, being that all the others genotypes completely lost their leaves (except cv. Mineirão), partially compensated by some branch growth. During two years of evaluation, genotypes GC-1463 and CG-1480 were more stable to forage yield in comparison to CPAC-1368. However, these outstanding genotypes of *S. guianensis* showed biennial live cycle. Otherwise, plots of lower performance genotype CPAC-4171 and cv. Campo Grande persisted or were regenerated from the soil seed bank established in the first year. Divergent behaviors of genotypes in the establishment, dry season, and plant longevity will imply different strategies of use.

Keywords: cultivar development, forage, selection

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