

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

PERFORMANCE OF BEEF CATTLE IN A CULTIVATED LEGUME-GRASS PASTURE IN THE BRAZILIAN CERRADO

Gustavo José BRAGA*¹, Allan Kardec Braga RAMOS¹, Marcelo Ayres CARVALHO¹,
Giovana Alcantara MACIEL¹, Francisco Duarte FERNANDES¹

*corresponding author: gustavo.braga@embrapa.br

¹Embrapa Cerrados, Planaltina, Distrito Federal, Brasil

An alternative to deal with forage shortage during prolonged drought season is the use of legumes as mixed pastures or pure stands, even though these practices still are unusual in Brazilian Cerrado, among other reasons due to the lack of cultivars. The objective of this study was to evaluate cattle liveweight gain in pastures of *Brachiaria brizantha* (cv. Paiaguás) mixed with two new *Stylosanthes guianensis* lineages (Grof 1463 and Grof 1480). The study was conducted at Embrapa Cerrados in Planaltina, Federal District, Brazil, from September to August in 2013/14 and 2014/15, in a clay soil area. The treatments consisted of mixed legume-grass pastures (Mixed) and no legume pastures (Single) both seeded in February 2013. The experimental units (paddocks) were distributed in a randomized complete block design with three replicates. In each paddock (1.5 ha), two Nellore (*Bos taurus*) young bulls were maintained throughout the year with initial weight of 228 kg (Year 1) and 251 kg (Year 2) to evaluate the average liveweight daily gain (ADG). The stocking rate was variable using *put and take* extra bulls to maintain the canopy height at 40-50 cm in a continuous stocking management. The mean stocking rate (SR) and the liveweight gain per area (GA) were also estimated. Throughout the experimental period, the herbage mass (HM) was sampled and hand-separated in leaf blade, stem (leaf sheath plus true stem), dead material, legume and weeds. In Year 1, the ADG was greater in Mixed pastures (0.607 kg head⁻¹) compared to Single pastures (0.437 kg head⁻¹), whereas in Year 2 there was no difference (mean of 0.481 kg head⁻¹). The major impact of legume on ADG occurred during dry season probably as consequence of the deterioration of grass nutritive value and the concomitant greater intake of high-protein legume. This effect did not happen in Year 2 because of low legume proportion (< 20%) in the HM. The mixed pastures of *S. guianensis* Grof 1463 and Grof 1480 provided an improved beef cattle performance just in the first year and had no effect on stocking rate. The disappearance of legume at the end of experimental period may have been caused by death of plants, weak flowering, lack of reseeding, animal intake, trampling etc. To prevent this short-term impact, legume re-establishment strategies like overseeding could be an option to maintain legumes in the pasture.

Keywords: *Brachiaria brizantha*, cattle liveweight gain, grazing, Nellore, *Stylosanthes guianensis*

Promoção e Realização:



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