

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

## PRODUCTIVITY OF *UROCHLOA BRIZANTHA* CV BRS PAIAGUÁS INOCULATED WITH GROWTH PROMOTING BACTERIA

Divaney MAMÉDIO\*<sup>1</sup>, Camila Fernandes Domingues DUARTE<sup>1</sup>, Ulysses CECATO<sup>1</sup>, Mariângela HUNGRIA<sup>2</sup>, Henrique Jorge FERNANDES<sup>3</sup>, Thiago Trento BISERRA<sup>1</sup>, Artur Roque Domingues BARREIROS<sup>1</sup>, Diogo Rodrigues da SILVA<sup>1</sup>

\*corresponding author: [divaney.zootecnia@gmail.com](mailto:divaney.zootecnia@gmail.com)

<sup>1</sup>Universidade Estadual de Maringá, Maringá, Paraná, Brasil

<sup>2</sup>Embrapa Soja, Londrina, Paraná, Brasil

<sup>3</sup>Universidade Estadual de Mato Grosso do Sul, Aquidauana, Mato Grosso do Sul, Brasil

The use of plant growth promoting bacteria (PGPB) in pastures can be a sustainable alternative to increase forage mass production. This study aimed to evaluate the production of the *Urochloa brizantha* cv. BRS Paiaguás inoculated with PGPB. The experiment was conducted in a greenhouse, in 15 dm<sup>3</sup> pots containing sandy soil Caiuá formation, for an experimental period of 12 months. In all pots, the phosphorus contents, potassium and the equivalent of 20 kg of N ha<sup>-1</sup> have been corrected. The experimental design was completely randomized, with six replications: (control) non-inoculated, (1) *Azospirillum brasilense* Ab-V5, (2) *Azospirillum brasilense* Ab-V6, (3) *Pseudomonas fluorescens* CNPSo 2719, (4) *Pseudomonas fluorescens* ET76 and (5) *Pantoea ananatis* AMG521. The inoculants were prepared in the concentration of 10<sup>8</sup> cells mL<sup>-1</sup> the substrate and applied at a rate of 15 mL kg<sup>-1</sup> of seeds. The cuts were made when the plants reached between 35 to 40 cm, leaving a residue of 15 cm. The material collected in each pot was placed in a paper bag previously identified, weighed and dried in air circulating oven at 55°C for 72 hours, for the determination of dry matter (DM). Statistical analysis was performed using SAS software and means compared were by the Tukey test, and the groups treated, compared through the Dunnett test, both test at 5% probability. There was interaction between cuts and bacteria. In cut 1, bacteria 3 differed from the other bacteria, providing an increase in mass production of 29% (15.49 g DM pot<sup>-1</sup>), compared to the control. There was not statistical difference between the treatments for cuts 2, 3 and 4. In the fifth cuts bacteria 3, 4 and 5 presented a production of 22.44, 20.27 and 20.99 g DM pot<sup>-1</sup>, surpassing the control treatment in 94%, 75% and 82%, respectively. For the sixth cut, all bacteria promoted an increase in forage mass production, except for bacteria 2 that did not differ from the control treatment. In the seventh cuts the bacteria (1, 2, 3, 4 and 5) provided increases in the order of 50, 68, 212, 157 and 144%, respectively, being that bacteria 3 was the one that stood out in relation to the others, with production of 50.78 g DM pot<sup>-1</sup>. The inoculation of PGPB provided a greater forage mass production of grass Paiaguas.

**Keywords:** *Azospirillum*, diazotrophic bacteria, inoculants, *Pantoea*, *Pseudomonas*

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