

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

## CHLOROPHYLL CONTENT AND ACCUMULATION OF MASS OF *PANICUM MAXIMUM* CV. BRS ZURI INOCULATED WITH BACTERIA PROMOTING GROWTH

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Pastures are the most economical and practical way to feed livestock in Brazil, but, part of this area is in the degradation stage, affecting forage quality and production, requiring the replacement of nutrients, especially nitrogen, for the recovery of these areas. The objective was to evaluate the ability of bacterial strains of growth as an alternative or complement to nitrogen fertilization (N), in the nutrition and productivity of *Panicum maximum* cv. BRS Zuri. The experiment was conducted in a greenhouse. The application of the inoculants containing the bacteria occurred directly on the seeds, moments before sowing, and a thinning was performed preserving five plants per pot. Three treatments consisted in the inoculation of strains of *Azospirillum brasilense* ABV5-V6, *Pseudomonas fluorescens* and a combination between *Rhizobium tropici* and *Azospirillum brasilense* ABV6, three other treatments evaluated the combination between inoculation and N fertilization, having two control treatments, one without inoculation and fertilization and another only with N fertilization. The experimental delineation was in randomized blocks, with five replications. The accumulation of dry mass (DM) of the aerial part and the leaf chlorophyll index, by means of a chlorophyllometer, of the forage were determined along three cuts performed with an interval of thirty days between them, and the root DM at the end of the experiment. The results were submitted to analysis of variance at 5% probability and Scott-Knott's test was applied for significant differences. There was a significant effect for all analyzed factors ( $P > 0.05$ ). Fertilization N together with strains of *Rhizobium* and *Azospirillum* promoted the highest accumulation of DM of shoot with 46.26 g per pot, the control treatment, fertilized with N, promoted a higher root DM, with a mean of 91.9 g per pot and the chlorophyll index presented higher values when *Pseudomonas fluorescens* was inoculated together with fertilization, with an average of 22.29 ICF, indicating a better nutritional state of the plants. The treatments in which only the inoculation occurred had lower performance, in relation to those that were fertilized, in all the analyzed characteristics, but, it is concluded that growth promoting bacteria together with N fertilization promoted an increase in production DM of the aerial part and the leaf chlorophyll index.

**Keywords:** fertilization, inoculation, plant biomass, tropical forages

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