



# I-INTERNATIONAL MEETING OF ANIMAL SCIENCE IN SEMI-ARID REGIONS

Universidade Federal do Agreste de Pernambuco – UFAPE

July 03<sup>rd</sup> to 05<sup>th</sup>, 2024, Garanhuns-PE

Área do trabalho: Pastagens e Forragicultura

## Impact of chemical fertilization on the morphological aspects of *Brachiaria brizantha* cv. BRS Paiaguás and *Panicum maximum* cv. BRS Tamani

Kayane V. S. Nogueira\*<sup>1</sup>, Mateus B. O. Gomes<sup>1</sup>, Jessyka N. F. Barbosa<sup>1</sup>, Joao P. N. I. Brito<sup>1</sup>,  
Laiane D. Araujo<sup>1</sup>, Fabio N. Lista<sup>1</sup>, Elisvaldo J. S. Alencar<sup>1</sup>

<sup>1</sup>Universidade Federal do Vale do São Francisco-Univasf, Colegiado de Zootecnia, Petrolina/Pernambuco, Brasil.

\* Kayane.nogueira@discente.univasf.edu.br

The forage species that stand out in Brazilian pastures are grasses from the genera *Brachiaria* (Syn. *Urochloa*) and *Panicum* (Syn. *Megathyrus*). Chemical fertilization is used to correct and enhance soil nutrients, enabling forage species to reach their maximum production potential. This study aimed to evaluate the influence of chemical fertilization on the morphological characteristics of the cultivars *Brachiaria brizantha* BRS Paiaguás and *Panicum maximum* BRS Tamani in the São Francisco Valley. The research was conducted at the Agricultural Sciences Campus of the Federal University of Vale do São Francisco (UNIVASF), in Petrolina, Pernambuco, starting in April 2021 with the direct seeding of BRS Tamani and BRS Paiaguás cultivars, followed by soil covering. A randomized block design was used, with four treatments: 1. BRS Paiaguás with fertilization, 2. BRS Paiaguás without fertilization, 3. BRS Tamani with fertilization, and 4. BRS Tamani without fertilization. Morphological characteristics were evaluated in four marked tillers of each cultivar in the plots, with data collection at seven-day intervals, starting from the seventh day after cutting. Measurements were taken using a measuring tape, covering Stem Length (SL, cm), Stem Diameter (SD, mm), Number of Tillers (NT), Number of Leaves (NL), and Plant Height (PH, cm). The results indicated that characteristics such as Stem Length, Plant Height, Stem Diameter, Number of Leaves, and Number of Tillers showed significant effects when comparing the treatments. Data were subjected to variance analysis, and treatment means were compared using Tukey's test at a 5% probability ( $P \leq 0.05$ ) using SAS OnDemand. This study observed that morphological characteristics like the number of leaves and tillers indicated that *Brachiaria brizantha* BRS Tamani could have fewer leaves but more tillering, which is the opposite of *Panicum maximum* BRS Paiaguás. The findings suggest that chemical fertilization significantly influences the morphological traits of these forage species, affecting their growth and productivity.

**Keywords:** Forage Grasses, Morphology, Cultivated Pasture, Chemical Fertilization.