ZOOTECNIA BRASIL
Centro de Convenções da PUC-GO | Goiânia-GO
27 a 30 de agosto de 2018

55ª REUNIÃO ANUAL DA SOCIEDADE BRASILEIRA DE ZOOTECNIA

ZOOTEC 28º CONGRESSO BRASILEIRO DE ZOOTECNIA

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

MORPHOLOGICAL APECTS OF GENOTYPES OF *Pennisetum* sp. OF DIFFERENT SIZE IN RESPONSE TO IRRIGATION AND SUCCESSIVE HARVEST

Alexandre Carneiro Leão de MELLO[1*], Robson Elpídio Pereira RIBEIRO[1], Robson Oliveira de CARVALHO[1], Rayanne Thalita de Almeida Souza[1], Thaíse Virgínia Freire Ramos Peixôto, Márcio Vieira da CUNHA[1], Mário de Andrade LIRA[1]

*corresponding author: alexandre.lmello@ufrpe.br
[1]Universidade Federal Rural de Pernambuco, Recife, Pernambuco, Brasil

The aim of this work was to evaluate if the size (high and low) of the plant associated to irrigation and under successive harvest affects *Pennisetum* sp clones morphological characteristics. The evaluations occurred from August 2017 to February 2018, in Garanhuns, located in the Agreste region of Pernambuco. The experimental design was randomized in blocks with arrangement in subdivided plots and four replicates. The main plots were irrigated and non-irrigated and clones (IRI 381, Elefante B, Taiwan A-146 2.37 and Mott) were the split plots. The clones were evaluated under cutting for successive harvest every 60 days. Four evaluations were carried out during the evaluation period. The first and the second in the dry season and the last two ones in the rainy season. The data were analyzed separately. The variables analyzed were plant height, leaf area index (LAI), leaf/stem ratio and number of basal living tillers. The statistic shows significant interaction between irrigation and clones. There was no difference between irrigated and non-irrigated treatments for the morphological variables during the rainy season. However, compared to other clones, Taiwan A-146 2.37 had a greater number of tillers per linear meter, 187.9 in the irrigated treatment and 146.9 in the non-irrigated. Related to the clones, there was difference of height between the sizes in a range from 111.6 to 191.3 cm, small-size and high-size, respectively. This result affirms what was expected. In relation to LAI evaluation, the Taiwan A-146 2.37 presented a lower index (2.78) when it is compared to the other clones, which present an average of 3.78. It probably happens because Taiwan A-146 2.37 has leaves in an arrow shape and also a straight architecture of stem. This characteristic might be associated to the higher tillering capacity of this clone due to the greater amount of light present in the base of the clump. The leaf/stem ratio was higher in the Mott (0.78) while the other clones showed an average of 0.44. This is an important morphological aspect because it may reflect positively on the quality of this material. The use of irrigation benefited all the evaluated characteristics, both in the rainy and in the dry periods. In addition, during the dry period the irrigated means were superior to non-irrigated treatments. In conclusion, the morphological aspects of Mott, Taiwan A-146 2.37 and IRI 381 stood out in relation to leaf/stem, number of tillers and height of plants, respectively. The use of irrigation and the size of the plant influenced directly the morphological characteristics the elephantgrass genotypes throughout the harvests.

Keywords: cutting management, elephantgrass, plant size, productivity