

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

## PRODUCTION OF AFRICAN STAR IRRIGATED AND FERTILIZED WITH DIFFERENT APPLICATION NUMBERS OF NITROGEN

Wagner PARIS\*<sup>1</sup>, Alexandre Augusto AUACHE FILHO<sup>1</sup>, Oscar Tuz MATOS<sup>1</sup>, Olmar Antônio Denardin COSTA<sup>1</sup>, Júlia NEPOMUCENO, Marcos Luis MOLINETE, Alessandra BIANCHIN, Karine Nunes da COSTA<sup>1</sup>

\*corresponding author: wagparis@yahoo.com.br

<sup>1</sup>Universidade Tecnológica Federal do Paraná, Dois Vizinhos, Brasil

The increase in productivity and utilization of forage subsidized by technologies has been growing in Brazil, an easy and economically viable way to ensure improvements in these aspects are the use of nitrogen fertilization and irrigation. Irrigated pastures tend to suffer a less of stress and less productive seasonality throughout the year, thus increasing the vegetative production of pastures and their responses to fertilization. In this way the objective of the present trial was to evaluate the subdivision of the nitrogen fertilization in pasture of African star (*Cynodon nlemfuensis*) irrigated. The area of study has about 1.5 ha, which were divided into three subdivided modules in 6 pickets, the treatments received nitrogen fertilization in the form of urea 200kg ha<sup>-1</sup> in single application and parceled according to the treatments being these 1A (an application), 2A (two applications) and 4A (four applications). The first application was held in the month of November along with the beginning of the experiment, and, the other after two grazing pastures and subjected to irrigation when necessary, by a hydraulic system consisting of a motor pump (7, 5CV) and sprinklers distributed from in order to reach the entire experimental area. The determination of forage production was done through three pre and post-grazing cutting cuts submitted to botanical separation and determination of dry matter of constituents. To grazing of pasture, 16 Holstein heifers with a live weight (PV) average of 200 kg were used. The work was carried out in the period of November 2015 to March 2016 and the experimental design was totally randomized. The total forage production was significantly higher ( $P < 0.05$ ) in all months in the Treatment 1A (23.5 t ha<sup>-1</sup>) when compared to the other treatments 2A (20 t ha<sup>-1</sup>) and 4A (17.6 t ha<sup>-1</sup>), being December and January the months with the highest production in every treatments (48% of the total), due to the conditions physiological development of tropical plants. Another factor that corroborates for this result is the cycling of nutrients, which, together the nitrogen fertilization of unique application is shown more efficiently due to rapid degradation of the nutrients deposited in the feces and urine of the animals, affected by the relationship between animals, soil and plant. It is concluded that for the African star pasture the nitrogen fertilization 200kg ha<sup>-1</sup> in single application presents higher values in total forage production in relation to the subdivision.

**Keywords:** chemical composition, forage mass, tropical grass

Promoção e Realização:



Apoio Institucional:



Organização:

