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

EVALUATION OF PHOTOTROPISM OF CACTUS PEAR-PRIMARY CLADODES WITH DIFFERENT PLANTING METHODS

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Cactus pear productivity can be influenced by the planting method. The planting of cactus pear without burying the cladodes has been used by producers, however, this practice presents little scientific investigation. The evaluation of the direction of cladodes in relation to light is fundamental since it is related to the capture of sunlight. Thus, the goal was to evaluate the position of primary cladodes of the 'Orelha de Elefante Mexicana' cactus pear with different planting methods. The experiment was conducted at the Federal Institute of Piauí - IFPI, Paulistana Campus, beginning in March 2017. Three planting methods were studied in a system of beds: with the largest side of the cladode facing the ground, without burying, (P1); with the largest side of the cladode in the north-south direction, 45º slope to the ground and buried (P2); with the largest side of the cladode in the east-west direction, 90º slope to the ground and buried (P3). The harvest frequency was six months. This was a randomized block experimental design with three replications. Cactus pear was fertilized (single superphosphate, micronutrients, agricultural gypsum, calcitic limestone and urea) and irrigated by drip irrigation (10 mm weekly water). The positions of the primary cladodes were determined in relation to the basal cladode, being classified as parallel, perpendicular or diagonal. To evaluate the orientation of primary cladodes in the P1 treatment, an imaginary line was drawn in the north-south direction. The comparison of means was performed by the Tukey's test at 5% of probability, using the Statistical Analysis System (SAS 9.0). The proportion of primary cladodes in the parallel position was higher in the P2 treatment (60%) and lower in the P1 treatment (34%). Cladodes in the parallel position remained in the same position as the basal cladode at planting, so there was little adjustment of the cladodes in relation to light in the P2 treatment. In the P1 treatment, 34% cladodes have their largest side facing the sun, which indicates good interception of sunlight. The perpendicular and diagonal positions were not influenced by the treatments. Cutting cycles did not influence the alignment of the primary cladodes in relation to the basal cladode and there was no interaction between the treatment and the cutting cycle. The parallel position, in relation to the basal cladode, of primary cladodes is influenced by the planting method. There is a good adjustment of the position of cladodes in relation to the sun in treatment P1.

Keywords: cactus, photosynthesis, semiarid