

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

WATER CONSERVATION IN SPINELESS CACTUS BIOMASS IN TROPICAL CLIMATE REGION (Aw) WITH WINTER DRY STATION

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The regions of tropical climate have as main characteristic two totally distinct seasons, a rainy one with great rainwater concentration and a dry one. In the rainy season there is a great waste of rainwater that is not properly stored for reuse in times of scarcity. Thus, storing rainwater in the form of green biomass would be an alternative to these regions. The purpose of this study was to evaluate the water use efficient (WUE) and water accumulation (WA) of spineless cactus grown in different tropical regions (Aw) with winter dry season. The experiment was performed by a completely randomized design with seven repetitions in a factorial scheme (3 × 7). The factors corresponded to three genotypes of spineless cactus, Miúda and Baiana (*Nopalea cochenillifera*) and Orelha de Elefante Mexicana (*Opuntia stricta*) and seven locations classified as Tropical Climate (Aw) according to the Köppen classification of 1936, with dry winter and rainy summer. The spineless cactus varieties were cultivated with a density of 66,133 plants ha⁻¹, being irrigated with 1.0 mm of water every 7 days through a drip system. The cut was carried out after one year of planting, conserving the cladode matrix. The experimental locations 1, 2, 3, 4, 5, 6 and 7, recorded an accumulation of available water for the plant (precipitation + irrigation) of 935.5, 905.7, 903.9, 996.6, 873.5, 958.4 and 1000.4 mm, respectively. In the cut, the amount of green and dry biomass was obtained and the values of WUE and WA were determined. Analysis of variance was performed and the data, when significant, were analyzed by the Scott-Knott test at the 5% level of significance. There was interaction (P<0.05) in relation to genotypes and locations for WUE and WA. The WUE ranged from 1.0 - 35.0 ± 1.0 kg DM mm⁻¹, with a higher value in the location 2 for the Baiana genotype, which also presented a higher WA value ranging from 4.0 - 259.0 ± 2 t ha⁻¹. The different locations and genotypes of spineless cactus present difference for the WUE and WA. The *Nopalea cochenillifera*, genotype Baiano, presents greater WUE and WA for location 2. The cultivation of spineless cactus is recommended for water conservation in a region with tropical climate (Aw) with dry season in winter.

Keywords: cacti, *Nopalea*, *Opuntia*, production

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