



Stomatal density and leaf turgor pressure in Tahiti lime under water deficit

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The water deficit can cause morphophysiological changes and significantly reduce crop productivity. Among the alterations, the number of stomata and leaf water potential may be associated to the process of acclimatization of plants to adverse conditions. This work aimed to evaluate the stomatal density (SD) and leaf turgor pressure (ψ_p) in Tahiti lime (*Citrus latifolia* Tan.) plants under water deficit and grafted on different rootstocks. The work was developed at the IFBaiano Campus, Bom Jesus da Lapa-BA, in Tahiti lime orchard with six rootstock: 1 - Citrumelo Swingle; 2 - TSKC x TFD-006; 3-HTR-069; 4 - Flying Dragon; 5 - LVK x LCR - 038 and 6 - Rangpur lime. After one year of cultivation, water deficit treatments composed of four irrigation blades (25, 50, 75 and 100% of crop evapotranspiration) were established. After 90 days, SD and ψ_p were studied in an experimental design consisting of a 4 x 6 factorial, with three replicates, four irrigation blades and six rootstock combinations. The evaluations occurred concomitantly in the morning in an intense sun condition. Two fully expanded leaves per plant were used. ψ_p was determined using the Wiltmeter® and SD by the foliar epidermis impression method. The counting of the stomata was performed in an optical microscope, using a 40x magnification objective. The ψ_p and SD measures showed variability among treatments. Significant interaction between rootstock and irrigation blades was observed, especially LVK x LCR-038 rootstock, which conferred the highest ψ_p and SD to the canopy at the lowest irrigation levels (25 and 50%). The results indicate that these variables were efficient in the evaluation of the water deficit and can be used together in the selection of scion-rootstock tolerant to abiotic stress.

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