

CHALLENGES FOR PLANT PHYSIOLOGY

FOOD PRODUCTION AND SUSTAINABILITY

Effect of flooding on young plants of Parkia gigantocarpa Ducke

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Flooding is an abiotic factor, common in many regions of the world and may pose a problem for forestry, agriculture and permanent preservation areas. The objective of the study was to evaluate the biochemical responses of young plants of Parkia gigantocarpa submitted to flooding. The experimental design was completely randomized with two water conditions (control and flooding) combined with five evaluation periods (0, 4, 8, 12 and 16 days of flooding) with five replications per treatment. The plants exposed to flooding showed significant reductions in the concentration of starch and total soluble proteins, mainly in the leaves. The flooding reduced the sucrose concentration in the leaves and increased in the roots. The total concentration of soluble carbohydrates increased in the roots of plants exposed to flooding. Young plants of Parkia gigantocarpa were sensitive to flooding.

Keywords: Starch, sucrose, sensibility, ,