

DIAMETER INCREMENT OF *DIPTYCHANDRA AURANTIACA* EVALUATED USING DENDROMETER BANDS AND GROWTH RINGS – STUDY CASE FROM THE BRAZILIAN PANTANAL WETLAND

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Diptychandra aurantiaca Tul., is a frequent tree species in cerrado (dense forested savanna) in non-flooded areas in the Brazilian Pantanal Wetland region; its trunk is commonly used as fence poles in cattle raising farms. The objective of this study was to evaluate *D. aurantiaca* growth, due to the importance of this species as natural resource. From 1990 to 1992 diameter increment and phenology were monitored in 10 trees of *D. aurantiaca* from Nhumirim farm. The trees diameter at breast height (DBH) were measured using metric tape. In 2005, the phenology experiment was recovered and dendrometer bands were installed in 5 of those trees and in 18 new ones. As complementary information, in 2000, 10 trees from another site of Nhecolandia Pantanal were fell down, and the increment was measured from growth rings at the DBH disc. In the early 1990's, when the Pantanal wet season was finishing, the average annual diameter increment was 4.5 mm. In 1993/94 a long dry cycle started. The trees responded to the water stress, and the annual growth increment from 1990 to 2005 was 2.5 mm, the increment from 1995 to 2000 obtained from the growth rings was, in average, 3.7 mm. In the last period, from 2005 to 2008, the annual increment was even smaller, reaching only the average of 0.5 mm. These results emphasize the importance to understand the dynamic of native tree species related to local climate, as the sustainable use of these species will be directly dependent of the growth conditions.