EVALUATION OF RUBBER (Hevea brasiliensis Muell Arg.) FOR DRAUGHT RESISTENCE. III. GROWTH OF SOME CLONES UNDER TWO WATER REGIMES

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The growth of young rubber plants of clones IAN 717, IAN 873, IAN 2903, IAN 3087, IAN 6323 and Fx 3899 was determined under two water regimes (field capacitidy and cyclic dehydration). Exponential growth curves were improved if adjustment was made to the primary data of total dry matter (W_t) leaf dry matter (W_f) and leaf area (A_f). From these adjusted values of W_t, W_f and A_f the following growth parameters were estimated: rate of production of dry matter (C_W), rate of growth of leaf area (C_A), net assimilation rate

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$_A$) and leaf area ratio (F_A). The C_W and C_A of clones decreased with water deficit, there being most reduction observed for Fx 3899 and IAN 717 while IAN 3087 had the best performance when compared to the irrigated treatments. The reductions in the C_W and C_A, associated to A_f, resulted in a substantial decrease in E_A, F_A and the relative growing rate (R_W) in the different clones. In the presence of cyclic water deficit, clones IAN 717 and IAN 3087 showed higher values for E_A and R_W, that of Fx 3899 being the lowest. In turgid plants, a higher R_W was shown by IAN 3087, IAN 6323 and Fx 3899, the last two being more influenced by the cyclic water deficit.