



CALLOGENESIS OF MAHOGANY (*Swietenia macrophylla* KING) *

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Mahogany (*Swietenia macrophylla* King) belongs to the family *Meliaceae*, is a species of great economic importance because of its wood, which is durable and highly appreciated for manufacturing furniture and luxury items decoration. The aim of this work was to establish methods of adventitious and axillary shoot regeneration for mahogany. Epicotyl fragments were inoculated in MS medium supplemented with 0, 0.25, 0.5 and 1.0 M BAP and 0.1, 0.25, 0.5, 1.0 and 1.25 M TDZ, both along with 0.5 M NAA and a control without growth regulators. Leaves were cultivated in MS medium with 0, 0.5, 0.75 and 1.0 M TDZ under an irradiance of $0.73 \text{ mol m}^{-2} \cdot \text{s}^{-1}$, 0.75 M TDZ under an irradiance of 0.73 and $37 \text{ mol m}^{-2} \cdot \text{s}^{-1}$ and 0, 1.11, 2.22, 4.44 and 8.88 M BAP with 0.1 M NAA under an irradiance of $0.73 \text{ mol m}^{-2} \cdot \text{s}^{-1}$. In order to regenerate adventitious shoots, callus originated from epicotyl explants, initially cultivated in 1.0 M TDZ, were transferred to medium supplemented with 0, 1.11, 2.22, 4.44 and 8.88 M BAP. Incidence of callus, its consistency and color, and also the number of adventitious shoots formed were recorded after 30 days of culture. In the experiments of axillary shoot formation, the number of shoots, their weight, levels of oxidation and contamination were evaluated. In all experiments, except in shoot regeneration, statistically significant differences were reached. Different consistencies and colors of callus were reached. Most of the calluses from epicotyl segments cultivated with 1.0 M BAP were compact (76.4%) and with 1.0 M TDZ most of them were friable (91.5%). The best results were obtained with 0.75 M TDZ under low light irradiance, 90% of production of callus, of which 77.8% were friable. With 4.44 M BAP and 0.1 M NAA the percentage of friable callus was 93.3%. Two adventitious buds were obtained (3.33%) with 2.22 M BAP.

Palavras-chave: INDIRECT ORGANOGENESIS, EPICOTYL SEGMENT; FOLIAR SEGMENT

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