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Key words: micropropagation, tissue culture, *Swietenia macrophylla*, mahogany, contaminants, *in vitro* culture, nodal explants

SUMMARY

The Mahogany (*Swietenia macrophylla* King), is one of the noblest wood in the world known for its strength and beauty. However, the mahogany population has been affected or decreased by factors such as, deforestation, *Hypsiphyla grandella* attack (borer of the Mahogany) and genetic erosion. The latter of these is due to the selective use of the best individuals in the natural forests. A diagnosis of the situation of the Mahogany in Mesoamérica, estimates the mahogany population at 36% (CCT 2000), and whereby the mature individuals are presented in low proportion and slow natural regeneration in the forest populations. Whit that focus it is necessary to take actions for its conservation and repopulate by means of reforestation. The vegetative propagation is an interesting option for the complete exploitation of the genetic improvement of trees because it allows the identical multiplication of the best individuals, of the best families. The tissue culture has allowed an advancement in the propagation of a great number of forest species of quick growth or for the production of trees plus. However, this technique has been little developed in tropical forest species and particularly in alone Mahogany investigation antecedents exist in juvenile materials coming from seed germinated *in vitro*.

The objective of the present study, seek to contribute to the development of a methodology for the micropropagation of mature trees of Mahogany selected in the programs of genetic improvement. One worked in the decrease of the levels of infection bacterial and fungi of the primary nodal explants and in the obtaining of a medium of appropriate cultivation for the development of the initial stages of the micropropagation.

In the initiation phase 66,6% of aseptic explants was achieved under the treatment with hipocloryte of calcium ($Ca[ClO]_2$ to 10% sumerged for 20 minutes. It was selected the medium of cultivation of Shenk and Hildebrandt (SH) to 100% supplemental with 15 sucrose g/l, 1.0 mg/l of 2-ip, 0.5 mg/l of AIB.

In the multiplication phase, the best answer was achieved by means of the recycle of the primary explant and the supply of BAP in a dose of 0.5 mg/l. These conditions allowed the obtaining of an average of 2.33 shoot by explant of superior quality, that which will allow to continue with the multiplication process to begin the development stages and root of buds for the later acclimatization.