

Leaf Maturity, a Critical Factor in Embryogenesis

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Summary

The embryogenic capacity of leaf explants was found to be related to their physiological maturity in young palms of *Cocos nucifera*. Leaf tissues from 12- to 24-month-old palms were embryogenic but the potential was quickly lost with the onset of juvenility. Even in young palms, explants of tender leaves responded differently according to their maturity. Only a particular leaf in a particular state produces embryogenic cells: the leaf whose growth was observed to increase by about 13 times its initial size in 1 month. It may be concluded that a crucial factor(s) determining embryogenesis *in vitro* is elaborated at a certain physiological stage of maturity of one particular leaf in the crown of a young palm. Furthermore, only a portion of this leaf yields embryogenic explants and its competence is of short duration.

Key words: Cocos nucifera, leaf explants, embryogenic potential, growth rate, juvenility, leaf maturity.