

Establishment and Improvement of Oil Palm Liquid Culture for Clonal Propagation

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Abstract : A serious shortage of prime agricultural land coupled with environmental concerns inland expansion has daunted efforts to increase the national yield average. To address this issue, maximising yield per unit hectare through quality planting material is of great importance. Breeding for improved planting materials has been a continuous effort since the early days of this industry, it is time-consuming, and the likelihood of segregation within the progenies further impedes progress in this area. Incorporation of the cloning technology in oil palm breeding programmes is therefore advantageous to expedite the development of commercial elite and high-yielding planting materials. After more than 22 years of research and development through this project, reliable protocols for liquid/suspension culture systems coupled with various innovative technologies which are effective at promoting proliferation and growth of oil palm culture have been established. Subsequently, clonal palms derived from the suspension culture system were extensively studied in the field, and the results have been encouraging. Clones such as CPS1, CPS2 and a few others recorded superior performance in comparison with D x P standard crosses.

Keywords : tissue culture, suspension culture, oil palm, *Elaeis guineensis*

Conference Title : ICPTCCSC 2022 : International Conference on Plant Tissue Culture and Cell Suspension Culture

Conference Location : Paris, France

Conference Dates : July 19-20, 2022