Improving Yam (*Dioscorea* spp.), Using Biotechnology. 1) Rapid production of disease free germplasm. MALAURIE,B.; TARDIEU,F. and THOUVENEL,J.C., ORSTOM, Abidjan, Cote D'Ivoire.

Improvement in yam producivity, in particular disease prevention in the field, is very important in the development of this major food crop in West Africa. The Yam Mosaic Virus (YMV) is a major problem for this culture and the complex *D. cayenensis-rotundata* is particularly sensitive. A research program using meristem cultures is conducted. To do this, excised meristem from 0.1 to 5 mm length, were incubated at 28°C, with 16h daylight, on (MS)modified basal culture medium plus 3% sucrose, 200 mg glutamine, 0.8% agar or 0.4% agarose and a balance of auxin/cytokinin. The phytosanitary state has been checked using immuno-enzymatic techniques on field material before the vitro-culture, on vitro-plantlets, and then after separation of the vitro-plantlets, on regenerated plantlets. Healthy plantlets from meristem cultures of 10 cultivars have already been obtained. The production of virus free plants using meristem culture, the rapid multiplication of disease free material using micropropagation techniques such as nodal cutting, in vitro tubers and somatic embryogenesis will quickly provide to growers quantities of healthy tuber seedlings.

Malaurie Bernard, Tardieu Franck, Thouvenel Jean-Claude (1988)

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