

carried out with successfully in field tuberization, Isozymic characterization was performed over 150 accessions. Virus- free plants were obtained by meristem culture and indexing allowed the detection of different virus. Maintenance of 21 yam species, under slow conditions, is under control, and four edible yam species endure the cryopreservation process with more or less success depending species.

#### 64- A REVIEW OF THE USE OF AN IN VITRO YAM (*Dioscorea* spp.) GERMPLASM

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##### Abstract

A research program has been develop on yam in vitro by IRD (ex – ORSTOM) since 1985 , in cote d'Ivoire and continued after 1990 in Montpellier. First interest were focus on protoplast in the idea to improve yam by somatic fusion between genotypes of interest and on establishment of an in vitro collection of yam. Using the genetic diversity of the collection, research were developed on different other subjects such as in vitro morphogenetic behavior. Microtuberization, somatic embryogenesis, acclimatization, isozymic characterization, virus – free plant production and long term conservation by cryopreservation. These two last focusos were continue or develop in Montpellier, with the transfer of the duplicate of the collection. Virus eradication and production of virus – free plants were performed by ELISA and immunocapture rt/PCR. If obtention of viable mesophyll protoplast was successful , no real division was obtained. On microtuberization, various investigation were realized, and factors such as sucrose concentration and photoperiod were optimized. Somatic embryogenesis was observed , and acclimatization of microplantlets of various genotypes was

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