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### **Field evaluation of cassava varieties under drought stress in Kenya, Tanzania and Ghana**

A collaborative project is underway between IITA, CIAT, EMBRAPA, Cornell University and the NARS of Tanzania, Kenya and Ghana to identify the physiological and genetic traits that make cassava one of the most drought tolerant crops. This involves firstly the evaluation under drought stress conditions in Tanzania, Kenya and Ghana of local varieties, and a selection of genotypes from IITA, with contrasting responses to drought stress; and secondly the phenotyping at the same sites of two mapping populations (MCOL 1734 x VEN 77; MCOL 1468 x BRA 255) and self progeny (MCOL 1734) developed at CIAT. Methodologies for physiological evaluation are being tested. The project has a large capacity building component, both for evaluating the response to drought, and in receiving and hardening *in vitro* cassava plantlets. Protocols for hardening and rapid micro-propagation of *in vitro* cassava plantlets have been developed. Here preliminary field results are presented from Tanzania and Ghana, as well as results from a parental screen of the mapping populations using 307 markers comprising of genomic and expressed sequence tag (EST) SSRs.