

## Introduction

Cassava is a staple crop with remarkable tolerance to drought and great ability to survive uncertain rainfall patterns. Experiments are underway in Kenya, Tanzania and Ghana to identify the genetic and physiological traits that make cassava a particularly drought tolerant crop. The study also aims to identify molecular markers associated with drought tolerance genes for the application in breeding programs as well as identify cassava clones with outstanding drought tolerance.

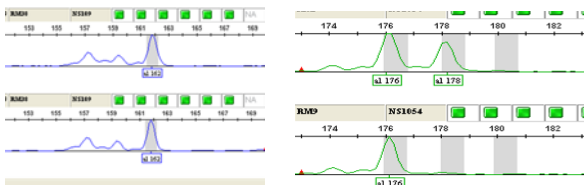
## Methodologies and progress

### Mapping populations

Receiving, hardening and rapid micro propagation of *in vitro* mapping populations (MCOL 1734 x VEN 77; MCOL 1468 x BRA 255) and selfed progeny (MCOL 1734) developed by CIAT and EMBRAPA.



### Genotyping of mapping populations



Monomorphic primer      Polymorphic primer  
Polymorphic markers

MCOL 1734 X VEN 77 = 168 SSR Markers

MCOL 1468 X BRA 255 = 147 SSR Markers

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### Clonal evaluation

Physiological characterization using 53 IITA and 9 local germplasm in a RCB design, 2 replicates, 2 treatment (irrigated and non-irrigated) in Kiboko, Kenya and Hombolo, Tanzania

### Parameters

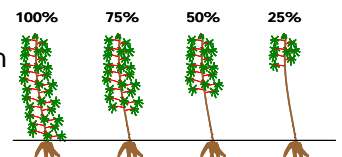
- Stomata conductance and leaf temperature



- Soil moisture content



- % Leaf retention



- Flowering



- Length and width of fully expanded leaf



- ABA and starch content
- Yield parameters