MANAGEMENT OF THE CELOS CASSAVA EX SITU FIELD GENEANKS

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OBJECTIVES

General objective
- To support the development of the agribusiness chain based on cassava

Specific objective
- Conservation of cassava germplasm in ex situ field genebanks at CELOS experimental fields
- Morphological diversity between the conserved accessions, their agronomic values and specific composition have been assessed

BACKGROUND

CELOS started in 2006 the collection of local cassava varieties at different locations in Suriname.
The cassava field genebanks were set up at two locations: first at the Leysweg (2 seasons) and Phedra; anno 2014 at Phedra (8th season) and at Saramacca Tigerkreek West (4th season)
morphological and agronomic characterization took place during 2008 - 2011.
In the 8th ex situ field genebank at Phedra there are 51 phenotypically distinguishable cassava accessions and in the 4th season at Saramacca 102 accessions (renewed field January 2014).
Collection data (passport data) and characterization data are included in the developed and continuously maintained genebank database (in Access 2007).

ACTIVITIES DURING RENEWAL OF THE CASSAVA GENEANKS

- All tool are disinfected in a 2% Chlorine solution
- Boots are disinfected when entering a field
- Healthy plants are selected as planting material
- Roots are cleaned and checked for FSD symptoms
- Cuttings are disinfected during 10 minutes in a 3 cc Vicozole/l solution

IPGRI DESCRIPTORS ARE USED FOR CHARACTERIZATION

Morphological characterization at six months
- Color of unexpanded apical leaf
- Color of first fully expanded apical leaf
- Leaf vein color
- Punctumance of young leaf
- Number of leaf lobes
- Shape of central lobe
- Length of central lobe
- Width of central lobe
- Petiole color
- Anthocyanin pigmentation in petiole
- Petiole length
- Angle of petiole insertion
- Length of stipules
- Stem color
- Prominence of leaf
- Growth habit of young stem
- Time to first apical branching
- Angle of branch
- Height of the first apical branch
- Time to second apical branching
- Number of levels of branching
- Height of plant
- Presence of flower
- Storage root surface color

Agronomic characterization
- At two weeks after planting
  - Germination percentage
- At the harvest
  - Total fresh weight of foliage of stakes
  - Storage root pulp color
  - Storage root cyanide content
  - Storage root peduncle
  - Storage root forms
  - Position of roots
  - Storage root length
  - Storage root diameter
  - Number of storage roots per plant
  - Total fresh weight of storage roots
  - Color of outer surface of storage root cortex
  - Amount of rotted storage roots per plant
  - Storage root dry matter content
  - Post harvest deterioration

Conservation of genetic material
- Genetic material is available for breeders
- Genetic material is being conserved for further characterization
- Genetic material is available for propagation to produce planting material for field experiments