Key access and utilization descriptors for cassava genetic resources

This list consists of an initial set of characterization and evaluation descriptors for cassava utilization. This key set of strategic descriptors, together with passport data, will become the basis for the global accession-level information system being developed by the Bioversity-led project, Global Information on Germplasm Accessions (GIGA). It will facilitate access to and utilization of cassava accessions held in genebanks and does not preclude the addition of further descriptors, should data subsequently become available.

Based on the comprehensive list of descriptors contained in ‘Genetic Resources for cassava and wild relatives’ (IBPGR, 1983, Appendix VII), this strategic set, listed below with the original descriptor states, was developed in consultation with cassava experts worldwide, and further refined by a Core Advisory Group (see ‘Contributors’) led by Dr Daniel Debouck of CIAT.

Biotic and abiotic stresses included in the list were chosen because of their wide geographic occurrence and significant economic impact.

**Storage root pulp colour**
Observed immediately after being cut open

1. White or cream
2. Yellow
3. Pink
99. Other (specify in the Notes descriptor)

**Storage root surface colour**

1. White
2. Cream
3. Light brown
4. Dark brown
99. Other (specify in the Notes descriptor)

**Stem colour**
Observed between 50–100 cm from ground level

1. Silver green
2. Light brown or orange
3. Dark brown
99. Other (specify in the Notes descriptor)
Key access and utilization descriptors for cassava genetic resources

Colour of first fully expanded leaf
3 Light green
5 Dark green
7 Green–purple
9 Purple

Shape of central lobe
1 Oblanceolate
2 Linear
3 Elliptic
4 Pandurate (obovate with pair of basal lobes)
5 Lanceolate
99 Other (specify in the Notes descriptor)

Colour of unexpanded apical leaves
3 Light green
5 Dark green
7 Green–purple
9 Purple
99 Other (specify in the Notes descriptor)

Pubescence of young leaves
Newly formed leaves in the transitional stage
3 Sparse
5 Intermediate
7 Dense

Petiole colour
1 Light green
2 Dark green
3 Green–purple
4 Purple
99 Other (specify in the Notes descriptor)

Colour of outer surface of storage root cortex
1 White or cream
2 Yellow
3 Pink
4 Purple
99 Other (specify in the Notes descriptor)
Storage root dry matter percentage (DM %)

Total fresh weight of storage roots per plant (FW kg)
Recorded on 10 plants

Hydrocyanic acid content (HCN) [mg/kg]
- 3  Low (sweet)
- 7  High (bitter)

Harvest index
Fresh storage root weight (5)/total plant weight (4 + 5)

Post-harvest deterioration
Qualitative evaluation of physiological deterioration
- 3  Low
- 5  Medium
- 7  High

Reaction to drought
(7.3)

Reaction to high soil moisture
(7.4)

African Cassava Mosaic Virus (ACMV)

Cassava Bacterial Blight (CBB)

Cassava Common Mosaic Virus (CsCMV)

Cassava mites

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Cassava Frogskin Disease (CFSD)

Whiteflies

Cassava Brown Streak Virus Disease (CBSD)

Notes
Any additional information may be specified here, particularly that referring to the category ‘Other’ present in some of the descriptors above.

CONTRIBUTORS
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