

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)

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 deteriorationQualitative evaluation of physiological deterioration¹

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**

¹ Use quantitative method described by Wheatley C. et al. (1985), Post-harvest deterioration of cassava roots, in Cock JH and Reyes JA, editors, Cassava: Research, Production and Utilization. UNDP-CIAT, Cali, Colombia, pp 655–671. Or specify method used in the NOTES descriptor.

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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Core Advisory Group

Daniel Debouck, CIAT, Colombia

Alfredo Augusto Cunha Alves, EMBRAPA, Brazil

Dominique Dumet, IITA, Nigeria

O.N. Eke-Okoro, National Root Crops Research Institute, Nigeria

Clair Hershey, Cornell University, USA

Danny Hunter, Bioversity International, Italy

Nelson Morante, CIAT, Colombia

Llermé Ríos Lobo, INIA, Peru

Sergio J. Rodríguez Morales, INIVIT, Cuba

Peaingpen Sarawat, Khon Kaen Field Crop Research Centre, Thailand

Xavier Scheldeman, Bioversity, Colombia

Reviewers

Brazil

Luiz Carvalho, EMBRAPA

Miguel Dias, EMBRAPA/CPAA

Wania Fukuda, EMBRAPA

Paulo Cesar Lemos de Carvalho, Universidade Federal do Reconcavo da Bahia

Nagib Nassar, Universidad de Brasilia

Ivo Roberto Sias Costa, EMBRAPA/CENARGEN

Vanderlei Silva Santos, EMBRAPA/CNPMPF

Colombia

Fernando Calle Calle, CIAT
Hernan Ceballos, CIAT
Maritza Cuervo, CIAT
Paula Hurtado, CIAT
Graciela Mafra, CIAT
César Humberto Ocampo Nahar, CIAT

Nigeria

Alfred Dixon, IITA
Paul Ilona, IITA
Olaniyi Ajewole Oyatomi, IITA

Peru

Kember Mejia, Instituto de Investigaciones de la Amazonía peruana
Julio Pinedo, Universidad Nacional de la Amazonía peruana (UNAP)
Vidal Villagomez Castillo, Universidad Nacional Agraria La Molina

Thailand

Opas Boonseng, Rayong Field Crops Research Centre
Reinhardt Howeler, CIAT
Pinit Kulayasilapin, Prachinburi Field Crop Experiment Station
Atchara Limsila, Rayong Field Crops Research Centre
Anon Malipan, Lopburi Service Centre for Crops and Production

United Kingdom

John Beeching, Department of Biology & Biochemistry, University of Bath

USA

Carlos Iglesias, Weaver Popcorn Company