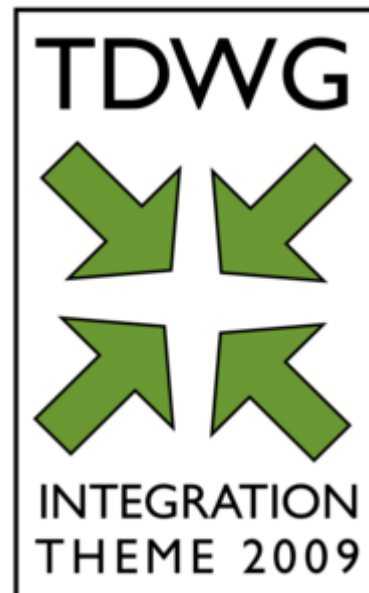


# DwC Germplasm

From EPGRIS3

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## Darwin Core Germplasm Extension

Darwin Core (DwC) is designed around a set of general (core) terms applicable for most biodiversity datasets. Darwin Core also implements extensions to the core terms, designed to include terms of more specific utility in thematic domains such as the community for plant genetic resources. The Darwin Core Germplasm Extension has been developed to include the additional terms required to describe germplasm samples maintained by genebanks worldwide.



- DwC Germplasm Extension: <http://rs.nordgen.org/dwc/>
- Darwin Core: <http://rs.tdwg.org/dwc/index.htm>
- Dublin Core: <http://dublincore.org/>

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## Terms (DwC Germplasm)

### GermplasmDataset

- `dwc:datasetID` [[1] (<http://rs.tdwg.org/dwc/terms/index.htm#datasetID>) ]

- NICODE (missing term) - Discussion at: NationalInventoryCode
- UPLOADERCODE (epgris3-trait:UPLOADERCODE)
- DATASET\_REMARKS (epgris3-trait:DATASET\_REMARKS)

## GermplasmSample

- dwc:occurrenceID [2] (<http://rs.tdwg.org/dwc/terms/index.htm#occurrenceID>) (epgris3-trait:GENOTYPE\_NUMBER)
- GermplasmID (redundant by dwc:occurrenceID) [3] (<http://rs.tdwg.org/dwc/terms/index.htm#occurrenceID>)
- dwc:catalogNumber [4] (<http://rs.tdwg.org/dwc/terms/index.htm#catalogNumber>) (mcpd:ACCENUMB)
- GermplasmIdentifier (mcpd:ACCENAME)
- dwc:institutionCode [5] (<http://rs.tdwg.org/dwc/terms/index.htm#institutionCode>) (mcpd:INSTCODE)
- BiologicalStatusOfSample
- BiologicalStatusOfSampleCode (mcpd:SAMPSTAT)
- TypeOfStorage (mcpd:STORAGE)
- dwc:otherCatalogNumbers [6] (<http://rs.tdwg.org/dwc/terms/index.htm#otherCatalogNumbers>) (mcpd:OTHERNUMB)
- dwc:occurrenceRemarks [7] (<http://rs.tdwg.org/dwc/terms/index.htm#occurrenceRemarks>) (mcpd:REMARKS)

## Taxon

- dwc:scientificNameID [8] (<http://rs.tdwg.org/dwc/terms/index.htm#scientificNameID>)
- dwc:genus [9] (<http://rs.tdwg.org/dwc/terms/index.htm#genus>) (mcpd:GENUS)
- dwc:specificEpithet [10] (<http://rs.tdwg.org/dwc/terms/index.htm#specificEpithet>) (mcpd:SPECIES)
- dwc:infraspecificEpithet [11] (<http://rs.tdwg.org/dwc/terms/index.htm#infraspecificEpithet>) (mcpd:SUBTAXA)
- dwc:scientificNameAuthorship [12] (<http://rs.tdwg.org/dwc/terms/index.htm#scientificNameAuthorship>) (mcpd:SPAUTHOR)\* (mcpd:SUBTAUTHOR)\*
- dwc:vernacularName [13] (<http://rs.tdwg.org/dwc/terms/index.htm#vernacularName>) (mcpd:CROPNAME)

## SampleAcquisition

- SampleAcquisitionID
- DonorInstitute (eurisco:DONORDESCR)
- DonorInstituteCode (mcpd:DONORCODE)
- DonorsSampleIdentifier (mcpd:DONORNUMB)
- SampleAcquisitionDate (mcpd:ACQDATE)
- SampleAcquisitionSource (mcpd:COLLSRC)
- SampleAcquisitionRemarks

## CollectingEvent

- dwc:recordNumber [14] (<http://rs.tdwg.org/dwc/terms/index.htm#eventID>)
- CollectingInstituteCode (mcpd:COLLCODE)
- dwc:recordNumber [15] (<http://rs.tdwg.org/dwc/terms/index.htm#recordNumber>) (mcpd:COLLNUMB)
- dwc:decimalLatitude [16] (<http://rs.tdwg.org/dwc/terms/index.htm#decimalLatitude>) (mcpd:LATITUDE)
- dwc:decimalLongitude [17] (<http://rs.tdwg.org/dwc/terms/index.htm#decimalLongitude>) (mcpd:LONGITUDE)
- dwc:minimumElevationinMeters [18] (<http://rs.tdwg.org/dwc/terms/index.htm#minimumElevationInMeters>) (mcpd:ELEVATION)

- dwc:eventDate [19] (<http://rs.tdwg.org/dwc/terms/index.htm#eventDate>) (mcpd:COLLDATE)
- dwc:locality [20] (<http://rs.tdwg.org/dwc/terms/index.htm#locality>) (mcpd:COLLSITE)
- dwc:countryCode [21] (<http://rs.tdwg.org/dwc/terms/index.htm#countryCode>) (mcpd:ORIGCTY)
- dwc:eventRemarks [22] (<http://rs.tdwg.org/dwc/terms/index.htm#eventRemarks>)

## BreedingEvent

- BreedingEventID
- BreedersSampleIdentifier (mcpd:ACCENAME)\*\*
- BreederInstitute (eurisco:BREDESCR)
- BreederInstituteCode (mcpd:BREDCODE)
- BreederPerson
- BreedingCountry
- BreedingCountryCode
- BreedingYear
- AncestralData (mcpd:ANCEST)
- PurdyPedigree
- BreedingEventRemarks

## LocationOfSafetyDuplication

- SafetyDuplicationID
- SafetyDuplicationDate
- SafetyDuplicationInstitute
- SafetyDuplicationInstituteCode (mcpd:DUPLSITE)

## GermplasmTreatiesAndRegulations

- GermplasmRegulationID
- TreatyOrRegulationName
- TreatyOrRegulationGoverningBody

## GermplasmDistribution

Distribution of germplasm reporting standards need to be developed. Perhaps to be included in the Darwin Core Extension terms?

*Reporting for the ITPGRFA (International Treaty for Plant Genetic Resources for Food and Agriculture).*

## GermplasmTrait

- GermplasmTraitID
- GermplasmTraitIdentifier
- GermplasmTraitClass
- dwc:measurementType [23] (<http://rs.tdwg.org/dwc/terms/index.htm#measurementType>)
- dwc:measurementMethod [24] (<http://rs.tdwg.org/dwc/terms/index.htm#measurementMethod>)
- GermplasmTraitSource
- GermplasmTraitScale
- GermplasmTraitRemarks

## GermplasmTraitExperiment

- GermplasmExperimentID
- GermplasmExperimentIdentifier
- GermplasmExperimentReport
- GermplasmExperimentYear
- GermplasmExperimentRemarks

## GermplasmTraitMeasurement

- dwc:measurementID [25] (<http://rs.tdwg.org/dwc/terms/index.htm#measurementID>)
- dwc:measurementValue [26] (<http://rs.tdwg.org/dwc/terms/index.htm#measurementValue>)
- dwc:measurementDeterminedBy [27] (<http://rs.tdwg.org/dwc/terms/index.htm#measurementDeterminedBy>)
- MeasurementByInstituteCode (*redundant by new term dwc:measurementDeterminedBy*)
- MeasurementGrowthStage

## ConservationTraits

Stephane Riviere of the ENSCONET has proposed to add these terms for information on conservation traits [28] ([http://www.nordgen.org/epgris3/wiki/index.php/Talk:DwC\\_Germplasm](http://www.nordgen.org/epgris3/wiki/index.php/Talk:DwC_Germplasm)) . <http://www.ensconet.eu/>

- IUCNCategory
- NumberOfSeeds
- BioRegion
- InSituCountry
- InSituRecoveryDateStarted
- InSituRecoveryInstitute
- InSituRecoveryRemarks

## Versions (DwC Germplasm)

- DwC Germplasm Version 0.1, August 26, 2009 (FIRST DRAFT VERSION) [29] (<http://rs.nordgen.org/dwc/germplasm/0.1/>)

## Mapping

- Mapping of DwC to the MCPD The Multi-Crop Passport Descriptor list, developed in 2001 by FAO and IPGRI (now Bioversity) is a widely used list of terms for documentation of Crop Germplasm.
- Mapping of EURISCO descriptors to the ABCD (2004-2006) [30] (<http://www.bgbm.org/tdwg/codata/Schema/Mappings/EURISCO-2-ABCD.pdf>) [31] ([http://www.ecpgr.cgiar.org/epgris/Tech\\_papers/EURISCO\\_Descriptors.pdf](http://www.ecpgr.cgiar.org/epgris/Tech_papers/EURISCO_Descriptors.pdf))

## References and links

- Germplasm Documentation, Descriptors and Derived Standards. [32] (<http://www.bioversityinternational.org/index.php?id=141>)

- Multi-Crop Passport Descriptors (2001). [33] ([http://www.bioversityinternational.org/index.php?id=19&user\\_bioversitypublications\\_pi1%5BshowUid%5D=2192](http://www.bioversityinternational.org/index.php?id=19&user_bioversitypublications_pi1%5BshowUid%5D=2192))
- Generation Challenge Program (GCP) Passport Schema [34] (<http://gcpcr.grinfo.net/include/webservices/schema-documentation.php>)
- Developing crop descriptor lists. Guidelines for developers. Bioversity International (2007). Available from Bioversity International ([http://www.bioversityinternational.org/index.php?id=19&user\\_bioversitypublications\\_pi1%5BshowUid%5D=3070](http://www.bioversityinternational.org/index.php?id=19&user_bioversitypublications_pi1%5BshowUid%5D=3070)) and Google Books ([http://books.google.se/books?id=8\\_QbY904cH8C&lpg=PT23&ots=lrCZvB7IXA&dq=crop%20mcpd&hl=en&pg=PA1#v=onepage&q=crop%20mcpd&f=false](http://books.google.se/books?id=8_QbY904cH8C&lpg=PT23&ots=lrCZvB7IXA&dq=crop%20mcpd&hl=en&pg=PA1#v=onepage&q=crop%20mcpd&f=false))
- EURISCO Descriptors (2003) [35] ([http://www.ecpgr.cgiar.org/epgris/Tech\\_papers/EURISCO\\_Descriptors.pdf](http://www.ecpgr.cgiar.org/epgris/Tech_papers/EURISCO_Descriptors.pdf))
- Species Profile Model (SPM) [36] (<http://wiki.tdwg.org/SPM>) group at TDWG. For descriptive data, trait (C&E) measurement experiment data.
- Moore, J.D., Kell, S.P., Iriondo, J.M., Ford-Lloyd, B.V. & Maxted, N., (2008). CWRML: representing crop wild relative conservation and use data in XML. BMC Bioinformatics, 9: 116. [37] (<http://wrap.warwick.ac.uk/547/>) [38] (<http://dx.doi.org/10.1186/1471-2105-9-116>)
- Kell, S.P., Moore, J.D., Iriondo, J.M., Scholten, M.A., Ford-Lloyd, B.V. and Maxted, N., (2008). CWRIS: a tool for managing and accessing crop wild relative information. In: Maxted, N., Ford-Lloyd, B.V., Kell, S.P., Iriondo, J., Dulloo, E. and Turok, J. (eds.) Crop Wild Relative Conservation and Use. Pp. 469-489. CAB International, Wallingford.

## TDWG 2009, working session on the DwC

At the TDWG 2009, Dag Endresen and Samy Gaiji convened a working session on the DwC-G and the implementation of the DwC-G in the GBIF IPT. The working session also included a more technical presentation of the GBIF IPT by Markus Döring, and a presentation of the GBIF Harvesting and Indexing Toolkit (HIT) by Kyle Braak.

Read more at [DwC\\_Germplasm\\_TDWG2009](#).

Retrieved from "[http://www.nordgen.org/epgris3/wiki/index.php/DwC\\_Germplasm](http://www.nordgen.org/epgris3/wiki/index.php/DwC_Germplasm)"

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