

**A GLOSSARY OF PLANT GENETIC RESOURCES TERMS IN  
ENGLISH AND THEIR DEFINATIONS IN ENGLISH**

**Compiled by  
Abebe Demissie  
EAPGREN**

**JAN. 2005**

Accession	:	A sample of seeds representing a cultivar, a breeding line or a collected field sample which is held in a storage for conservation. It needs to contain sufficient seeds to represent the genetic variation of the population from which it was derived, to provide material for germination tests to monitor viability and provide seeds for distribution and regeneration.
Active collections	:	Those that are kept under less than ideal storage for medium to short-term (5-20 years) and are used for regeneration, multiplication and distribution, evaluation and documentation.
Advanced characters	:	The characters or features, within a taxon, which are more or less specialized in proportion to their departure from the ancestral condition.
Alleles	:	Homologous genes that transcribe different messages.
Anatomy	:	The study of structure
Annual	:	Use of plants which perish within a period of one year.
Asexual	:	Reproduction without the involvement of sex organs, sexless.
Base collection	:	A collection of genetic resources samples which is for long term conservation.
Based sample	:	If visual evidence shows rare types of low frequency in a field being sampled and some of those variants are added to the original random samples so as to enrich the genetic variation, the sample is biased.
Biennial	:	Plants which requires two years to complete its life cycle, growing one year and flowering and fruiting the second year.
Biogeography	:	A branch of geography that deals with the geographical distribution of animals and plants.
Biological ecological	:	The variety and variability among living organisms and the Diversity complexes in which they occur.
Bisexual	:	Containing both male and female reproductive organs in a single flower (flowers).
Biosphere	:	The life zone of the earth including the lower part of the atmosphere and the upper part of the lithosphere.

Biosphere	:	The life zone of the earth including the lower part of the atmosphere and the upper part of the lithosphere.
Biosphere Reserve	:	Established under UNESCO's Man in the Biosphere (MAB) program, biosphere reserves are a series of protected areas linked through a global network intended to demonstrate the relationship between conservation and development.
Biota	:	The living organisms of a region.
Biotechnology	:	Techniques that use living organisms or substances from organism to take or modify a product. The most recent advances in biotechnology involves the use of recombinant DNA techniques and other sophisticated tools to harness and manipulated genetic material.
Centre of diversity	:	The regions where most of the major crop species were originally domesticated and developed. These regions may coincide with Centres of origin.
Centre of domestication	:	Region where plant domestication must have taken place, or where agriculture originated.
Centre of origin	:	The area in which taxon originated and from which it has spread such as area contains a large number of varieties of this taxon.
Character	:	An identifiable hereditary property such as specific component of colour, a structural detail, a colour pattern, or resistance to disease.
Characterization	:	Consists of recording those characters which are highly heritable can be easily seen by the eye and are expressed in all environment.
Collection/ collecting	:	Gathering together
Community	:	A group of ecologically related population of various species of organisms occurring in a particular place and time.
Conservation	:	The practice that permits the perpetuation of a resource.

Cryogenic storage (Conservation)	:	The preservation of seeds, semen, embryos, or micro-organisms at extremely low temperature below $-130^{\circ}\text{C}$ . At this temperature, water is absent molecular, kinetic energy is low. Diffusion is virtually nil, and storage potential is expected to be extremely long.
Giltgen	:	Cultivated plant species.
Ecology	:	The science of the cell, its life history, nuclear division and development
Cytogenetics	:	Investigations which combines and synthesizes the methods and results of chromosome cytology with the genetic methods and result of breeding analysis.
Database	:	An organized collection of data that can be used for analysis.
Domesticated Plants	:	Plants grown by man made environment
Dormancy (seed)	:	Is the condition in a viable seed which prevents it from germinating i.e. when it is at a suitable temperature in a medium providing adequate water and access to a gaseous environment approximating to air.
Ecosystem	:	A functional system which includes, the organisms of a natural community together with their environment.
Ecosystem Diversity	:	The variety of ecosystems that occur within a large land-scape ranging from biome (the largest ecological unit) to microhabitat.
Endemic	:	Peculiar to a certain region.
Endemism	:	The occurrence of a species in particular locality or region.
Expedition	:	Sending forth or starting out on a journey for some definite purpose.
Exploration	:	The act of searching a particular plant species to establish its range of agronomically useful variability and geographic distribution.
Organic species	:	An organism that exists in free state in an area but is not native to that area. Also refers to animals from outside the country in which they are held in captive or free ranging populations.

Ex-situ	:	Pertaining to study or maintenance of an organism or groups of organisms away from the place where they naturally occur. Commonly associated with collection of plants and animals in storage facility botanic gardens and zoos.
Extinction	:	Disappearance of a taxonomic group of organisms from existence in all regions.
Funa	:	Organic of animal kingdom.
Meld genebank	:	A management system involving the use of offsite methods such as botanic gardens. Zoological parks. Arboretums, and captive breeding programs to protect and maintain biological diversity in plants animals and micro-organisms.
Floral	:	Organism of the plant kingdom.
Gene-Pool	:	The collection of genes in an interbreeding populations.
Genes	:	A chemical unit of hereditary information that can be passed from one generation to another.
Genetic diversity	:	The variety of genes within a particular species variety or breed.
Genetic drift	:	A cumulative process involving the chance loss of some genes and the disproportional replication of others over successive generations in small populations, so that the frequencies of genes in the population is altered. The process can lead to a population that differs genetically and in appearance from the original population.
Genetic resources	:	Are actual or potentially useful characteristics of plants, animals and other organisms that are determined genetically
Genotype	:	The genetic constitution of an organism as distinguished from its physical appearance.
Genetic	:	The diversity of genetic material within and between species and subspecies of animals & plants.
Germination	:	A laboratory test to estimate the proportion of seeds within an accession capable of germination.

Complasm	:	Refers to genetic information of an organism or group of organisms.
Habitat	:	The place or type of site where an organism naturally occurs.
Hybrid	:	An offspring of a cross between two genetically unlike individuals.
Imbition	:	The act of imbibing i.e., water ascends by a chemical process in cell walls.
Inaibation	:	The time from the moment of infection or sowing of spores until growth is manifest.
Indigenous	:	Existing and having originated naturally in a particular region or environment.
Inflorescence	:	Any arrangement of more than one flower.
Infra	:	In combination, signifying below.
In situ	:	Maintenance or study of organism within an organism native environment.
En situ genebank	:	Protected areas designated specifically to protect genetic variability of particular species.
....itro	:	(literally “in glass”) The growing of cells, tissues, or organs in plastic vessels under sterile conditions on artificially prepared media.
Kernel	:	The nucleus of an ovule or of a seed, that is, the whole body within the coats.
Landrace	:	Primitive or antique varieties usually associated with traditional agriculture. Often highly adapted to local conditions.
Long term storage	:	
Monitoring	:	The period of storage between two viability tests to ascertain whether to continue storing the accession or to produce a fresh stock of seeds by regeneration or replacement from other source.

Monoculture	:	The cultivation of single crop to the exclusion of other crops on a piece of land.
Monohology	:	The study of form and its development.
Native	:	A plant or animal indigenous to a particular locality.
Natural	:	Produced or effected by nature.
Ortseeds	:	Seeds that contain any fluid fat-bodies in their seeds.
Organism	:	A body posing organic structure.
Orthodox	:	Seeds that are able to withstand the reduction in moisture and temperature necessary for long-term storage and remain viable.
Passport	:	Accession identifier and information recorded by collector.
Perennial	:	Is a plant which last several years not perishing normally after once flowering and fruiting.
Preliminary	:	(Consisting of recording a limited number of additional traits thought to be desirable by a consensus of users of the particular crop.
Prime center of diversity	:	Place where domestication first took place.
Dimitive?	:	Specific types in contrast to varieties and hybrids.
Varantine control	:	The legal enforcement of measure planned to present pests and diseases from spreading or having spread, from multiplying sufficiently to become intolerably troublesome.
Race	:	A variety of such fixity as to be reproduced from seed, used also in a loose sense for related individuals without regard to rank.
Receme	:	An inflorescence consisting of a main exis, bearing single flowers alternately or spirally on stalks (pedicels) of approximately equal length.
Random sample	:	A random collection from a population selected in such a way that all items in the population are likely to be present.

Recalcitrant seed	:	Seeds which cannot be dried without damage; seeds that cannot survive the reduction in moisture content or lowering of temperature necessary for long-term storage.
Regeneration	:	Reproduction.
Sample	:	A part of statistical population whose properties are studied to gain information about the whole.
Sampling	:	Collecting variants of plant species in order to represent the extent of genetic variability.
Secondary Centre diversity	:	Areas of genetic diversity, where a crop might have been grown to a greater extent than in the region where it was first domesticated.
Short-term storage	:	
Somaclonal variations	:	Structural, physiological or biochemical changes in a tissue, organ, or plant that arise during the process of in vitro culture.
Species diversity	:	The number and variety of species found in a given area in a region.
Faxon	:	Any classification unit of any rank.
Threatened species	:	Referring to a species that is likely to become endangered within the foreseeable future, throughout all or a significant portion of its range.
Tissue culture	:	A technique in which portions of a plant or animal are grown on an artificial culture medium in an organized (e.g. as plantlets) or unorganized (e.g. as callus) state.
Chi sexual of flowers	:	Of one sex
Variation	:	Divergence in the characteristics of an organism caused by environment or by difference in genetic constitution.
Variety	:	A sort or modification subordinate to a species.
Viable	:	Used of seed which is capable of germinating.
Viability	:	The possibility of growth.

Wild	:	Is a race or species which is neither cultivated nor encouraged by human disturbance.
Wildlife	:	Living non domesticated animals.
Wild relatives	:	Plant species that are taxonomically related to crop species and serve as potential sources for genes in breed of new variety of those crops.
.....?	:	Organisms captive or living in the wild state that have not been subject to breeding to alter them from their native state.
.....?	:	A plant which is adapted to withstand extremely dry conditions.
.....?	:	Product
.....?	:	The single cell which results from syngamy fertilized egg.
Desertification	:	Land degradation in arid, semi-arid and dry sub-humid areas resulting from factors, including climatic variations and human activities.
Drought	:	The naturally occurring phenomenon that exists when rain is below normal recorded levels, causing serious hydrological imbalances that adversely affect land resources' production systems.
Mitigating the effects Of drought	:	Means reduction in the productivity of land resulting from land uses or processes such as soil erosion, overgrazing and over-cultivation.
Land degradation	:	Means reduction in the productivity of land resulting from land uses or processes such as soil erosion, overgrazing and over-cultivation.
Arid, semi-arid and Dry sub-humid areas	:	Means areas other than polar and sub-polar regions, in which the ratio of annual rainfall to potential evapo-transpiration falls within a range of 0.05-0.065.

Global warming	:	The raising of green house gas concentrations, where more earth radiation is absorbed and re-emitted back to the earth. This results into a warming of the atmosphere near the earth's surface.
Climate	:	The average weather over a period of years or decades, including seasonal extremes and variations locally, regionally, or across the globe.
Climate Change	:	Change in the average climate (or its variability) from one averaging period to the next.
Greenhouse gases	:	Gases such as carbon dioxide, water vapour, clouds and small particles that trap heat in the lower part of the atmosphere.
Natural green House effect	:	The process of trapping radiation heat in the atmosphere.
Anthropogenic Emissions	:	Emission of gases such as petrol fumes through human activities, as opposed to natural gas emission.
Ramsar site importance	:	A wetland included in the list of wetlands of international importance
Sustainable use of Wetlands	:	Human use of wetlands in such a way that they yield the greatest continuous benefit for the present generations while maintaining its potential to meet the needs and aspirations of future generation.
Water fowl	:	Aquatic (usually fresh water) birds.
Wise use of wetland	:	Sustainable use of wetlands for the benefit of mankind, in a way that is compatible with the maintenance of the natural properties of the ecosystem.
Bequest value	:	The value of knowing something will be there for future generations
Direct use value	:	Refers to products or goods which are consumed directly such as food or timber
Existence value	:	The value of knowing something exists even if you will never use it or see it.

- Indirect use value : Refers to the services that support the products that are consumed, this includes ecosystems functions like nutrient cycling.
- Non use or passive value : Refers to the value for things that we don't use but would feel a loss if they were to disappear
- Potential or option value : Refers to the use that something may have in the future