

A Global Strategy

for the conservation and use
of Coconut Genetic Resources

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2.1.3 International coconut nomenclature

Standardization of coconut cultivar names has been undertaken for decades. During the first COGENT meeting held in Montpellier, France in May 1992, representatives from national collections tried to clarify the status of existing collections and outlined what would become the Coconut Genetic Resources Database (CGRD).

Coconut nomenclature has been quite specific since 1992, when researchers were asked to systematically provide an international name to any accessions they collect. It is unclear why and by whom this requirement was established, although COGENT believes that this nomenclature rule has strongly influenced users' representations of coconut diversity and the conservation of coconut germplasm at the global level.

The guidelines "Useful definitions of terms and nomenclature" has been released as an annex in the book "Coconut genetic resources"¹ published in 2005 by Bioversity and available on the COGENT website. These guidelines were also more recently published in the "Catalogue of conserved germplasm"², together with an extensive list of international names of coconut cultivars.

The researchers in charge of the national coconut genetic resources programme are responsible for giving international names to the germplasm from their country. However, they are prompted to follow these specific guidelines in order to achieve international standardization.

Accessions are generally named just after the accession has been planted in the *ex situ* genebank. These names start to become "international" only when the passport data of the collected germplasm has been transmitted to the CGRD, serving *de facto* as an international reference. The COGENT secretariat, which has been acting as CGRD manager, has made sure that the new names meet the nomenclature rules and, if necessary interacts with national researchers to adjust the proposed name accordingly. For instance, a new international name must not duplicate any previously recorded name (including synonyms and abbreviations).

Once the first version of the CGRD was released, twenty COGENT member-countries were visited by CIRAD experts. National researchers were trained in generating and inputting data into the database. These visits offered many opportunities to interact with national researchers about the names of coconut germplasm.

Presently, the only names which have an international status are those of accessions that are conserved in *ex situ* genebanks and recorded in the CGRD. Lists of these names are released on the COGENT website as a FAQ (frequently asked question)³. Beyond that housed in the *ex situ* genebanks, coconut germplasm does not have registered international names.

¹See URL: http://www.cogentnetwork.org/images/publications/Coconut_genetic_resources.pdf

² See URL : <http://www.cogentnetwork.org/conserved-germplasm-catalogue>

³ Which Coconut germplasm is presently conserved by COGENT country members?
See URL: <http://www.cogentnetwork.org/faq/139-exsitu>

In 1991, Dr Hugh Harries (1991) tried to develop a “Coconut Registration Authority”, but this proposal was not further developed. A more complete list of coconut cultivars does exist and is based on this early initiative⁴ and the subsequent work of some CIRAD researchers. This list has not yet been officially published or released, due to lack of time availability of the researchers involved in its maintenance, and lack of known formal procedures to ratify an official registration.

Each accession planted in a COGENT *ex situ* genebank has to be registered under at least a cultivar name and an abbreviation. National researchers were advised not to create a new cultivar name for each and every sample they collected in farmers’ fields. For that purpose, the notion of population within a cultivar was introduced in the nomenclature as follows: “Populations could denote minor geographical and/or phenotypic differentiation within a cultivar”. This helped limit the unwanted proliferation of cultivar names which could lead to unnecessary and costly conservation of the same germplasm accessions under different cultivar names.



Pool of coconut fruits collected from the same cultivar

There still remain differences between countries regarding the way they are naming the accessions. For instance, researchers in Bangladesh, Pakistan and Sri Lanka recently named many accessions as populations of already existing cultivars, whereas Indonesian researchers continue to give many new cultivar names to the accessions they collect. As for other crops, also a coconut cultivar should have characteristics that distinguish it from any other known cultivar. In reality, within a large network of 39 countries, this principle is sometimes difficult to meet and check. The standardized characterization and evaluation data existing in the CGRD help to compare accessions and cultivars conserved in different countries.

Using international names in scientific publications is highly recommended. Whilst there may be good reasons to use another name, it is good practice to include a list establishing links between the alternative names and the international names.

2.2 Methodologies for conserving coconut genetic resources

For many crop plants, germplasm can be stored as dried seeds and at low temperatures. Coconut seeds are recalcitrant: they germinate naturally using the free water available inside the coconut and germination can be prevented if the germ-pore cover remains dry due to dryness in the adjacent fibres of the husk (M. Foale, personal communication). Seednuts cannot normally survive the drying process, nor can they be stored below 8°C. Therefore, coconut germplasm can be maintained *in vivo* as living

⁴ COGENT and CIRAD take this opportunity to thank Dr Hugh Harries for having transmitted his huge compilation work of coconut cultivar names.