
CONSERVATION OF COCONUT GENETIC RESOURCES IN SRI LANKA

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Coconut has been recognized as a crop with tremendous potential for alleviating poverty in the third world. Its importance however, as an oil crop and a source of income generation for poor farmers' incomes. The low productivity constraints need to be identified accurately and dealt appropriately to gain maximum benefits of coconut and hence proper identification, collection, evaluation and conservation of coconut genetic resources in the country was recognized as an essential step towards developing strategies for enhancing incomes of small holder. On the other hand the genetic erosion of coconut has reached an unprecedented ark due to natural disasters, land fragmentation and competition from other crops.

A search for coconut genetic resources was initiated in 1984 with emphasis on collecting drought tolerant germplasm and subsequently for random collecting to capture a more genetically representative sample. These collections are conserved ex-situ in 11 CRISL gene banks. To date, the number of collections has reached 100, constituting 7 drought tolerant, 51 random, 7 seed palm (plus palm), 8 exotic and 17 distinct phenotypes Data (standard morphological descriptors) are being constantly gathered from these ex-situ accessions for their genetic evaluation. Descriptor-data and DNA polymorphisms have been assessed in a sample population and a narrow genetic base was observed among most common tall coconuts of the country. Molecular data unveiled a gamut of information on population's structure of the coconut in Sri Lanka and their roots of origin.

Utilisation of coconut germplasm was looked in two dimensions, use of desirable characters, such as jelly-like endosperm of dikiri coconut for confectionery and small bodiri nut as a beverage, for income generation of poor-farmer families and use of genetically diverse accessions for production of new hybrids. Importation of germplasm was envisaged as a high priority for enrichment of coconut germplasm in the country.