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## THE WORLD FIRST AND ONE OF ITS EVER KIND, ISOLATED COCONUT SEED GARDEN AT AMBAKELLE, IN SRI LANKA CELEBRATED ITS GOLDEN JUBILEE

*Dr. Lalith Perera*

In 1954, a protected jungle of about 350ha in Ambakelle was acquired from the forest department by the CRISL and about 100ha of jungle in the middle was cleared to plant seedlings to establish the world's first isolated coconut seed garden. Seedlings for the seed garden were raised by artificial pollination between selected mother palms and also by pollen from prepotent palms identified

by long term progeny trials. For the superior progeny established at Ambakelle seed garden, valuable genes from about 2000 elite coconut mother palms from fourteen high yielding estates, selected in various parts of the coconut growing areas in Sri Lanka has been contributed. Hence this seed garden has a reputation as a coconut genetic resource centre as well. The seed garden was formally inaugurated

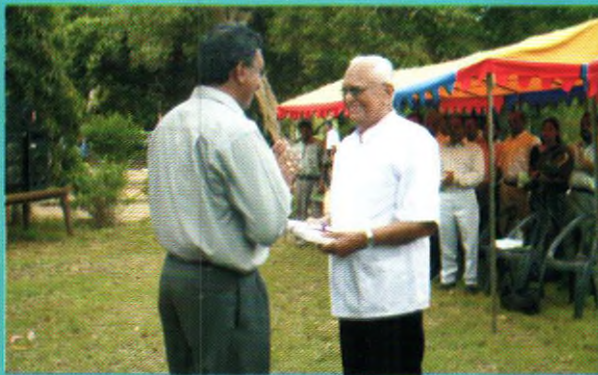
on 23 April 1955 by planting the first seedling in the seed garden by the then Food and Agriculture minister, Hon. Mr. J R Jayawardena, the first Executive President of Sri Lanka later. The entire area was then planted with high quality seedlings by phasing out 10-15ha per year. The seeds produced by natural directed pollination between tall trees was named as variety CRIC60 or variety tall x tall and produced in



A dwarf and tall mix field in the seed garden



Past Superintendents of the Isolated Seed Garden with, third from left in the first row, Chairman/Coconut Research Board, Dr. D.V Liyanage, the creator of the seed garden, Director/ Coconut Research Institute, Deputy Director (research), and Second from the right in the back row, Head of the Breeding Division.



Felicitating Dr. D.V. Liyanage by Hon. Anura Priyadarshana Yapa, the Minister of Plantation Industries, Sri Lanka.

large quantities with low cost of production.

In 1950's, CRISL was researching about the development of hybrid coconuts and found that both Sri Lanka dwarf green x Sri Lanka tall and Sri Lanka dwarf yellow x Sri Lanka tall hybrids were superior to tall x tall in terms of precocity and nut number. Hybrid seed production involved emasculating, bagging of dwarf inflorescences and hand pollination of female flowers using pollen of tall origin. This practice again was expensive and laborious and production of seed

nuts through this process was limited and hence insufficient to meet growers' demand. In order to solve this problem and for production of hybrid in large quantities, isolated seed garden concept was further considered and seed garden was physically expanded by about 50ha to plant dwarfs, both the green and yellow variety within the seed garden. The idea was to emasculate dwarfs and then allow natural pollination of female flowers from pollen from tall palms planted within the seed garden. The first dwarf seedling was established in the seed garden in 1956, but large area of

dwarfs was planted between 1966 and 1977. Dwarf seedlings for the seed garden have been originated from large number of mother trees selected from three estates, where pedigree of some of palms was known for few generations.

Presently, there are 16,606 tall trees and 2110 dwarf trees available in the seed garden. Flowering time and yield data of individual trees of the first three fields for a period of twenty years are available. Flowering time, yield data and husked nut weight of individual trees were available for the field 4 of the seed garden. This allows plant breeders to select best coconut genotypes for high yield as well as for yield stability and other traits and use them for breeding purposes and for establishment of subsequent seed gardens. The production potential of the seed garden was excellent and it exceeds 80 nuts per palm per year on average. The seed garden contributes for the national replanting programme largely and about 1,000,000 tall x tall seed nuts and about 80,000, dwarf x tall seed nuts are supplied to growers annually.

The world first Isolated Coconut Seed Garden at Ambakelle in Sri Lanka completed its 50<sup>th</sup> birthday on 23 April 2005. The pioneered scientists in establishing and developing the seed garden and those who significantly contributed for the wellbeing of the seed garden were felicitated on the day of its golden jubilee.

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**APCC Secretariat Congratulate all the scientists who are associated with this seed garden and also request to make the best use of this seed garden.**