# Botanic Gardens: A Gateway of Plant Introduction

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Botanic Garden is an institution holding documented germplasm collections for the purpose of conservation, research, display and education. There are about 2,240 Botanic Gardens throughout the world, spread over 155 countries. About 80,000 plant species have been maintained by the Botanic Gardens worldwide. The germplasm collections of Botanic gardens are unique source at one place and provide enormous scope for study, research and to further utilize these for crop improvement programme. Introduction of plants is an important activity of the Botanic Gardens. There is exchange relation of Plant Genetic Resources (PGRs) amongst the botanic gardens throughout the world by Index Seminum (Seed List) particularly those located in the iso-climatic zones. Therefore, there is a unique scope for introduction of new and novel genotypes from different sources. Once the introduced plant species are acclimatized, these are used for various purposes. The new plant species thus introduced and developed when released in the horticultural trade contribute effectively. However, at present introduction of PGRs through Plant Exchange Programme from abroad is little difficult after enactment of CBD that emphasizes benefit sharing and other legal application.

National Botanical Research Institute Botanic Garden is the third largest and one of the old botanic gardens in India and effectively contributing in plant introduction since its inception. There is exchange relation with about 200 botanic gardens of the world. The emphasis is selection and introduction of new ornamentals for their further exploitation in the horticultural trade. As a result of the sustained efforts many new plant species have been introduced and a repository of genetic base created. Some of the notable introductions are as follows. *Adansonia za, Agave salmiana, Caesalpinia cacalaco, C. mexicana, C. gilleisii, C. velutina, Bougainvillea cvs., Dioon edule, Encephalartos gratus, Euonymus fortunei 'Emerald 'n' Gold', Gladiolus cvs., Houtuynia cordata 'Chamaleon', Jacaranda cuspidifolia, Nolina stricta, N. paryii* etc. The introduced plant materials are first acclimatized, multiplied and their performance assessed in the local agro-climatic conditions. The genotype having desirable characters are further multiplied and utilized in the improvement programme and also given to the other botanic gardens and research Institutes on exchange. Besides, those, which have commercial potentiality, are released for horticultural trade.

# Utilization of Introduced Germplasm for Genetic Improvement of Indian Tobacco

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Introduced germplasm has played a significant role in cultivar improvement various types of tobacco cultivated in India. Out of 79 varieties developed and released so far, 13 are direct introductions. Six varieties have been developed using both parents of exotic origin and 11 by using one exotic parent. Forty-nine varieties have been developed by hybridization among indigenous germplasm only. Thus, contribution of introduced germplasm to tobacco varietal development in India is about 40% as compared to 60% of indigenous germplasm. A judicious use of indigenous germplasm from different sources in complement with specific exotic germplasm is suggested to make further gains in productivity and quality of Indian tobaccos, besides promoting sustainability of the crop. Implications of extensive use of exotic germplasm have also been