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RESEARCH ARTICLE

Cocoa (*Theobroma cacao* L.) genetic stocks–collection, evaluation and utilization

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SUMMARY

Cocoa is the only source of chocolate. Cocoa plantations around the world face severe biotic and a biotic stresses. To over come these stresses new hardy varieties with superior qualities are essential. Collection of much diverse germplasm and its wise exploitation forms the basic step in this direction. Cocoa is comparatively new crop to India; hence the genetic base is narrow. The crop assumed commercial status and has emerged as one of the remunerative inter crops of peninsular India. Though cultivation was problem free during initial years, problems started to arise one by one. At this juncture, the Kerala Agricultural University has initiated cocoa research in 1979 and its main focus was on breeding with establishment of germplasm, its evaluation and exploitation. Thus the University has established the biggest assembly of germplasm in India with 564 accessions, by LOCAL collection and by import from the International Cocoa Quarantine Centre (ICQC), University of Reading U.K. The accessions were planted @ 4 plants each and were catalogued based on economic characters, pest and disease resistance. The present breeding thrusts are evolving varieties with high yield, bold bean size and quality attributes and resistance to vascular streak dieback disease and Phytophthora pod rot. Out of 564 types maintained in the germplasm, seven superior types were released a clonal varieties (CCRP 1 to CCRP 7). 51 were identified as better combiners and these have been utilized for planting in clonal garden. Among the 549 self incompatible types, 134 were utilized in breeding programme for yield improvement, 47 were exploited as parents in breeding for resistance to Vascular streak die back diseases and black pod diseases, 9 with bean size of above 2.5 g were utilized as parents in the programme for evolving bold bean type varieties.17 criollo and criollo- like accessions were utilized for breeding programme for improvement of processing qualities. The superior hybrids CCRP 8,9,10 have been released for cultivation.

Key Words **:** Amelonado, Criollo, Germplasm, *Theobroma cacao*, Introduction

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Cocoa (*Theobroma cacao* L.) popularly known as Food of Gods', is a neotropical species occurring in primary and secondary regions of distribution in the Americas lying within 20^0 N and S of equator. The crop was introduced to India during 1960's. It is now cultivated in all south Indian states in a total area of 46,318 ha and production of 12, 954 tonnes. In spite of aggressive area expansion drive by Cadbury India Ltd, the demand - supply gap increases by 10 per cent every year and the present production meets only 45 per cent of the domestic demand. The gap is widening as consumption is increasing at a rate of about 15-20 per cent every year. Indian cocoa is preferred by chocolate makers due to its high quality, low global production, high import duty and high cost for transportation during import. Cocoa has now become the most remunerative inter crop of coconut and arecanut providing an additional income of not less than Rs.75, 000/ year/ hectare.

The future of world cocoa mainly depends on the ready availability of improved planting materials. Significant improvement is warranted in resistance to major diseases

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