

# ASSESSMENT OF THE GENETIC BASE OF WILD TURMERIC (*CURCUMA AROMATICA* SALISB.) IN KERALA, INDIA

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## ABSTRACT

Wild turmeric (*Curcuma aromatica* Salisb.) is a valuable aromatic medicinal herb belonging to the family Zingiberaceae. Due to climatic and anthropogenic activities the plant faces acute narrowing of natural populations. Assessment of the genetic base of such plants would provide critical information useful in developing conservation strategies. For the purpose, the diversity of the above species in Kerala State of India was assessed presently based on fifteen agronomic growth and yield characters recorded from sixty two accessions of the species collected from different locations including wild and domesticated habitats in the study area. All the fifteen characters studied namely plant height, number of tillers, number of leaves per tiller, leaf length, leaf breadth, leaf area, yield per plant, number of primary fingers, length of primary finger, diameter of primary finger, number of secondary fingers, length of secondary finger, diameter of secondary finger, length of mother rhizome and diameter of mother rhizome showed statistically significant variation between the accessions. Such a significant variability with respect to important morphometric characters shows the broad genetic base of the species in this area thereby indicating the potential capability of this plant to withstand the biotic and abiotic stresses caused by changes in landscape ecology and anthropogenic factors. However, both in vivo and ex vivo conservation strategies should be developed for the species so that any possible threat in future is addressed.

Keywords: *Curcuma aromatica*, Wild turmeric, Changes in landscape ecology, Diversity