A STUDY ON THE ASSESSMENT OF THE GENETIC BASE OF PEACOCK GINGER (*KAEMPFERIA ROTUNDA* L.) IN KERALA, INDIA

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ABSTRACT

Kaempferia rotunda L. popularly known as peacock ginger is a rare rhizomatous medicinal herb belonging to the family Zingiberaceae. Due to the climatic and anthropogenic activities, the plant faces acute narrowing of natural populations. The genetic base of Kaempferia rotunda is getting narrowed due to various reasons including anthropogenic and climatic factors. Assessment of genetic base of such plants would provide critical information useful in developing conservation strategies. For the purpose, the diversity of the species in Kerala state of India was analyzed based on the observations on fifteen agronomic growth and yield characters recorded from sixty eight accessions of the species collected from different locations of its cultivated areas and wild habitats in the study area. All the fifteen growth and yield 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, number of secondary fingers, length of primary finger, diameter of primary finger, length of secondary finger, diameter of secondary finger, length of mother rhizome and diameter of mother rhizome showed statistically significant variations between the accessions. Such a significant variability with respect to important agronomic characters shows the broad genetic base of the species in the study area thereby indicating the potential capability of this plant to withstand the biotic and abiotic stresses caused by changes in landscape ecology and anthropogenic activities.

Key Words: Peacock ginger; Kaempferia rotunda; Diversity; Changes in landscape ecology