Morphological Characterization of the Ecotypes of *Murraya koenigii* (Curry Leaves) in Sri Lanka

K. B. L. Kaushalya and L.M.H.R. Alwis*

Department of Export Agriculture, Uva Wellassa University, Badulla, Sri Lanka

Curry leaves (*Murraya koenigii)* are significantly used as a medicinal spice; highly valued as an ingredient that promotes appetite for its unique, inherent; odor and flavor. Its nutrient property is used for cosmetic products, functional goods, and considered a valued export commodity. Being a native wild species, domestication cannot be seen. Thus, high morphological differences could be observed making high diversity. The ecotypes of *Murraya koenigii* were proved to be available at *Dambulla, Matale*, and *Ritigala* sites but morphological studies have not been conducted to find whether the morphological characters are diversifying geographically. This study was carried out to identify the morphological characters of the ecotypes of *Murraya koenigii.* Thus, the plant descriptor was developed. From the above selected ecoregions including *Mahiyanganaya* district, samples (12) with replicates (3) were collected randomly. Cluster analysis was conducted for all the sixteen characters including nine quantitative and seven qualitative parameters, to identify whether they are genetically overlapped. There was a significant difference between selected ecotypes from each selected eco-regions with consideration to the given quantitative morphological traits based on the analysis of variance. *Dambulla* type1 clustered with *Matale* type2. As the second cluster, all other types were clustered together. *Dambulla* type3 was clustered as a separate group. For the *Mahiyanganaya* (*MH*) samples, though the comparative results could not be obtained from the mean comparison data analysis; *MH* type2 and *MH* type3 were clustered together. This cluster reflected only the qualitative traits but not the quantitative characters. Ecotypes were clustered together with each other thus proving that there is a significant morphological variation among the ecotypes of *Murraya koenigii.*

Keywords: Descriptor, Ecotype, Morphological Characterization, Native, Wild Species