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**Phenotypical Variation and Characterisation of Mango (*Mangifera indica* L.) Varieties in Jaffna**

**N. Krishnapillai<sup>1\*</sup>, R.S.W. Wijeratnam<sup>2</sup>**

<sup>1</sup>*Department of Botany, University of Jaffna, Sri Lanka*

<sup>2</sup>*Industrial Technology Institute, Colombo 07, Sri Lanka*

*\*nahmagal@gmail.com*

**Abstract**

Mango (*Mangifera indica* L.) is a member of family Anacardiaceae and the genus *Mangifera* belongs to the order sapindales. *Mangifera* species consists of 69 species and only two species are found in Sri Lanka. *M. zeylanica* is endemic and wild while *M. indica* is a cultivated species in Sri Lanka. Diversity of mango varieties is rich in northern part of Sri Lanka. However, characterisation of mango varieties in field is a difficult task. Thus this study was designed to identify and characterise mango varieties in field and provide identification keys with most useful morphological traits. 18 grafted mango varieties including popular 'Karuthakolumban', 'Willard', 'Ambalavi' and 'Chembaddan' with 54 mango accessions were selected for preparation of identification keys. Selected leaf and inflorescence characters to prepare identification key were; colour of immature leaf, leaf shape, leaf margin, inflorescence axis colour, flower colour and number of petals in the flower (tetramerous, pentamerous or hexamerous) while selected fruit morphological traits were; fruit skin colour, skin texture, skin thickness, fruit shape, weight, size, stalk insertion, beak type and stem end cavity. Identification keys were prepared based on the mango descriptors listed by IPGRI (2006).

Two types of key were prepared based on the variation of the qualitative parameters. First key was prepared using leaf and inflorescence characters while fruit characters were used in the second key. Due to these keys, mango varietal identification in the field is feasible and it will be helpful to local mango growers, researchers and breeders. This method of identification and characterisation is a low cost, cheap and efficient tool compared to molecular techniques and therefore it is suitable for developing country like Sri Lanka. Validity of the key has been subsequently evaluated in the field and it was found validity is consistent due to the uniform environmental conditions of dry zone.

**Keywords:** Mango varieties, Leaf, Inflorescence and fruit morphological traits, Identification keys