

**Preliminary investigation on chemical parameters of Karuthacolomban Mangoes  
(*Mangifera indica* L.) in Jaffna**

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**Abstract**

Karuthacolomban mango from Thenmaradchy division of Jaffna district is very popular among the consumers. But there is no consistency in the physico-chemical characters of the fruit among these Karuthacolomban cultivars. Therefore, a study was carried out to evaluate the chemical parameters of mango fruits from three GramaNiladhari divisions in Thenmaradchy division of Jaffna district namely Manthuvil, Kachchai and Madduvil and the fruits were labeled as MAN, KCH and MAD respectively. Fruits were harvested at proper maturity stage and allowed for ripening. Total Soluble Solid (TSS), Titratable acidity (TA), Total Sugar content (TS), Crude fiber (CF) and Ascorbic Acid Content (ASC) were measured from the fruit pulp. Principle component analysis was carried out to characterize the chemical properties. Cluster analysis was performed on tabulated data set to group the plants based on their similarities and separated from the dendrogram. Mango fruits with higher mean value with total soluble solids (>15° Brix value), total sugar (>13.5 g/100g of flesh), titratable acidity (<0.4%), ascorbic acid (>34 mg/100g of flesh) and fiber content (<4.5%) were considered for plant selection. Cluster II showed promising chemical characters of high total soluble solids, moderate acidity and ascorbic acid content with acceptable sugar and fiber content. The mango trees labeled as MAN2, KCH1 and MAD5 from the cluster II were selected as better trees could be used as mother plants. Further molecular marker assisted studies are required to confirm these differences before using these plants as mother plants 1800-1289.

**Keywords:** Chemical parameter

Cluster

Dendrogram

Variety

Variability