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**Determination of essential oil content and composition of palmarosa (*Cymbopogon martinii* Roxb.)**

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Palmarosa (*Cymbopogon martinii* Roxb.) belongs to family Poaceae. It has a rose like sweet odour. Essential oil content and composition depend upon the climatic condition, harvesting time, maturity, extent of wilting and the distillation process. However, the objective of this study was to determine the essential oil content and chemical composition in three different parts of the plant.

Matured palmarosa plants were selected from the Central Research Station, Department of Export Agriculture, Matale. The plants were cut at 10 cm above the ground, allowed to wilt in shade for 24–48 h. A 30 g sample of stem, leaves and whole plant water distilled in three replicates. Moisture content of these samples was determined using standard Dean and Stark method separately. Percent oil content was determined on dry basis and percent concentrations of constituents in oil were determined using Shimadzu GC 8A Gas Liquid Chromatograph with Flame Ionization detector with 10% carbowax 20 M WAW column.

The leaves of palmarosa showed the highest volatile oil content at 2.18% and the stems at 0.52% was the lowest. Palmarosa oil is valued for its high geraniol content that fetches a higher price. The highest geraniol concentration (58.13%) was observed in leaves and the lowest (49.18%) in stems. But the highest geranyl hexanoate concentration (33.97%) was observed in stems and the lowest (21.75%) in leaves.  $\beta$  Ocimene, linalool, Geranyl acetate, Farnesol are other major chemical components in palmarosa oil. The highest percentage of essential oil and geraniol content was observed in palmarosa leaves.