ABSTRACT

_Pogostemon cablin_ Benth., commonly called the patchouli plant yields an essential oil called the patchouli oil of commerce. It is highly valued by the perfumery industry since there is no substitute for natural patchouli oil. This coupled with its versatile use, narrow genetic base and localized production base has always maintained an excess demand for patchouli in the national and international market. The present study aims at establishing a germplasm collection of patchouli, characterising the germplasm and evaluating it for growth, yield and oil parameters. Molecular characterisation studies proved that RAPD can function as an ideal tool for removing taxonomic ambiguity in the patchouli crop. Field evaluation of the patchouli germplasm showed that although MEG 1, the wild patchouli exhibited greater vigor and regeneration it did not match up in its oil quality to the cultivated varieties KER 1 (Penang Patchouli) and KAR 1 (johore patchouli) . Since the varieties possessing good quality oil are observed to be poor biomass yielders and vice versa, cultivar specific propagation methods were devised and adopted for the propagation of the selected patchouli _elites_. Axillary bud propagation and somatic embryogenesis were observed to be the ideal methods of choice for the large scale propagation of patchouli accessions KER 1 and KAR 1.

**Key words:** _Pogostemon cablin_, Patchouli, Lamiaceae, Essential oil, RAPD, Micropropagation