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Short Communication

ELITE *CINNAMON ZEYLANICUM* GENOTYPES ISOLATED FROM GERMPLASM OF INDIA AND CEYLON

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Cinnamomum zelynicum Blume is a native of Ceylon, is also found growing in south India, (Ridley, 1893). This species from its wild state is being cultivated in both the countries for spice and leaf oil production. The highly cross pollination characteristic recorded wide variability in the morphological parameters which caused confusion in taxonomical studies. Paul and Dutta (1978) and Paul and Sahoo (1993) studied the variations in morphoeconomic characters. Besides, the leaf oil chemo types in Cinnamon were reported by Rao *et al.* (1988). Hence, Cinnamon germplasm accessions collected from Ceylon and India (Tamil Nadu and Bangalore) during early seventies were cultivated at RRL, Bhubaneswar to isolate elite genotypes of *C. zeylanicum.*

The germplasm seed progenies were grown in one hectare area with a population of 2500 plants. Though the bark and leaf oils were studied, the population was screened based on tongue taste of bark and leaf petiole. Twenty elite plants isolated from 70 gutty progenies of 7 year old were multiplied vegetatively and planted in isolated area. The fresh leaf and bark oil of six to seven years old elite plant progenies were estimated by Clavengers apparatus and oil quality was analysed by GC using 2 m long Carbowax M-20 column.

The six year old Cinnamon progenies recorded wide range of leaf oil content (0.2 to 1.20 percent) with an average of 0.78 per cent, while the seven year old population had 0.60 to 1.4 per cent leaf oil with mean value of 0.90 per cent. Among the selections RRL(B) C-5 recorded the highest oil content in both the years (0.95 per cent in 6th year and 1.20 per cent in 7th year). While the progenies recorded increase in leaf oil content with age, the selection RRL(B) C-6 produced 0.8 per cent oil in both the years.

The range of bark oil content of elite Cinnamon progenies were 0.15 to 0.38 per cent and 0.20 to 0.70 per cent 6th and 7th year respectively. Similar reports are made by Paul and Sahoo (1993). The increase in oil content in older plants might be due to increase in oil glands in leaf and bark.

The leaf oil analysis yielded 73.63 to 92.19 per cent and 90.8 to 95.7 per cent eugenol in the 6th and 7th year respectively. Similar the cinnamic aldehyde content of the bark oil is also increased with the increase in the age of the plants in all the elite population. But the genotypes had shown significant different in their leaf and bark oil quality and the selecton RRL(B) C-6 found to be the best (94 per cent eugenol and 83 per cent cinnamic aldehyde) among all the genotypes. The laboratory has released this variety alongwith the composite seeds of elite population to commercial growers.

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