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VARIATION IN YIELD AND SOME PHYSIOLOGICAL CHARACTERISTICS OF TWO *HEVEA* CLONES IN NORTH KONKAN

Konkan region in the Western India (15°N to 20°N) is one of the less congenial but potential regions selected for trying rubber cultivation in view of the limited scope for expansion of area under rubber in the traditional belt. The region is characterised by prolonged soil moisture deficits and high summer temperatures (Chandrashekar *et al.*, 1990; Mohankrishna *et al.*, 1991). Some observations on growth and yield of *Hevea* in North Konkan have already been reported (Sethuraj *et al.*, 1989; Bhaskar *et al.*, 1990; Chandrashekar *et al.*, 1990). However, no information is available on the extent of variation in yield and other physiological characteristics of *Hevea* in the region and the present paper reports variability in yield and some physiological characteristics in two clones of *Hevea*.

The data utilised in this study were collected from a plantation at Parali (18.3°N, 73.13°E) in Raigad District of Maharashtra State. The study was confined to the available clones *viz.* GT 1 and RRIM 600 only. Data were collected from ten trees of comparable age and girth in each clone. All trees were under $^1/_2$ S, d/2 system of tapping.

Latex yield and dry rubber yield were recorded from all the selected trees. Initial flow rate and latex vessel pressure potential were recorded from four trees while other parameters were measured from three random trees in each clone. The parameters were recorded from March 1989 to February 1990 at monthly intervals except for November 1989 and January 1990 (Chandrashekar *et al.*, 1990).

Mean values of latex yield (LY), dry rubber yield (DRY), rubber content (Cr), initial flow rate (F), pretapping latex vessel pressure potential (Pretap Plv), latex solute potential ($\psi\Pi$), predawn leaf water potential (PD ψl) and afternoon leaf water potential (AN ψl) were used to work out variability and other related statistics. The parameters were selected based on their importance (Sethuraj and Raghavendra, 1987) and with minimum sampling error.

Typical weather characteristics of the region are summarised in Table 1. The annual water deficit in the region is around 1070 mm whereas it is around 350 mm in the traditional region (Rubber Research Institute of India, 1988). The soil moisture stress extends from February until the onset of monsoon in June (Chandrashekar *et al.*, 1990). The normal soil moisture depletion

Table 1. **Weather characteristics of North Konkan**

Minimum temperature	13 to 24°C
Maximum temperature	28 to 38°C
Sunshine duration	1.00 to 11.00 hours
Vapour pressure deficits	0.25 to 2.0 kPa
Average annual rainfall	2500 mm
Wet period	June to October
Dry period	November to May