Effect of design and planting density on the agrophysiological parameters of clone GT 1 *Hevea brasiliensis* Muell Arg in southwestern Côte d'Ivoire

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**ABSTRACT**

The design and planting density can influence certain agronomic parameters. To enable *Hevea brasiliensis* clone GT1 to better express their agrophysiological potentialities and sensitivity to the tapping panel dryness a study, of the design and planting density was undertaken at the SCASO experimental site in southwestern of Ivory Coast. The experimental design applied, split-plot of three treatments (designs in lines separated from 6 or 7 m and staggered) and three sub-treatments (350; 510 and 650 trees/ha) with four repetitions, was installed on 12, 22 ha. Only one latex collection system was applied (S/2 d/4 6d/7 ET 2.5 % Pa 1 (1) 6/y). The parameters measured were rubber production, circumference increase, physiological profile and tapping panel dryness sensitivity. The rate of trees present in the plots was good (87.27 %) and have not varied with the design and planting density. Vegetative growth tapping (2.69 cm.year⁻¹), and mean yield (1926 kg.ha⁻¹.year⁻¹) were influenced by density unlike design. Despite good productivity, the physiological state of the rubber trees was good, characterized by a well-balanced physiological profile and a low tapping panel dryness rate (2.73 %), independently of design and planting density. The density and the suitable planting design were planting in separate rows of 6 m / 650 t/ha.

**Keywords:** *Hevea brasiliensis*; density and planting design; Rubber production; GT 1; Vegetative growth tapping