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POLYMORPHIC ISOZYME EXPRESSION CAUSED BY STOCK-SCION INTERACTION IN *HEVEA BRASILIENSIS* CLONE RRII 105

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Isoelectric focusing (IEF) was used for finger printing five different isozymes from the leaf extracts of 22 individual budded *Hevea* plants (clone RRII 105) to study the enzyme polymorphism due to stock-scion interaction. The results showed remarkable variations in the isozymic banding patterns of aspartate aminotransferase (AAT), leucine aminopeptidase (LAP), acid phosphatase (ACP), alkaline phosphatase (ALP) and phosphogluco isomerase (PGI) isozymes which have vital roles in several plant metabolic pathways. The variations noticed in the isozyme patterns among the budded plants of the same clone may be due to the stock-scion interaction.

Key words: *Hevea brasiliensis*, Isoelectric focusing, Isozymes, Stock-scion interaction, Enzyme polymorphism.

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INTRODUCTION

Stock-scion interaction is a phenomenon observed among budded or grafted plants. Various studies on scion/rootstock combinations of apple trees indicated differences in plant morphology, growth rate and dry weight distribution among tree parts attributable to inherent genetic characteristics of the Sscion and/or rootstocks (Ferree *et al.*, 1982; Cummins and Aldwinkle 1983; James and Herb, 1983; Lehman *et al.*, 1990). Graft induced changes in fruit yield and quality have been reported in *Capsicum annuum* (Yagishita and Hirata, 1987), *Anona* (George and Nissen, 1987) and apple (Lord *et al.*, 1985). The genetic, phy- sical and physiological traits of citrus rootstocks have been reported to be responsible for some of the physiological differences in tree vigor, water relations, cold hardiness, mineral nutrition, transpirational water use, hormonal balance and fruit yield and quality (Ahmed and Al-Shuraf, 1984; Syvertsen and Graham, 1985). The rootstock influence on the accumulation and concentration of many elements like calcium, potassium, magnesium, boron and several other inorganic ions in the scion have been reviewed by Vose (1984) for a wide range of crops in relation to mineral nutrition. In *Capsicum annuum*, the genetically controlled capsicin biosynthesis was modified by grafting and this genomic modification due to stock-scion interaction was reported as a stable genetic character (Yagishita and Hirata, 1987; Yagishita *et al.*, 1986 and 1990). Investigations pertaining