

Somatic Embryogenesis Induced by Culture on Single Media in Coffee Plants from Crosses of *Coffea arabica* by Timor Hybrid

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ABSTRACT

An efficient and reproducible method is being developed to be used as a regeneration system of coffee plants, within a genetic transformation project. From preliminary experiments two media were chosen: LIQC-3 (MS: 1/2 strength salts; B5: organic constituents; sucrose: 30 g/l; BA: 3 mg/l) and NAR-1/4 (MS: 1/4 strength macro salts and 1/2 micro salts; B5: organic constituents; sucrose: 30 g/l and 2-ip: 1 mg/l). Five, from nine genotypes tested, showed high frequency of induced white friable embryogenic tissue (ET), with marked proliferation capacity. Leaf explants cultivated should be obtained from soft young leaves from new suckers initiated by pruning. The mother trees were fertilized 4 times a year and sprayed with benomile 1,5 g/l each week. In one experiment the genotypes F5.31 and F5.302 appeared embryogenic in both media, LIQC-1 (BA: 1 mg/l) and NAR-1/4. The genotype F5.302 and the medium NAR-1/4 were notably efficient according to the ANAVA, being the variable analyzed the percentage of explants with ET (P, media: 0.003 and P, genotypes: 0.0001). By using the combination F5.302-NAR 1/4 ET was induced in 93% of the explants, after two months in culture and without any subculture. These results suggest that 2-ip is more effective than BA for somatic embryogenesis in the coffee genotypes evaluated.