

DWALF-TYPE-MUTANT ACCUMULATION BY 6-BENZYLAMINOPURINE IN BANANA MICROPROPAGATION¹

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Somaclonal variation is one of the most serious problems in banana micropropagation and, dwarf-type-mutants account for 80% of the all mutants. Aiming to verify a cause of the high incidence of dwarf-type-mutants, *in vitro* development of the mutants were compared with that of normal plantlets on a medium supplemented with 6-benzylaminopurine (BA). The dwarf-type-mutants of Nanicão cultivar (*Musa* sp., AAA group, cavendish subgroup) showed 10% higher in shoot-production rate than normal original plantlets when cultured on MS medium supplemented with 3 mg/l BA and, 50% higher when cultured with 10 mg/l BA. In Grande Naine cultivar (AAA group, cavendish subgroup), the dwarf-type-mutants produced shoots of 40% higher numbers than normal plantlets on the medium with both 3 and 10 mg/l BA. On the basis of the results, one formula was conducted to presume incidence of dwarf-type-mutants after long period of *in vitro* cultures. The incidence of dwarf-type-mutants calculated by the formula for a 2-year-cultured population of Nanicão cultivar was 68% which was closely coincided with the field observation. These results suggest that the high incidence of dwarf-type-mutants in banana micropropagation may be caused by the accumulation of mutants resulted from their high capacity of shoot production in micropropagation process

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