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Chemical-Induced Mutation for Development of Resistance in Banana cv. Nanjangud rasabale

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Abstract : The chemical mutagens have become important tool to enhance agronomic traits of banana crop. It is being used to develop fusarium resistance lines in various susceptible banana cultivars. There are several mutagens like EMS and NaN3 available for banana crop improvement and each mutagen has its own important role as positive or negative effects on growth and development of banana plants. Explants from shoot tip culture were treated with various EMS (0.30, 0.60, 0.90 and 0.12%) and NaN3 (0.01, 0.02 and 0.03%) concentrations. The putative mutants obtained after in vitro rooting were subjected for artificial inoculation of Fusarium oxysporum f.sp. cubense. Screening putative mutants resistance to Panama disease was carried out by using syringe method of inoculation. It was observed that, EMS treated mutants were more susceptible compared to NaN3 treatment. Among the NaN3 doses 0.01% found to produce 3 resistant lines during preliminary screening under greenhouse conditions.

Keywords : Nanjangud rasabale, EMS, NaN3, putative mutants
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