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Isolation of desirable induced morphological mutations in elite lines from a population of *Abelmobchus esculentus* (L.) moench by gamma rays and EMS

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Induced mutation often produces abnormalities which cause morphological alterations in external form of plants including colour, shape, size, etc. In the present study evaluation was performed during summer and *kharif* season for the year 2010-11 on *Abelmoschus esculentusat* Junagadh Agricultural University, Junagadh, Gujarat, India.Seeds of two elite varieties (GO-2 and GJO-3) were subjected to physical (gama rays) and chemical (ethyl methane sulphonate; EMS) mutagenesis to find out the frequency and spectrum of induced desirable morphological mutations. In M2 generation, 12 different morphological mutations were induced in both the varieties. It was found that the spectrum of these mutations and their frequency varied with the type and dose of mutagens and the genotype used. Gamma radiations induced more number of morphological mutants as compared to EMS treatments in both the varieties. The highest mutation rate (11.19%) was detected in 40 kR gamma rays treatment followed by 0.25% EMS treatment in GO-2. In general, gamma irradiation treatments seemed to be superior in producing greater frequencies over all doses for both the varieties GO-2 (19.17%) and GJO-3 (16.33%).

Biography

Vaibhav Chaudhary has completed his MSc (Agriculture) at the age of 26 years from Junagadh Agricultural University, Junagadh, Gujarat, India and is currently a PhD Scholar at Assam Agricultural University in the department of Plant Breeding and Genetics. Research crop for the PhD programme is Maize (*Zea mays* L.) and has published five papers in reputed journals till date.

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