

Lr13 with other unknown gene(s) present in these wheats. Such interaction between *Lr13* and other major genes like *Lr16* and *Lr30* to give enhanced resistance to Canadian leaf rust races virulent on *Lr13* as well as these two genes has been reported⁸.

Since all the resistant wheats tested here which have *Ne2-Lr13* are susceptible to race 77A at seedling stage³, some additional and as yet unknown adult plant resistance genes must be present in these wheats which are currently being identified.

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INDUCED MALE STERILE MUTANT IN GREEN GRAM (*VIGNA RADIATA* (L) WILCZEK)

R. D. S. YADAV¹ and V. P. SINGH

Department of Genetics and Plant Breeding, Institute of Agricultural Sciences, Banaras Hindu University, Varanasi 221 005, India.

Present address: All India Coordinated Research Project for the Improvement of Daira Land, Department of Agronomy, Narendra Deva University of Agriculture and Technology, Kumarganj 224 229, India.

GREEN gram is strictly a self-pollinated crop. The male sterile lines have proved quite worthy and as a quick breeding tool for incorporating superior traits in desirable genotypes. Reports in the past have indicated that gamma-ray treatments have effectively induced sterile mutants in green gram¹ and allied species². The present report deals with a male sterile mutant that may eliminate tedious work during emasculation while making crosses for its improvement.

The cultivar T₄₄ (origin number, 44-41, a

selection from cross between, T₁ × T₄₀, evolved at Kanpur) of green gram was taken as the experimental material in the present investigation. Two hundred dry (moisture, 9%), healthy and uniform size seeds of the cultivar were exposed to gamma rays (⁶⁰Co source) at 5, 10, 20, 30, and 40 kR doses at National Botanical Research Institute, Lucknow. The R₂ lines were raised from R₁ individuals following plant to progeny method. Out of a number of mutants in R₂ generation, a male sterile mutant (tested in 2% acetocarmine solution) was scored from 40 kR gamma-treated population. The segregation behaviour of the mutant was calculated by using χ^2 method. The data for the mean performance of days to flowering, plant height, number of branches per plant, number of racemes per plant, pollen sterility, number of pods per plant and grain yield per plant of the parent and the mutant obtained from 10 random selected plants from each of the 4 replications at R₃ generation were compared by student *t* test.

The male sterile mutant could easily be isolated from the mutagenic population by characterizing as narrow and compact projection of its leaves, branches and peduncles in contrast to semispreading nature of the parent. The days to flowering (38.25 ± 1.26) and the number of racemes per plant (13.44 ± 1.06) of the mutant differed significantly from the parent which had 35.00 ± 1.18 days to flowering and 10.50 ± 0.85 being the number of racemes per plant. Increased bearing of buds or flowers of the mutant can rapidly be utilized in hybridization. The segregation behaviour of the mutant in R₂ generation (104 normal, 32 mutant; $\chi^2 \pm 0.157$) clearly reveals that the mutant genotype is controlled by a single recessive gene. But it also exhibited other morphological variations. It can be inferred that either this gene has a pleiotropic effect or that more than one closely linked genes is involved causing such variations¹⁻³.

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