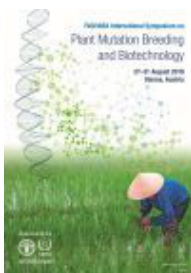


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GAMMA RAY INDUCED BLACK GRAM (*VIGNA MUNGO* L. HEPPER) MUTANT DIFFERING IN FLORAL CHARACTERS

An investigation was carried out in Blackgram (*Vigna mungo* (L.) Hepper) genotype MDU 1. The MDU 1 Blackgram variety is indeterminate and duration 75 days and has high arabinose content 7.5% and has high batter volume. It was highly susceptible to Yellow Mosaic Virus (YMV) and cultivated only during September – October season. Thereby, to develop a short duration, determinate and YMV resistant genotype, the Blackgram variety MDU 1 was subjected to Gamma ray treatment from 100 Gy to 500 Gy. Four high yielding mutant lines (ACM 11, ACM 15, ACM 17, ACM 25) were isolated and advanced to yield trials. To distinguish from the MDU 1 Blackgram variety, the floral traits were studied in detail in these four mutants. Yellow standard petal with purple tinge on the margin was observed in ACM 17 and found to be absent in MDU 1. The stigmatic hairs are dense in MDU 1 and sparse in ACM 17. The YMV incidence was less than 10 % when compared to MDU 1 which recorded 75% of infection. From the investigation, we found that ACM 17 mutant was high yielding, determinate, YMV resistant and also differs in floral characters from MDU 1 Blackgram variety. This mutant ACM 17 must be subjected to further detailed study.

Country or International Organization

India

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Track Classification: Enhancing agricultural biodiversity through new mutation induction techniques