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SELECTION OF PROMISING SOYBEAN MUTANTS THROUGH MULTI-LOCATION TRIALS

An experiment was conducted to evaluate the performance of four promising lines along with two check varieties of soybean in respect of plant height, branches per plant, pods per plant, seeds per pod, days to maturity and seed yield, at five different locations during Rabi 2013. Significant variations were observed both in individual location and combined over locations for all traits. Among the mutants, average days to maturity ranged from 105-115 days, 104-108 days and 108-115 days in testing sites of Mymensingh, Rangpur and Magura, respectively. It indicated that, at Mymensingh all the mutant lines as well as check varieties had prolonged days to maturity, which eventually reflected significantly higher grain yield in this location. Plant height ranged from 38.1-65.6cm, 35.1-70.7cm and 31.8-55.1cm in at Mymensingh, Rangpur and Magura, respectively. Higher number of branches/plant in all mutant lines as well as check varieties was found in at Mymensingh. The average number of pods/plant in the mutant lines ranged from 41.6-44.2. The highest number of pods/plant was found in mutant lines SBM-9, SBM-18 and SBM-22 in at Magura, Mymensingh and Rangpur, respectively. At Mymensingh, the mutant line SBM-18 produced the highest seed yield (2969.7 kg ha⁻¹) followed by SBM-15 and SBM-22. Similarly, SBM-18 gave the highest grain yield followed by SBM-22 in at Magura, whereas, the mutant line SBM-22 produced the highest grain yield followed by SBM-9 and SBM-18 in at Rangpur. Among the locations, all mutants as well as check varieties gave the highest seed yield at Mymensingh. Among mutant lines, some of the better mutants will be selected on the basis of yield contributed characters for further trials.

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