

Evaluation and selection of tomato mutants for cultivation in summer

ABSTRACT

Results revealed significant genotypic differences in respect of morphological and biochemical parameters, reproductive characters, yield attributes and fruit yield in four tomato (*Lycopersicon esculentum* L.) mutants along with two varieties of summer tomato. In general, high yielding genotypes showed superior performance in plant height, branch and leaf number, total dry mass production, nitrate reductase activity, total sugar content, fruit number and individual fruit weight as compared to low yielding ones. Number of effective and non-effective flower clusters and number of fruits/cluster had no relation with fruit yield. Binatomato-2 and TM-2 showed the highest fruit yield/plant (1.30 and 1.20 kg, respectively) due to superiority in morpho-physiological characters and yield attributes. In contrast, the mutant TM-4 produced the lower fruit yield/plant (average 0.52 kg). Binatomato-3 showed the highest individual fruit weight (73.50 g). Further, duration of first harvesting was higher in low yielding genotypes than in high yielding ones. This information may be helpful in future plant breeding program.

Keyword: Gamma rays; High yielding; Tomato mutants