



EVALUATION OF PROMISING MULBERRY GENETIC RESOURCES

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ABSTRACT

Central Sericultural Germplasm Resources Centre (CSGRC), Hosur is a unique and exclusive station involved in conservation of different mulberry and silkworm genetic resources in India. CSGRC maintains 1254 mulberry accessions representing 26 countries (indigenous-984 and exotic-270) and 458 silkworm genetic resources from 14 countries. These valuable genetic resources are thoroughly evaluated during the conservation process for their qualitative and quantitative economic traits and potential accessions are identified for inclusion in the crop improvement programmes. In the present study, 189 (147 indigenous and 42 exotic) mulberry accessions were evaluated over a period of three years and data of thirteen crops in different seasons were analysed. The identified 20 better performing mulberry accessions along with 3 control accessions were subjected to bioassay to ascertain their suitability and preference by silkworm (*Bombyx mori* L.). The popular bivoltine hybrid CSR2 x CSR4 was used for bioassay in three different seasons. The pooled data of ten rearing traits and three post cocoon traits of economic importance were assessed using multiple trait evaluation index. The results based on the evaluation index value revealed accession MI-0669 the superior most for 9 traits followed by ME-0012 for 8 traits and ME-0165 for 7 traits. Three exotic accessions, ME-0089, ME-0139 and ME-0151 performed better for five traits and MI-0025 and MI-0653 for 4 traits. These promising accessions can serve as a potential breeding material in evolving superior mulberry varieties.

Key words: Bioassay, mulberry genetic resources, multiple trait evaluation index.