



EVALUATION OF SELECTED BIVOLTINE SILKWORM GENETIC RESOURCES UNDER ABIOTIC STRESS CONDITIONS OF NORTHERN INDIA

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ABSTRACT

Despite the availability of mulberry leaves in plenty during autumn season, the cocoon crops are generally a failure in North India due to adverse climatic conditions. In order to identify suitable bivoltine silkworm races which can combat the abiotic stress conditions of high temperature and high humidity prevailing during autumn season in North India, a few selected bivoltine silkworm germplasm conserved at CSGRC, Hosur were evaluated. Ten out of 230 bivoltine accessions, selected based on superior performance in rearing and post cocoon parameters were evaluated under RSRS, Sahaspur conditions. The experimental accessions were BBE-0173, BBE-0174, BBE-0178, BBE-0186, BBE-0189, BBE-0192, BBE-0198, BBE-0226, BBI-0239 and BBE-0266 along with two control accessions *i.e.*, one local [BBI-0045(SH-6)] and one common national control [BBI-0290(CSR-2)]. Six trials conducted in both the favourable (spring) and unfavorable seasons (autumn) revealed accessions, BBE-0266, BBE-0178, BBE-0198 and BBI-0239 as better performers during both the seasons for rearing and post cocoon parameters. These accessions are recommended as possible potential resources to evolve silkworm breeds suitable for autumn season.

Key words: Abiotic stress, autumn, bivoltine accessions, germplasm, spring.