

Promising Multivoltine Silkworm Germplasm for Abiotic & Biotic Stresses

Evaluation of silkworm germplasm under abiotic and biotic stress conditions is very essential to identify useful genotypes conferring better adaptation to stress environment and resistance to diseases for further utilization by silkworm breeders in specific breeding studies. CSGRC, Hosur is maintaining 73 MV accessions silkworm genetic resources with wide variation in the quantitative as well as morphological characteristics. Identification of potential silkworm genotypes by testing them under adverse climatic conditions will help to screen for better parental lines for silkworm breeding. Hence, a collaborative project was formulated to evaluate some selected multivoltine accessions against abiotic & biotic stresses particularly in the adverse climatic conditions viz., high temperature / high humidity and high temperature / low humidity in the identified hot spot locations functioning under Central Silk Board as mentioned below:

Centres/Scientists involved :

CSGRC- Hosur	:	Shri P. Kumaresan Dr. P. R. Koundinya Shri S. A. Hiremath Dr. R. K. Sinha
RSRS Anantapur	:	Smt. S. Vidyunmala Shri B. Kasi Reddy
RSRS Chamrajnagar	:	Shri R. Gururaj
RSRS, Salem	:	Smt. N. Daheera Beevi
CISR- Jorhat	:	Shri M D.Senapati Smt. R. Das

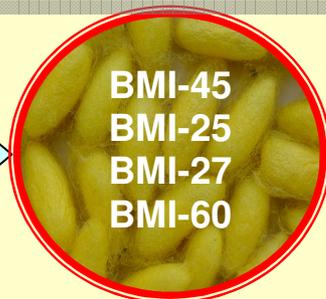
A total of 10 test accessions viz., BMI-0045, BMI-0062, BMI-0060, BMI-0025, BMI-0040, BMI-0027, BME-0049, BMI-0024, BMI-0016 BMI-00 14, plus 2 controls viz., BMI-0001, & BMI-0017 were tested in all the 4 test centres. A total of 4 rearing trials were conducted under both high temperature / high humidity and high temperature / low humidity conditions. The trials were conducted during unfavorable summer months ie., March- May. Sixteen important economic traits including post cocoon parameters were recorded. For statistical analysis, only 11 important economic traits were considered, which are mostly related to survivality, cocoon yield and silk fibre characters. The best performing accessions were identified by using Mano's evaluation index. The disease incidence on account of bacterial flacherie, viral grasserie during larval and mountages were also recorded. Based on the results, the following recommendations are made:

Recommendations

- ❖ Four multivoltine germplasm accessions viz., BMI-0045, BMI-0025, BMI-0027 and BMI-0060 are recommended for high temperature / low humidity conditions of Anantapur, Salem and Chamrajnagar.
- ❖ Four multivoltine germplasm accessions viz., BMI-0040, BMI-0025, BMI-0027 and BMI-0016 are recommended for high temperature / high humidity conditions of Jorhat.
- ❖ One multivoltine germplasm accession viz., BMI-0027 is recommended for high temperature / high humidity regions endemic to grasserie and flacherie.

Promising Germplasm Suitable for High Temperature & Low Humidity Regions

RSRS
Anantapur
Chamarajnagr
Salem



Promising Germplasm Suitable for High Temperature & High Humidity Regions

CISR
Jorhat



Promising Germplasm Suitable Biotic (Grasserie & Flacherie) Stresses

CISR
Jorhat



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