

RESEARCH ARTICLE

Evaluation of elite bivoltine mulberry silkworm (*Bombyx mori* L.) double hybrids suitable for North West India

■ Bharath Kumar Neelaboina, Shivkumar, R. Kiran, P. Kumaresan and Sardar Singh

SUMMARY

Nine bivoltine silkworm double hybrids along with control were developed and evaluated at Central Sericultural Research and Training Institute, Central Silk Board, Pampore, Jammu and Kashmir (J&K) during summer (July-August) and autumn (August-September) 2020. The main aim is to develop silkworm double hybrids locally by utilising the silkworm breeds developed by different research Institutes. The bivoltine silkworm breeds developed by CSB research institutes were procured initially for preparation and evaluation of foundation crosses. Based on the performance, out of twenty four foundation crosses three oval and three constricted foundation crosses were shortlisted for further development of 09 double hybrids. On the basis of the evaluation index (E.I) values 05 double hybrids during summer and 05 double hybrids during autumn recorded E.I value above 50. During summer 05 silkworm double hybrids viz., (CSR50×PAM114) X (PAM117×APS4), (CSR50×PAM114) X (PAM117×SK7), (PAM114×CSR27) X (PAM117×APS4), (PAM114×CSR50) X (PAM117×APS4) and (PAM114×CSR50) X (SK6×SK7) recorded E.I values 50.09, 55.86, 57.95, 61.35 and 52.88, respectively over control FC2×FC1 (60.67) whereas in autumn 05 silkworm double hybrids viz., (CSR50×PAM114) X (SK6×SK7), (CSR50×PAM114) X (PAM117×SK7), (PAM114×CSR27) X (PAM117×APS4), (PAM114×CSR50) X (PAM117×APS4) and (PAM114×CSR50) X (SK6×SK7) recorded E.I values 56.20, 53.13, 54.62, 55.52 and 59.80, respectively over control FC2×FC1 (57.65). Based on results one double hybrid (PAM114×CSR50) X (PAM117×APS4) for summer and one double hybrid (PAM114×CSR50) X (SK6×SK7) for autumn identified for North West India.

Key Words : Autumn, Evaluation index, Mulberry silkworm, Summer

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