RESEARCH PAPER

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

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Abstract : The present research investigation was carried out at Central Sericultural Research and Training Institute, Central Silk Board, Pampore, Jammu & Kashmir (J&K) during summer (July-August) and autumn (August-September) 2021. The main objective is to develop silkworm double hybrids by utilising the silkworm breeds developed by different research Institutes. The silkworm breeds procured from different research institutes were utilised 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 double hybrids. A total of nine bivoltine silkworm double hybrids were developed and evaluated along with control (CSR2×CSR27) X (CSR6×CSR26) for identification of superior bivoltine silkworm double hybrid suitable for North West India. On the basis of the evaluation index (E.I) values 04 double hybrids during summer and 04 double hybrids during autumn recorded E.I value above 50. During summer 04 silkworm double hybrids *viz.,* (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 57.88, 53.46, 60.37 and 54.38 respectively over control FC2× FC1 (59.59) whereas in autumn 04 silkworm double hybrids *viz.,* (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 56.56, 54.88, 58.02 and 61.93 respectively over control FC2× FC1 (59.50). 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.

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