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RESEARCH PAPER

Identification of superior autumn specific silkworm (*Bombyx mori* L.) hybrids suitable for temperate region of Jammu and Kashmir

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Abstract : Sixteen bivoltine silkworm hybrids were developed and evaluated at Central Sericultural Research and Training Institute, Central Silk Board, Pampore, Jammu & Kashmir (J&K) during spring (May-June) and autumn (August-September) 2022 along with controls. The main aim is to develop superior silkworm hybrids for autumn season. The characteristics of autumn season in J&K are poor leaf quality, high incidence of diseases powdery mildew, leaf spot and sub-optimal rearing conditions. Hence, silkworm breeds/hybrids need to be developed to withstand these unfavourable conditions during autumn season. Based on the performance, out of sixteen bivoltine silkworm hybrids 07 silkworm hybrids during spring and 05 silkworm hybrids during autumn performed well with evaluation index (E.I) value above 50. During spring season 07 silkworm hybrids *viz*., Line-5 × Line-6, Line-5 × Line-7, Line-5 × Line-9, Line-16 × Line-6, Line-16×Line-7, Line-17 × Line-7 & Line-18 × Line-6 recorded E.I values 50.54, 60.09, 52.60, 58.76, 56.70, 56.78 & 59.97, respectively over controls (SH6×NB4D2 [42.41], FC2×FC1 [65.09] & G11×G19[49.81]) whereas in autumn 05 silkworm hybrids *viz*., Line-16 × Line-9, Line-17 × Line-3, Line-18 × Line-3, Line-18 × Line-6 & Line-18 × Line-9 performed well with E.I values 53.36, 54.99, 53.25, 64.24 & 59.95, respectively over controls (SH6×NB4D2 [49.77], FC2×FC1 [67.04] & G11×G19[52.78]). Among the best performed 07 hybrids during spring and 05 hybrids during autumn, one hybrid Line-18 × Line-6 recorded E.I value above 50 in both seasons and identified as superior hybrid for autumn season suitable for temperate region of Jammu and Kashmir.

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

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