Sericologia 54(1): 66-72, 2014
ISSN 0250-3980

Research Paper

A NEW ROBUST BIVOLTINE DOUBLE HYBRID (CSR50 x CSR52) x (CSR51 x CSR53) OF *BOMBYX MORI* L. FOR HIGHER EGG AND COCOON YIELD

A. Naseema Begum, N. Mal Reddy, S. Manthira Moorthy and B. B. Bindroo
Central Sericultural Research and Training Institute, Mysore 570008, India.
E-mail: naseemcsrti@yahoo.com

ABSTRACT

The present study was undertaken to assess the performance of newly evolved bivoltine double hybrid, (CSR50 x CSR52) x (CSR51 x CSR53) with reference to egg and cocoon yield parameters and also under field conditions. Four parental breeds *viz.,* CSR50, CSR52 (oval type), CSR51 and CSR53 (dumbbell type) and two foundation crosses (FCs) *viz.,* CSR50 x CSR52 (oval x oval) and CSR51 x CSR53 (dumbbell x dumbbell) were utilized for preparation of new double hybrid, (CSR50 x CSR52) x (CSR51 x CSR53) / (CSR51 x CSR53) x (CSR50 x CSR52) and studied along with control single hybrid CSR2 x CSR4/CSR4 x CSR2 and double hybrid (CSR6 x CSR26) x (CSR2 x CSR27)/ (CSR2 x CSR27) x (CSR6 x CSR26). Statistical analysis indicated that the new double hybrid is significantly ($P<0.05$) superior over single hybrids in respect of egg yield (34.23 %), disease free layings (dfls) recovery (18.46 %), eggs / disease free laying (20.11 %), less unfertilized and non-diapause eggs. Further, a marginal improvement in respect of egg yield (6.42 %) and disease free layings recovery (8.15 %) was recorded over control double hybrid. Field evaluation of new double hybrid (CSR50 x CSR52) x (CSR51 x CSR53) indicated that the average cocoon yield was 68.72 kg /100 dfls as against 63.02 kg in CSR2 x CSR4 and 65.18 kg /100 dfls in (CSR6 x CSR26) x (CSR2 x CSR27). The results indicate the suitability of the new double hybrid (CSR50 x CSR52) x (CSR51 x CSR53) for commercial rearings in southern states.

Key words: Bivoltine silkworm, *Bombyx mori* L., double hybrids, egg yield, field performance.