



EVALUATION OF DOUBLE HYBRIDS AND PARENTS OF SILKWORM, *BOMBYX MORI* L. BASED ON HYBRID VIGOUR

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ABSTRACT

Twelve bivoltine parental breeds (6 each of oval and dumb-bell) developed at CSRTI, Mysore were utilized to prepare fifteen each of oval and dumb-bell foundation crosses (FC) in a selective method. All possible (oval x oval) x (dumb-bell x dumb-bell) four-way crosses prepared out of these FCs were reared in three replications during different seasons of the year to evaluate their performance for both pre and post-cocoon traits and also to estimate the magnitude of heterosis. The study reveals that, out of 15 each of bivoltine oval and dumb-bell FCs and 21 four-way crosses studied, 6 each of oval and dumb-bell FCs and 5 four-way crosses exhibited better performance with desirable positive heterosis for most of the economic traits, which may be attributed to better inherent advancement obtained in the study. The results of the present study also show prophecy of identifying promising bivoltine double hybrids for field testing based on overall performance and heterosis for each of the quantitative trait.

Key words: Bivoltine foundation crosses, field testing, four-way crosses, heterosis.