

**Evolution of a Productive Bivoltine Hybrid of Silkworm
Bombyx mori L. (SD7 × SD12) with Shorter Larval duration
For Tropics**

**S. B. Dandin, P. Sudhakara Rao*, H. K. Basavaraja, K. C. Mahalingappa,
S. N. Pallavi and Kannika Trivedi**

Central Sericultural Research and Training Institute, Mysore-570008 India

With an objective of evolving quantitatively and qualitatively superior bivoltine silkworm hybrid of *Bombyx mori* L. for tropics with shorter larval duration without compromising on productivity traits, a breeding programme was initiated at Central Sericultural Research and Training Institute, Mysore during 1997 by utilising productive bivoltine breeds as breeding resource material from the institute's Germplasm collection. The breed SD7 is characterised with plain larvae spinning white oval cocoons and SD12 is characterised by sex-limited larval markings spinning white dumb-bell cocoons. After fixation, these breeds along with other newly evolved breeds were subjected for hybrid evaluation in the laboratory. The nutritional studies are carried out to know the feed conversion efficiency of its parents. Based on the hybrid studies, the hybrid SD7 × SD12 was selected and evaluated for one year comprising three major seasons of tropics viz: Pre-monsoon (Characterised by high temperature and low humidity with out any rain fall), Monsoon (characterised by moderate temperature, heavy rain fall with high humidity) and post- monsoon season (characterised by low temperature and low humidity with frequent rain fall) to know the fluctuations in the larval duration. The evaluation and nutritional studies indicated that the hybrid is having shorter larval duration and more feed conversion efficiency. The hybrid recorded survival of 90.4 %, Shell weight of 45.0 cg, Shell ratio of 24.0 % and filament length of above 1200 mts with 36 hrs shorter larval duration when compared to productive control hybrid CSR 2 × CSR 5. The breeding methodologies and hybrid's usefulness for tropics were discussed.