



Development and Evaluation of Silkworm hybrids a review

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Abstract:

The concerted efforts of silkworm breeders contributed significantly for the evaluation and development of new silkworm hybrids suitable to eco-climatic conditions of tropical regions. Continuous renewal and change of existing hybrids with superior varieties and their commercialization is the need of the hour to meet the global demand. With this objective, an attempt has been made at Andhra Pradesh State Sericulture Research and Development Institute (APSSRDI), Hindupur, India and contributed for the development of potential cross breeds. In the present paper, thirty new hybrid combinations were prepared in Line x Tester method involving ten potential polyvoltine breeds with three testers such as APDR115, APS12 and HTO5. The relative merit of the hybrids over multiple traits was assessed by adopting widely used statistical methods such as Evaluation Index and subordinate function methods, the ranks were adjudicated to each of the hybrid combinations. Based on the evaluation methods and performance, five hybrid combinations were adjudicated as promising and chosen for further laboratory evaluation. Subsequently the superior and consistent hybrids would be exploited commercially at farmer level.



Key words: Silkworm, breeding, conventional method, crossbreed, evaluation, commercial exploitation

Introduction

The silkworm, *Bombyx mori* L. is a lepidopteran economic insect which is known for the production of mulberry silk aptly named as “the Queen of Natural Fibers”. Even though sericulture industry in India has been established as a major source among the agro-based industries, it is still in the process of achieving the required stability since the quality and quantity of silk produced as well as the unit production of silk remains low when compared with sericulturally advanced countries. Enrichment of silkworm breeds / hybrids have always been one of the important factors contributing to increase the productivity in sericulture sector. Continuous development, evaluation, renewal and change of existing breeds/hybrids with new superior varieties and their commercialization is the prime factor to increase silk quality and quantity. Among various reasons for low productivity, the lack of highly productive silkworm