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RESEARCH ARTICLE

Quality parameters and economic traits of new mulberry silkworm (*Bombyx mori* L.) hybrids

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ABSTRACT

An experiment was conducted to evaluate the performance of bivoltine mulberry silkworm (*Bombyx mori* L.) hybrids under Marathwada conditions at Sericulture Research Unit, Marathwada Agricultural University, Parbhani during October-November, 2008. The bi x bi hybrid CSR_{16} x CSR_{17} was found significantly superior with hatching percentage of 95.22. Maximum larval weight (45.08 g), maximum single cocoon weight (1.98 g), single shell weight (0.393 g), filament length (950 m), cocoon yield/10000 larvae brushed (18.55 kg), effective rate of rearing (96.33 per cent), whereas significantly superiority in less larval duration and shelling percentage was found in bi x bi hybrid CSR_{18} x CSR_{19} (22.65 days) and CSR_{48} x CSR_4 (20.98 per cent), respectively. The multi x bi hybrid PM x CSR_2 recorded significantly less disease incidence. Based on overall performance it can be concluded that the bivoltine hybrid CSR_{16} x CSR_{17} reared on mulberry variety V-1 was the most suitable and economical for rearing under Marathwada conditions.

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INTRODUCTION

Widespread utilization of hybrids towards achieving sustainability and quality oriented increased production is well established in plants and animals in general and silkworm in particular as it is the only animal where hybrids are used compulsorily . In spite of quantitative increase in the overall silk production in India over years through the development and use of productive silkworm hybrids on commercial scale , there remains a wide quantitative and qualitative yield gap than is mainly attributed to the dearth for potential silkworm hybrids suitable for Indian tropical conditions necessitating the need for more potential silkworm hybrids. Realizing the need for increased qualitative silk production, due emphasis is being laid towards the development of suitable and qualitatively superior bivoltine hybrids for providing tropical conditions of the country in general and region and season specific in particular likewise the present research was conducted to evaluate bivoltine mulberry silkworm hybrids in Marathwada conditions.

The hybridization is most successful and easy way of developing high yielding silkworm races, hence the present investigation was undertaken to evaluate the suitable hybrids of *Bombyx mori* under Marathwada conditions.

MATERIALS AND METHODS

Materials :

An experiment was conducted to evaluate bivoltine mulberry silkworm (*Bombyx mori* L.) hybrids under Marathwada condition for economic traits and disease incidence at Sericulture Research Unit, Marathwada Agricultural University, Parbhani during October-November, 2008. The mulberry plant variety V-1 was used for the feeding. The treatments were CSR_2 x CSR_4, CSR_{18} x CSR_{19}, CSR_{16} x CSR_{17}, CSR_3 x CSR_6, CSR_{48} x CSR_4, CSR_{12} x CSR_{26} and CSR_{12} x CSR_6 bi