

Research Paper :

## Effect of different mulberry varieties on rearing of silkworm *Bombyx mori* L. in Maharashtra

G.S. KAMATE, U.L. LANDE AND R.V. MUPADE

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See end of the article for authors' affiliations

Correspondence to :  
**R.V.MUPADE**  
Department of  
Agricultural  
Entomology,  
Marathwada  
Agricultural University,  
PARBHANI (M.S.)  
INDIA

### SUMMARY

The study was conducted to evaluate the rearing performance of silkworm CSR2 x CSR4 on different mulberry varieties during October-November 2008, in rearing house of Sericulture Research unit, Marathwada Agricultural University, Parbhani, Maharashtra. An experiment was laid out in randomized block design with ten treatments and three replications. Each treatment consisted of 100 silkworms. The studies revealed that mulberry variety V-1 was found statistically superior in improving economic traits than the rest of the mulberry varieties. Silkworms reared on V-1 mulberry variety were found significantly superior in larval period (23.06 hours), cocoon yield/10,000 larvae brushed (18.96 kg), disease percentage (3.60%), filament length (970m) than rest of the treatments. However, variety Kanva-2 was at par with V-1 in all treatments. Variety, Mizosava was found to have highest larval period (24.36 hours), disease percentage (6.75%), and lowest cocoon yield/10,000 larvae brushed (15.50), filament length (670 m).

### Key words :

Mulberry varieties, *Bombyx mori* L, Larval period, Shell ratio, Cocoon yield

The silkworm (*Bombyx mori* L.) is a monophagous and highly domesticated insect. Mulberry (*Morus* sp.) the sole food plant of silkworm. plays vital role in the growth and development of silkworm and in turn the silk production. Leaf quality and quantity not only influence the silkworm growth and development, but also the cocoon production and quality of raw silk. Nutrition plays an important role in improving the growth and development of the silkworm. like other organisms. Legay (1958) stated that silk production is dependent on the larval nutrition and nutritive value of mulberry leaves and play a very effective role in producing good quality cocoon. The silkworm growth and development are dependant on the composition of mulberry leaves, which alone contributes out 38.2 per cent (Miyashita, 1986). Success of sericulture industry and its ultimate profitability thus depends on the production of good quality leaves at an economical cost.

The raw silk production in Maharashtra during 2008-09 was 200 MT (Giridhar *et al.*, 2008). There is tremendous scope for Sericulture in Maharashtra Hence, present studies were undertaken to evaluate different mulberry varieties for rearing performance of *B. mori* in Maharashtra

### MATERIALS AND METHODS

The present investigation was carried out in Randomized Block Design with ten treatments and three Replication in rearing house of Sericulture Research Unit, Marathwada Agricultural University, Parbhani, Maharashtra during October-November 2008. Disease free layings of silkworm hybrid CSR2 X CSR4 were used as a test race against ten mulberry varieties viz., V-1, Kanva-2, BER-1, T-6, T-7, BER-779, P-16, Mizosava, A-1 and LMP. The fresh mulberry leaves of these ten varieties were obtained from already established mulberry garden around the rearing house of Sericulture Research Unit. Improved technology of silkworm rearing as described by Krishnaswami (1978) was adopted in this investigation.

The newly hatched larvae were fed with chopped pieces of fresh mulberry leaves of above ten different varieties. The leaves were chopped into small pieces of 0.5 cm and sprinkled over the newly hatched worms for their feeding. The feeding was given two times in a day at 8.00 am and 8.00 pm. The rearing trays were cleaned daily as per recommended times. The silkworm, *B. mori* moults four times during its larval growth period. The stage between two moults is called as instars and hence there are five instars in life period of

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