

Residual effect of Mulberry Powdery mildew suppressive bio agents on growth and development of Silkworm (*Bombyx mori* L.), cocoon and silk quality

S.E. MANJUNATHA, V.B. SANATH KUMAR AND N. KIRAN KUMAR

Department of Plant Pathology, College of Agriculture, V.C. Farm, Mandya 571505, Karnataka

Received : 07.11.2017

Accepted : 13.11.2017

Published : 29.01.2018

Study on assessing the residual toxic effect of fungal and bacterial bio agents used against powdery mildew of mulberry on silkworms was conducted. The results of the toxicological studies on growth, development and cocoon parameters revealed that, *Trichoderma harzianum* had positive effect on both larval weight and its length with increase of 21.46 g and 5.18 cm respectively. Similarly, cocoon, pupal and shell weight of 14.99g, 11.86 g and 3.17 g respectively, shell ratio of 21.17 per cent and cocoon yield of 524.66 g/dfi was higher compared to other treatments. The filament length of 769.05 m, filament weight of 0.16 g and denier of 1.80 per cent fineness were found to be superior in *Trichoderma harzianum* treated mulberry leaves fed to silkworm. The present investigation clearly revealed that mulberry powdery mildew effective bio agents, *Trichoderma harzianum* and *Trichoderma viridae* at 15 per cent concentration, *Bacillus subtilis* and *Pseudomonas fluorescens* at 10, 15 per cent concentration were found to be safe to silkworms when leaves fed to them three days after treatment with culture filtrate of bio agents.

Key words: Powdery mildew, *Trichoderma harzianum*, *Bacillus subtilis*, *Pseudomonas fluorescens*, toxicity, cocoon, denier