Research Paper

EFFECTIVENESS OF COMPOST PREPARED FROM SERI RESIDUE ENRICHED WITH BENEFICIAL AND ANTAGONISTIC MICROBES ON MANAGEMENT OF ROOT ROT DISEASE IN MULBERRY

D. D. Sharma, V. R. Mala, N. B. Chowdary and S. M. H. Qadri
Central Sericultural Research and Training Institute, Mysore – 570 008, India.
E-mail: ddsharma_csrti@yahoo.com

ABSTRACT

Studies were conducted to find out the effect of compost prepared from seri residue (SR: silkworm litter + rearing waste) enriched with rock phosphate (RP), beneficial microbes [Phosphate Solublizing Bacteria (PSB), *Azotobacter* (Az)] and antagonistic microbes [*Trichoderma harzianum* (Th) and *T. pseudokoningii* (Tp)] for management of root rot disease caused by a group of fungi such as *Fusarium solani, F. oxysporum, Botryodiplodia theobromae* and *Macrophomina phaseaolina* in mulberry. The trial was conducted in sick soil where mixed population of these pathogens was present @ 3.2 x 10^7/g soil. The experiment was conducted following RBD with nine treatments. Results revealed the maximum disease control (74.3%) recorded for treatment where SR was enriched with RP+*Az*+PSB+Th+Tp+NOC (72.6%) which prevented 37.0 and 36.3% leaf yield loss, respectively over control. There was no significant difference between these two treatments and interestingly, the results were on par with that of the recommended metho (Indofil M-45 (Mancozeb 75% WP) + Raksha (*T. harzianum)*] which could control the disease up to an extent of 77.6%. hence, compost prepared from seri residue enriched with beneficial / antagonistic microbes after mixing with neen oil cake in the ratio 2:1 @ 250 g/plant is recommended as an eco-friendly package for management of root rot disease as well as to improve the soil health.

Key words: Enriched compost, mulberry, root rot disease, seri-residue.