

Prevalence of Erwinia soft rot affecting cut foliage, Dracaena sanderiana ornamental industry and solution towards its management.

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Abstract

The study was carried out under net house conditions at Green Farms Ltd, Marawila to determine the occurrence and severity of Erwinia soft rot disease in Dracaena sanderiana plants and to formulate the possible control measures. Field experiment was carried out to manage the soft rot disease in D. sanderiana plants. Three different soil treatments with vermicompost, cow dung and poultry manure were tested to manage the disease and plots without application were kept as control. Percent disease incidence, disease reduction and growth parameters were recorded and data were statistically analyzed. Higher percentage of disease reduction was observed in vermicompost (80%) treated plots than those with cow dung (60%) and poultry manure treated. Sprinkler application of water was found favorable to spread soft rot disease and watering through horse pipe had lessened the disease incidence significantly. Moreover plant height, shoot and root biomass, number of leaves per plant, leaf length and leaf width were significantly high in vermicompost media. Weeding, removal of diseased leaves and plants, and avoiding sprinkler irrigation were helpful to reduce the disease spread from plant to plant. Vermicompost is the best substrate for suppression of the disease and promoting the growth of plant. Among the different water management practices tested to reduce the disease severity of Erwinia soft rot disease in D. sanderiana plants, water irrigated through the horse pipe was effective compare to sprinkler application. In-vitro experiment conducted to manage the Erwinia soft rot disease by using bio-agent, Pseudomonas fluorescens was found effective to reduce the growth of Erwinia under in-vitro conditions.

Indexed keywords

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