Small Scale Production of *Trichoderma viride* on Locally Available Liquid Waste and Other Substrates

Emerson. F. L., Mikunthan. G.
Department of Agricultural Biology, Faculty of Agriculture, University of Jaffna, Sri Lanka

Abstract

In eco friendly agriculture, *Trichoderma viride* is a promising bio control agent for various plant pathogens. It can be multiplied in solid and liquid media but liquid fermentation yields high reproductive capacity and is more convenient than solid state fermentation system. High cost of substrates and storage methods are major problems to accelerate the production. Therefore experiments were carried out to screen out suitable liquid wastes and other liquid media as suitable substrates for small scale production of *T. viride*. Locally available household and industrial liquid wastes such as Black gram soaked water, Coconut water, Rice mill effluent from the red pericarp variety, 5% Distillery spent wash and other liquid substrates such as 1% Palmyrah jaggery solution, 5% Palmyrah toddy and 1% Palmyrah fruit pulp extract, 10% Cow urine, 10% *Gliricidia sepium* and 10% *Thespesia populnea* leaves extracts were individually investigated. Among these substrates higher growth and sporulation of *T. viride* was recorded in black gram soaked water (35.9x10 spores/ml), followed by 1% Jaggery solution (30.0x10 spores/ml), Coconut water (28.8x107spores /ml), Rice Mill Effluent (28.7 x107spores/ml) and 1% Palmyrah fruit pulp extract (27.1x107spores/ml) after 14 days of incubation in dark room at 30°C. *T. viride* grown on black gram soaked water resulted highest fungal growth inhibition of 83.72% against *Sclerotium rolfsii* in 7 days. The present study revealed that locally available liquid substrates are potential source for liquid fermentation of *T. viride*.