404/D

Trichoderma harzianum mediated induced systemic resistance (ISR) in bean against bean rust

S Abeysinghe*
University of Ruhuna, Faculty of Science, Department of Botany, Matara

Trichoderma spp. are effective biocontrol agents for a number of soil-borne pathogens, and some are known for their ability to enhance plant growth. It was recently suggested that some strains of *Trichoderma* also trigger induced systemic resistance (ISR) in plants. The ability of a *Trichoderma harzianum* to protect bean plants against *Uromyces appendiculatus*, the causal agent of bean rust, under greenhouse conditions was studied. The fungal biocontrol agent was introduced to the plants through seed microbiolization or inoculated directly into the potting mix as a conidial suspension at the rate of 10^6 conidia/ ml. Treatment of non-microbiolized seeds and non-inoculated soil were included as controls and synthetic resistance inducer salicylic acid was also used. Treated seeds resulted in reduced disease severity as assessed by detached leaf assay compared with the control treatment in fourteen days old bean plants. Disease resistance was not observed in 14-days old plants grown in soil inoculated treatment. However, 21-days old primary leaves were equally resistant to the pathogen despite the mode of application of the biocontrol agent. Since the resistant inducing agent and challenging pathogen was spatially separated the state of resistant observed on primary leaves should be attributed to induced systemic resistance.

*saman@bot.ruh.ac.lk Tel: 041-2227024