

Efficacy of various bio-agents and plant extracts against early blight disease of tomato caused by *Alternaria solani*.

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The experiment was conducted with seven bio-agents. The laboratory trial was conducted by two ways. The treatment of *Trichoderma viride* at the centre and periphery significantly reduced the fungal growth recorded 90.18 and 87.40 per cent inhibition over control, respectively. When pathogen is at the centre *Gliocladium virens* and *Trichoderma viride* were found statistically at par with each other recording 87.77 and 87.40 per cent. When pathogen is at periphery, *Trichoderma viride* significantly reduced the fungal growth by 90.18 per cent. These were followed by the treatments viz., T9, T12, T11, T10, T14, and T13 recording 87.96, 85.37, 83.51, 80.00, 37.40 and 32.96 per cent inhibition over control, respectively. The experiment on fungal growth inhibition of *Alternaria solani* due to plant extracts was conducted in vitro by Poisoned Food Technique. The leaf extract of *Azadirachta indica* (20%) was highly effective in controlling mycelial growth of *Alternaria solani* which recorded 66.67 per cent inhibition over control. These treatments were followed by the treatments of *Allium sativum* (T6) and *Vinca rosea* (T3) which recorded 55.56 and 54.44 percent inhibition over control, respectively and these treatments were with at par each other. Other extracts were found significantly less effective in inhibiting the mycelial growth of *Alternaria solani* with 35.56, 27.78 and 22.22 per cent inhibition over control in case of *Ocimum sanctum* (T4), *Pongamia pinnata* (T5), and *Glyricidia maculata* (T2), respectively. Least inhibition was observed in case *Vitex negundo* (T7) which were exhibited 11.11 per cent inhibition over control at 20 percent leaves extract concentration. Treatments viz., *Azadirachta indica* and *Allium sativum* allowed poor sporulation and *Vitex negundo* produce moderate sporulation.

Biography

He did his B.Sc. (Agri) degree from MKV, Parbhani and M.Sc. (Agri) from Dr BSKKV, Dapoli. Now he is doing Ph.D. degree from MKV, Parbhani.

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