Abstract:

Antibiotic metabolites from two antagonistic actinomycete isolates coded 28P and CS35 were evaluated for the control of late blight of tomatoes in the greenhouse. Five concentrations namely; half strength, quarter strength, normal strength, one and half strength and double strength were evaluated for their efficacy in controlling late blight disease. The various concentrations of the metabolites were found to give a significant ($p=0.05$) control in management of late blight. The antibiotic metabolites were found to be protective in nature and there was an average of 30.8 and 19.8% improvement in disease control when metabolites from isolate 28P and CS35, respectively were applied before inoculation compared to when the metabolites were applied after inoculation. Concentrating the culture filtrates increased the efficacy of the disease control without producing any phytotoxic effects. The disease incidence of tomato plants treated with culture filtrates from actinomycete isolate CS35 was 25.74, 17.93 and 15.01 for the normal, one and a half and two times concentrations, respectively. The antibiotic metabolites also delayed the onset of the disease and plants treated with the metabolites took relatively longer time (up to 2 more days) for the symptoms to develop. The actinomycetes have a great potential in the management of late blight