Bio-control Potentiality of Forty Soil Actinomycetes against *Sclerotium rolfsii*. Sacc.

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Abstract
Sclerotium rolfsii. Sacc. [Teleomorph: *Athelia rolfsii* (Curzi) C.C. Tu & Kimbr.] is a necrotrophic soil borne facultative plant pathogen. This cosmopolitan fungus has a very wide host range, affecting more than 500 plant species. Actinomycetes, a group of prokaryotic filamentous organisms, are mainly soil inhabitant. They are well-known for the production of bactericidal and fungicidal metabolites to control plant diseases. Hence, forty Actimonycetes were isolated following crowded-plate technique on starch casein agar medium supplemented with Naligram and Nystatin (each of 0.050 mg/mL) from thirty four soil samples, collected from different habitats of five districts of Bangladesh. After being characterization they were tested *in vitro* for their biocontrol potentiality against *S. rolfsii* following cross strike method on Trypticase Soy Agar medium with 0.6% yeast extract. Out of forty Actinomycetes isolates 14 showed suppression of growth of the test fungi. Actinomycetes isolate no. 26Pa showed maximum inhibition (27 mm) followed by 25Sa (26 mm) and 19Ta (25 mm). These three Actinomycetes isolates were belong to the genus *Streptomyces* sp. can be used as biocontrol agent against *S. rolfsii.*

Keywords: Actinomycetes, Biocontrol Potentiality, *Sclerotium rolfsii*

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