Effect of various media, temperature and pH on growth and sporulation of *Trichoderma* spp. isolates from Uttar Pradesh

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ABSTRACT: *Trichoderma* spp. isolates were collected from different chickpea fields of Uttar Pradesh. These isolates were tested to know growth and sporulation behavior at different Temperature, pH and media. The most favourable temperature for growth and sporulation of *Trichoderma* spp. was found 30°C (74.33mg), followed by 25°C where average growth of the bio-agent was recorded as 64.66mg. Similarly the most favourable pH ranges was found 6.5 - 7.5 in which total dry weight of mycelium also varies between 200.33 to 226.33 mg and also very good sporulation was observed. The minimum dry weight was recorded as 109.66 at pH 3.0. *In vitro* study on five solid media *viz.*, Potato dextrose Agar, Rose Bengal Agar, Asthana and Hawker's Agar, Sabouraud's Agar and Czapek's (Dox) Agar. Among the different media, PDA shows excellent in average colony diameter (8.09 cm) followed by Rose Bengal Agar (7.69 cm), but excellent average mycelium weight (176.66 mg) was recorded in PDB medium and also excellent sporulation were observed on Potato Dextrose and Rose Bengal broth. Study of efficacy of the isolates at different temperature and pH conditions is helpful for practical utility.

Key Words : Trichoderma spp. isolates, media, temperature, pH, growth.