

EFFECT OF TEMPERATURE, PH AND VARIOUS MEDIA 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 Sultanpur, Sitapur, Barabanki, Kanpur Nagar and Etawah (Uttar Pradesh). These isolates were tested to study growth and sporulation behavior of *Trichoderma* sp. at different Temperature, pH and media. The most favorable temperature for growth and sporulation of *Trichoderma* sp. 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 favorable 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. Among the different media (*viz.*, Potato dextrose Agar, Rose Bengal Agar, Asthana and Hawker's Agar, Sabouraud's Agar and Czapek's (Dox) Agar) Potato Dextrose Agar (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 Potato Dextrose Broth (PDB) medium and also excellent sporulation were observed on Potato Dextrose and Rose Bengal broth. Studies on the biology of *Trichoderma* sp. isolates at different temperature and pH conditions is helpful for practical utility to contain disease problems in agro-ecosystems.

Keywords: Effect, Temperature, *Trichoderma*, Uttar Pradesh

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