

# Study on the Growth and Sporulation of the Pathogen *Exserohilum turcicum* in different Growth Medium

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**Abstract**—Globally, maize is known as queen of cereals because it has the highest genetic yield potential among the cereals. Turcicum leaf blight disease of maize caused by the fungus *Exserohilum turcicum* is one of the important foliar diseases causing severe reduction in grain and fodder yield. A study was conducted at Department of Plant Pathology, BCKV, Mohanpur, Nadia, West Bengal to study the growth and sporulation of the pathogen *Exserohilum turcicum* in different growth medium. The fungus, *Exserohilum turcicum* was isolated and purified in Potato Dextrose Agar media from naturally infected leaves of maize collected from the field of Regional Research Sub Station, Chakdah, West Bengal. Five different media was used namely, Oat Meal Agar, Corn Meal Agar, Czapek Dox, Asthana & Hawker's and Potato Dextrose Agar Media was considered for the study. It was found that both Potato Dextrose Agar and Oat meal agar media supported maximum significant mycelial growth of the pathogen. The least growth was observed in Maize grain extract agar. However, there was no significant difference in the growth of pathogen in the Potato Dextrose Agar and Oat Meal Agar medium. Maximum sporulation was observed in Potato dextrose agar medium ( $11.11 \times 10^4$  spores /ml) which was followed by Oat meal agar media ( $10.46 \times 10^4$  spores /ml). The least sporulation was observed in Czapek dox agar media ( $2.12 \times 10^4$  spores /ml) followed by Asthana and Hawker's agar media ( $2.95 \times 10^4$  spores /ml) Potato dextrose agar was the best for both colony growth and sporulation of all the solid media tested followed by Oat meal agar media.

**Keywords:** Maize, *Exserohilum turcicum*, morphology, colony growth, sporulation.