

# Effect of different culture media, temperature, pH, carbon and nitrogen sources on mycelial growth and sporulation of *Alternaria carthami* causing Alternaria blight of safflower

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## ABSTRACT

Eight culture media, eight temperature levels, nine pH levels, seven carbon and six nitrogen sources tested exhibited better growth of *Alternaria carthami*. Results revealed that Potato dextrose agar gave significantly highest growth (90.00 mm), followed by Potato malt agar (84.16 mm) with excellent sporulation. Temperature levels indicated that highest mean mycelial growth (85.66 mm) was recorded at 30°C followed by 25°C (83.83 mm) and 20°C (66.33 mm). However, maximum mean mycelial growth (85.83 mm) was recorded at pH 6.5 with excellent sporulation, followed by at pH 6 (82.00 mm) and pH 7 (70.33 mm) with excellent and good sporulation, respectively. The carbon sources exhibited varied radial mycelial growth and sporulation of the test pathogen. However, highest radial mycelial growth (86.00 mm) and excellent sporulation was recorded on glucose, followed by on maltose (82.83 mm) and starch (80.33 mm) with excellent sporulation. Nitrogen sources resulted highest radial mycelial growth (82.55 mm) and excellent sporulation on potassium nitrate, followed by on peptone (75.83 mm) with good sporulation. Least radial mycelial growth (19.00 mm) was recorded on urea with poor sporulation.

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