

## Research Article

**Morphological and Cultural Characterization of Quarantine Concerned *Phomopsis* spp. Associated with Oilseed Crops****LS Rajput<sup>1</sup>, Sanjeev Kumar<sup>1</sup>, Heena Bhati<sup>2</sup>, Krishna Nair<sup>2</sup>, Jameel Akhtar<sup>2</sup>, Pardeep Kumar<sup>2</sup>, SC Dubey<sup>2</sup>**

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**Abstract**

Total twelve isolates representing five species of *Phomopsis* were collected from various oilseed crops representing both exotic as well as domestic collections of India and were examined for morpho-cultural variability. Isolates of *Phomopsis* spp. showed significant difference in colony type, colour, radial growth, shape and size of both  $\alpha$  and  $\beta$  spore, pycnidial arrangement, production, colour and days required for initiation. PCA revealed that among different morpho-cultural characters, few characters such as colony margin, days required for full growth, pycnidial colour as well as days required for pycnidial initiation exhibited strong correlation for explaining variability. Three groups A, B and C were created through neighbour joining cluster analysis based on morpho-cultural characters of *Phomopsis* spp. Group A included both the domestic and exotic isolates of *P. phaseoli*, whereas group C was most diverse group including isolates of four *Phomopsis* spp. collected from different crops and agro ecological regions. This study revealed that morphological variation arises due to adaptation to various ecological zones that may lead to introduction of new race or genotype of *Phomopsis* spp. to the India. This variation among *Phomopsis* spp. can be used in resistance breeding programme to various crops.

**Key words:** Conidia, crops, cultural, *Phomopsis* spp., pycnidia

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