Research Article

Mycelial Compatibility Groups and Variability in Indian Mustard (*Brassica juncea* L.) Field Populations of *Sclerotinia sclerotiorum* (Lib.) de Bary

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Abstract

Sclerotinia sclerotiorum (Lib.) de Bary is an ubiquitous necrotrophic fungal pathogen capable of infecting more than 500 plant species in 75 families. It causes stem rot a major disease of oilseed *Brassica* in India. Variability in 25 different geographical isolates of *S. sclerotiorum* associated with the stem rot of *Brassica* spp was studied for their morphological and mycelial compatibility. The isolates varied in colony morphology, mycelial growth rate, sclerotium formation, sclerotial size and colour. Based on their mycelial compatibility, variability in isolates was observed and out of the 300 combinations, only 54 showed compatible reactions between two isolates. Based on mycelial compatibility, 18 per cent vegetative compatibility groups (VCG) were identified among all the isolates. Twenty five isolates were grouped into two clusters, (i). 7- isolates with 60 per cent similarity in their cross reactivity reactions and (ii) 18- isolates with 74 per cent similarity to each other. Therefore, high rates of out crossing and genetic recombination between the populations of pathogens from different geographical locations are possible. It has been observed for the first time to find the variability in *S. sclerotiorum* populations infecting the oilseed *Brassica* in India.

Key words: *Brassica* spp, mycelial compatibility, *Sclerotinia sclerotiorum,* variability

Citation: Sharma P, Meena PD, Rai PK and Kumar S. 2017. Mycelial compatibility groups and variability in Indian Mustard (*Brassica juncea* L.) field populations of *Sclerotinia sclerotiorum* (Lib.) de Bary. *J Mycol Pl Pathol* 47(2): 202-212