# SCREENING OF DIFFERENT ONION VARIETIES FOR RESISTANCE AGAINST BLACK MOLD ROT OF ONION CAUSED BY *ASPERGILLUS NIGER* VAN TIEGHEM

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**Abstract:** *Aspergillus niger* van Tieghem is the causal agent of black mold rot of onion, primarily a post-harvest disease. Four isolates of *Aspergillus niger i.e.,* An-1, An-2, An-3 and An-4 isolated from rotting onion, rotting garlic, rotting ginger and soil respectively were examined for their ability to cause rotting in bulbs of 13 different varieties of onion *i.e.,* Agrifound dark red, Agrifound light red, Agrifound rose, N-2-4-1, Baswant-780, Pusa red, Line-28, N-53 and Punjab red (red coloured), Agrifound white, Pusa white round, N-257-9-1(white coloured) and Early grano(yellow coloured). Agrifound white, Agrifound dark red and Pusa white round varieties were found to be most promising since these varieties suffered from the rot to the extent of 3.27%, 7.37% and 8.21% only respectively. The varieties Pusa red, Agrifound rose, Agrifound light red, N-257-9-1 and N-2-4-1 were found to be moderately resistant, while two varieties *i.e.* Baswant-780 and Punjab red were moderately susceptible. Two varieties *viz.* Line-28 and N-53 exhibited 44.20% and 41.80% rot respectively. One variety of onion *i.e.,* Early grano was found to be highly susceptible having maximum percentage rot of 71.25%. White coloured varieties exhibited minimum mean percentage rot and were found to be more resistant. The results would be useful for delineating the onion germ plasm to be utilized as a source of onion gene(s) which could confer resistance against black mold rot through conventional breeding or molecular engineering for the management of bulb mold rot.

**Keywords:** Black mold rot, *Aspergillus niger*, Onion (*Allium cepa* L.), Resistance, Varieties.

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