

## Research Article

***Bipolaris australiensis*, A New Report of Postharvest Rot Causing Fungus of Apple from Kashmir Valley and its Management****Tariq Ahmad Wani, Abdul Hamid Wani, Mehrajudin Talie, Mohd Yaqub Bhat and Wasim Sajad Malik***Section of Plant Pathology, Mycology and Microbiology, Department of Botany, University of Kashmir, Srinagar-190006, India; Email:myaqub35@gmail.com, danishmehraj143@gmail.com***Abstract**

Several fungi cause apple fruit rot, and accurate identification of the casual organism is the first step in creating control strategies for fruit rot. In this respect, the current study was aimed to identify the fungi associated with postharvest apple rot in Kashmir Valley. The study revealed the new fungus *Bipolaris australiensis* mediated brown rot of apple, identified on the basis of micro-morphological, cultural characteristics and satisfying Koch's postulates. The sensitivity of different fungicides and local *Trichoderma* isolates were tested for the management of *Bipolaris* brown rot of apple using agar well diffusion and dual culture methods. Amongst the four tested isolates of *Trichoderma* TVPLF isolate caused maximum inhibition ( $40.00\pm 2.00$ ) against *B. australiensis* followed by TAPRF ( $31.20\pm 2.81$ ), TRS ( $30.40\pm 2.50$ ) and TLV ( $22.40\pm 1.81$ ) under *in-vitro* conditions. Similarly, from the study it was observed that different concentrations of fungicides under *in-vitro* conditions exhibited significant inhibition zones against the test fungi. However, Kashstin fungicide shows maximum inhibitory ( $38.33\pm 1.52$ ) effects followed by Indofil z-78 ( $30.33\pm 0.57$ ), Covert ( $21.00\pm 1.00$ ) and Boon ( $21.00\pm 1.00$ ) at highest concentrations. Therefore, TVPLF *Trichoderma* isolate and Kashstin fungicide may prove helpful for the management of postharvest apple rot in near future after proper investigations.

**Key words:** Brown rot, fungicides, inhibition zone, management, *Trichoderma*

**Citation:** Wani T A, Wani A H, Talie M, Bhat M Y, Malik W S. 2023. *Bipolaris australiensis*, a new report of postharvest rot causing fungus of apple from Kashmir Valley and its management. *J Mycol Pl Pathol* 53(1): 64-70