

Research Article**Status on Occurrence and Pathogenic Variability of *Fusarium oxysporum* f.sp. *radicis-cucumerinum* causing Root and Stem Rot of Cucumber in Southern Rajasthan****Suresh Kumar¹, NL Meena², Pokhar Rawal³, Devendra Jain⁴ and BL Baheti⁵**^{1,2,3}Department of Plant Pathology, ⁴Department of MBBT, ⁵Department of Nematology, RCA, MPUAT, Udaipur-313 001, (Rajasthan), India; Email: drskg8888@gmail.com**Abstract**

Cucumber cultivation is vulnerable to attack of several diseases that interrupt normal physiological process of this crop. Root and stem rot caused by *Fusarium oxysporum* f.sp. *radicis-cucumerinum*, is one of them which hamper successful cultivation and causes significant yield losses globally including India. An intensive roving survey was carried out to know disease occurrence and distribution of root and stem rot of cucumber was conducted in cucumber growing 10 villages of each five districts of Southern Rajasthan viz., Udaipur, Rajsamand, Chittorgarh, Banswara and Dungarpur. The disease incidence ranged from 17.00 to 27.60 per cent during 2022 and 21.40 to 33.00 per cent during 2023. During *Kharif* season 2022, maximum disease incidence (25.04%) was recorded from Udaipur district followed by 22.16, 20.32 and 19.52 per cent disease incidence from Chittorgarh, Banswara and Dungarpur districts, respectively. However, minimum disease incidence (18.86%) was from Rajsamand district. During *Kharif* season 2023, maximum disease incidence (30.44%) was recorded from Udaipur district followed by 27.56, 26.12 and 22.92 per cent disease incidence from Chittorgarh, Banswara and Dungarpur districts, respectively. However, minimum disease incidence (24.26%) was from Rajsamand district. Pooled data revealed the highest disease incidence in Udaipur (27.74%) and lowest in Dungarpur (21.22%) district. The pathogenic variability of ten isolates of *Fusarium oxysporum* f.sp. *radicis cucumerinum* of five districts of Rajasthan was tested on cucumber susceptible variety S-82 through soil inoculation method in pot conditions. After 35-45 days of sowing disease incidence was recorded. According to the results maximum mortality was showed by isolate FORC-U1 (93.33%) followed by isolate FORC-C2 (86.67%). Isolate FORC-D1 showed per cent mortality of 80.00 per cent.

Key words: Cucumber, *Fusarium oxysporum* f.sp. *radicis-cucumerinum*, pathogenic variability, mortality, root and stem rot

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