

RESEARCH ARTICLE

Integrated management of bacterial blight disease (oily spot) of pomegranate caused by *Xanthomonas axonopodis* pv. *punicae*

■ C.V. AMBADKAR, A.S. DHAWAN AND V.N. SHINDE

SUMMARY

A study of efficacy of different antibiotics for management of bacterial blight disease of pomegranate caused by *Xanthomonas axonopodis* pv. *punicae* was conducted during the year 2010-12 at College of Agriculture, Osmanabad. *In vitro* study revealed that antibiotic streptomycin showed maximum inhibition zone of 22.21 and 31.60 per cent at 250 and 500 ppm concentrations against *X. axonopodis* pv. *punicae*, followed by tetracycline (18.26 and 27.53 %) and bacterinol (17.40 and 27.15 %) the least inhibition of bacterial growth was observed in cefaclor (13.08 and 17.53 %), respectively. Among seven botanicals neem oil showed maximum inhibition at all concentration (5, 10, 15 and 20 %) followed by garlic, neem leaf extract, tulsi leaf extract, ginger extract, guava leaf extract and aloe vera, respectively. The bacterial antagonistic viz., *Pseudomonas fluorescens* and *Bacillus subtilis* were found effective in inhibiting the test pathogen at 15.43 and 12.71 per cent, respectively. Based on the efficacy of these different antibiotics, bioagents and plant extracts, the best one were applied in integrated management schedule for mitigating bacterial blight of pomegranate. The schedule was applied at five different locations in Marathwada region of Maharashtra. At the time of adoption of orchards, the per cent disease severity observed in the orchard at Kelewadi, Wagholi, Sakanewadi, Hol and Killari were 16.44, 16.56, 17.85, 11.50 and 26.32 which was reduced to 3.5, 8.23, 8.14 and 9.53 and 9.04, respectively at harvest.

Key Words : *Xanthomonas axonopodis* pv. *punicae*, Antibiotics, Integrated management, Bacterial blight

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MEMBERS OF THE RESEARCH FORUM

Author to be contacted :

C.V. AMBADKAR, Department of Plant Pathology, College of Agriculture, OSMANABAD (M.S.) INDIA

Address of the Co-authors:

A.S. DHAWAN, Directorate of Extension Education, Vasant Naik Marathwada Krishi Vidyapeeth, PARBHANI (M.S.) INDIA

V.N. SHINDE, Department of Horticulture, College of Agriculture, OSMANABAD (M.S.) INDIA