

RESEARCH ARTICLE

Efficacy of bactericides and antibacterial chemicals against bacterial blight of pomegranate

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ARTICLE INFO

Received : 11.02.2014

Revised : 10.03.2014

Accepted : 21.03.2014

Key Words :

Bactericides, Antibacterial chemicals,
Bacterial blight, Pomegranate

ABSTRACT

Bacterial blight of pomegranate caused by *Xanthomonas axonopodis* pv *punicae* has become a severe disease in Maharashtra, Karnataka and Andhra Pradesh. Among the different strategies available for the management of the disease, use of chemicals tends to be more assured. Hence, an attempt was made to evaluate the available bactericides and antibacterial chemicals for their efficacy against the disease. The study included both *in vitro* and *in vivo* methods. Laboratory assay revealed the superior efficacy of bactinash-200 with an inhibition zone of 15.07 mm followed by bronip (14.67 mm) and plantomycin (13.77 mm) in suppressing the growth of the pathogenic bacterium. Further, field evaluation over the seasons showed that, bronip (0.05%) was significantly effective in recording the minimum disease incidence (17.18%) followed by bactinash-200 (23.26%) and bactrinashak (24.30%) at the similar concentration. In respect of reducing the disease severity, bactinash-200 (7.33 PDI) followed by bronip (7.87 PDI) were found significantly effective after 5th application of treatments. The efficacy of all the antibacterial chemicals was significantly low with Bordeaux (1%) mixture as least effective antibacterial chemical (61.38% incidence and 30.90 PDI). Correspondingly highest yield of 10.20 tons/ha was obtained in bronip treated plot followed by at par yield level (9.28 tons/ha) in bactrinashak treated plot. Maximum disease incidence (68.57%) and severity (42.93 PDI) was recorded in untreated check plot.

How to view point the article : Yenjerappa, S.T., Nargund, V.B., Ravikumar, M.R. and Byadagi, A.S. (2014). Efficacy of bactericides and antibacterial chemicals against bacterial blight of pomegranate. *Internat. J. Plant Protec.*, 7(1) : 201-208.

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