

Research Article

Bio-intensive Management of *Xanthomonas axonopodis* pv. *cyamopsidis* Causing Bacterial Blight of ClusterbeanSH Joshi^{1,2}, Anirudha Chattopadhyay³, NK Singh⁴, RS Jaiman¹ and Jyotika Purohit¹¹Department of Plant Pathology, Sardarkrushinagar Dantiwada Agricultural University, Sardarkrushinagar -385 506;²Department of Plant Pathology, Navsari Agricultural University, Navsari-396 450; ³Pulses Research Station and⁴Department of Microbiology, Sardarkrushinagar Dantiwada Agricultural University, Sardarkrushinagar -385 506; Email:jyotikap@sdau.edu.in**Abstract**

The bacterial blight caused by *Xanthomonas axonopodis* pv. *cyamopsidis* is the most important and destructive disease of clusterbean. The experiment aimed to formulate a bio-intensive management strategy for this disease using bio-agents and antibacterial chemicals. For that, the *in vitro* bioefficacy of different bio-agents and chemicals was evaluated against the pathogen. Among five bio-agents, *Pseudomonas fluorescens* was found most effective with a maximum inhibition zone of 49.50mm followed by *P. putida* (41.00mm) and *Bacillus subtilis* (37.33mm). However, among six different antibacterial chemicals, streptomycin was found most effective at all concentrations with a maximum inhibition zone of 64.33 mm at 500 ppm followed by 56.50mm at 200 ppm and 53.67mm at 100 ppm. Further, different superior treatments were selected and integrated in different combinations and then evaluated in pot condition. Among them, hot water treatment followed by seed biopriming with *P. fluorescens* and then spraying with streptomycin (250ppm) was found most effective with the lowest disease intensity (10.11%), the highest disease reduction over control (68.69%), and the highest germination (93.33%) as well as maximum plant length, 18 cm and 15.50 cm for the healthy and diseased plant, respectively. It will help to select a bio-intensive strategy to manage the bacterial blight of clusterbean under epiphytotic conditions.

Key words: Bacterial blight, bio-intensive management, clusterbean, *Xanthomonas axonopodis* pv. *cyamopsidis*

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