

Research Article**Bioagents for the Management of Mildews in Organically Grown Cucumber under Protected Cultivation****GM Hegde¹ and LH Malligawad²**

¹Associate Professor of Plant Pathology, ²Professor of Agronomy; Institute of Organic Farming, University of Agricultural sciences, Dharwad-580 005, Karnataka, India Email: hegdegm@uasd.in

Abstract

Powdery and downy mildews are potentially serious diseases of cucumber inflicting considerable quantitative and qualitative losses. Efficiency of *Pseudomonas fluorescens*, *Bacillus subtilis* and *Trichoderma harzianum* to manage both diseases on cucumber plants under polyhouse conditions was studied during *kharif* 2016-17 and 2017-18 at bioresource farm of institute of organic farming, UAS, Dharwad. Spray with suspensions of these bioagents significantly reduced severity of both mildews as well as increased fruit yield compared to the untreated control. The combination sprays of *Pseudomonas fluorescens* and *Bacillus subtilis* @ 5g per litre three times at an interval of 15 days recorded highest reduction of both the mildews, increased the yields and also has shown increase in plant height as compared to sole applications and untreated control. Based on the cost economics it is revealed that the combined spray of *Pseudomonas fluorescens* and *Bacillus subtilis* has resulted in highest gross returns, net returns and highest benefit-cost ratio.

Key words: Biological control, cucumber, downy mildew, polyhouse, powdery mildew

Citation: Hegde GM and Malligawad LH. 2020. Bioagents for the management of mildews in organically grown cucumber under protected cultivation. *J Mycol Pl Pathol* 50 (1): 74-83