

Environmentally benign management of bacterial wilt of brinjal incited by *Ralstonia solanacearum* (Smith)

■ C. T. Kumbhar*, A. V. Bulbule and P. N. Gajbhiye

Zonal Agricultural Research Station, Sub-montane Zone, Shenda Park, **Kolhapur (M.S.) India**

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ABSTRACT

A field experiment was conducted to study the effect of *Pseudomonas fluorescens* on wilt disease of brinjal incited by *Ralstonia solanacearum*, during three consecutive *Kharif* seasons of 2010, 2011 and 2012 at the experimental farm of Zonal Agricultural Research Station, Sub-montane Zone, Kolhapur (Maharashtra) India. Pooled data of the three years revealed that the wilting was reduced remarkably in the plots, where the plants were drenched with copper oxychloride 40 g + streptomycin 2 g (per 10 L water). This treatment gave outstanding disease control and was the best amongst all the treatments tried, in reducing wilt incidence by 62.77 per cent and yield increase by 71.93 per cent compared to untreated control. However, maximum benefit-cost (B: C) ratio of 3.11 was recorded in the treatment wherein *P. fluorescens* was inoculated to seed + seedling roots + soil. Consequently, on the basis of relative efficacy of *P. fluorescens* in terms of degree of disease control, additional yield, net profit per hectare and benefit: cost ratio, seed treatment with talc based culture of *P. fluorescens* @ 10 g kg⁻¹ seed before sowing and seedling root dip (2.5 kg of talc based formulation of *P. fluorescens* in 40 L water) as well as soil application (2.5 kg of talc based formulation of *P. fluorescens* mixed in 50 kg of FYM acre⁻¹ soil), at the time of transplanting may be recommended to farmers for management of bacterial wilt of brinjal and thereby gaining higher fruit yield.

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*Corresponding author:

drchandrankumbhar@gmail.com