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Research Article

Management of chilli powdery mildew caused by *Leveillula taurica*

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ABSTRACT

Powdery mildew of chilli incited by *Leveillula taurica* was found to be a devasting disease of chilli. During the present study, six fungicides, two bioagents and one plant extract were evaluated under field conditions. Among fungicides, Bayleton, Bavistin, Topsin-M were the most effective in controlling chilli powdery mildew. The plot sprayed with *Trichoderma viride* showed minimum disease severity (28.70%) as compared to plot sprayed with *Pseudomonas fluorescens* (28.80%) Neem oil also reduced chilli powdery mildew disease in field.

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INTRODUCTION

Chilli (*Capsicum annuum*) is an important spice cum vegetable crop. India is the major producer consumer and exporter of chilli in world. India's share in total export of chilli in world is 4 per cent (Gupta and Naik, 2005).

Diseases are major limiting factor in crop production. Chilli crop suffers from several fungal bacterial and viral disease among all diseases, *Leveillula taurica* which causes powdery mildew is unique foliar pathogen having ability to infect large number of plants (Hirate, 1968). The disease has been reported to occur on chilli crop from several countries, like Hungry, USA, Italy, Israel, Romania, Bulgaria, India and elsewhere (Sah and Singh, 1988) Powdery mildew is prevalent in all the major chilli growing states of India. It has been reported to occur in serious proration in Vidrabha region (Gohokar and Peshney, 1981) and western Maharashtra (Pawar *et al.,* 1985) and now it is increasing importance in Marathawada region.

Powdery mildew caused by *Leveillula taurica* is one of the devasting diseases, of chilli that cause significant yield losses *i.e.* upto to 24 per cent (Sharmila *et al.,* 2004) considering the seriousness of disease the present studies, were undertaken to find an effective method for the managment of disease either through bioagents, chemicals, botanicals.

MATERIALS AND METHODS

A field experiment was carried out at Department of Horticulture, Marathawada Agriculture, University, Parbhani during *Kharif* and *Rabi* seasons 2007-08. The experiment was conducted in Randomised Block Design with three replications and ten treatments. The Variety Pusa Jwala was used to carry out the experiment. The plot size was 3x2.7m and transplanting of seedling was done with spacing 60x45cm. The recommended intercultural practices were undertaken as and when required.

The experiment was conducted with ten treatment out of these three were systemic fungicides. *i.e.* Bavistin (Carbendazim), Bayleton (Triadmierfon) and Tilt (Propiconazole). Three were non-systemic fungicides, Thiovit (wettable sulphur), Kavach (Cholrothalonil) and Topsin-M (Thiophanate Methyl) and also two bioangnts *i.e. Trichoderma viride* and *Pseudomonas fluorescens,* with one plant extract *i.e.* neem oil. The spying schedule was under taken at the time of initiation of disease and further at time interval of 15 days from 135 DAT. The disease severity and incidence was recorded at 15 days interval after each spray. Disease severity of powdery mildew was recorded on lower, middle and upper leaves in 0 to 9 disease rating scale as suggested by Mayee and Datar (1986).

RESULTS AND DISCUSSION

Data presented in Table 1 and 2 indicate that disease severity and disease incidence in various treatments varied from 23.23 per cent to 26.47 per cent and 23.71 per cent to