

Studies on powdery mildew of chilli

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SUMMARY

Powdery mildew of chilli incited by *Leveillula taurica* was found to be one of the devastating disease of chilli. Present studies include defoliation and yield losses estimation due to powdery mildew. During present studies six fungicides, two bioagent and one plant extract were evaluated under field condition. Minimum leaf defoliation (4.3 %) after third spray recorded in plot sprayed with balyeton followed by bavistin (5.01%) topsin –M (5.22 %), Tilt (5.74%) and thiovet (6%). Among bioagents, *Trichoderma viride* was superior. Highest yield of dry chillies was obtained in plot sprayed with balyeton (12.1 q/ha). Followed by bavistin (11.33 q/ha.) and topsin – M (11.23 q/ha.) .

Key Words : Chilli, *Leveillula taurica*, Powdery mildew

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

Disease are major limiting factor in crop production. Chilli crop suffers from several fungal bacterial and viral diseases among all diseases *Leveillula taurica* which causes powdery mildew is unique foliar pathogen having ability to infect large numbers of plants (Hirate 1968). The disease has been reported to occur on chilli crop from several countries, like Hungary, USA, Italy, Israel, Romania, Bulgari, India and elsewhere (Shah and Singh, 1988). Powdery mildew is prevalent in all major chilli growing states of India. It has been reported to occur in serious prporation 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 devastating disease of chilli that causes significant yield

losses *i.e.* 24 per cent (Sharmila *et al.*, 2004).

Considering economic importance of powdery mildew of chilli following studies were carried out.

- Defoliation of chilli leaves due to powdery mildew.
- Yield of dry chillies as influenced by application of different fungicides, bioagents and botanicals.

MATERIALS AND METHODS

A field experiment was carried out at Department of Horticulture ,Marathwada Agriculture University Parbhani .during *Kharif* and *Rabi* season 2007-2008. The experiment was conducted in a randomised block design with three replications and ten treatments .The variety pusa Jwala was used to carry out experiment. The plot size was 3×2.7m and transplanting of seedling was done with spacing 60×45cm. The recommended intercultural practices were under taken as and when required.

The experiment was conducted with ten treatments out of these three were systemic fungicides *i.e.* bavistin, bayleton and tilt. There were non-systemic fungicides *i.e.* thiovit, kavach and topsin-M and also two bioagents *i.e.* *Trichoderma viride*, *Pseudomonas fluorescens*, and one plant extract *i.e.* neem oil. The spraying schedule was under taken at the time interval of 15 days from 135 days after transplanting. Observations on leaf defoliation were recorded on five plants selected randomly from each plot. Leaf defoliation was

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