

Research Article

Effect of Weather Parameters on Progression of Fruit Rot Disease of Chilli Caused by *Colletotrichum capsici* in West Bengal

Md Sarfraz Alam, Vikas Kumar Ravat and Amitava Basu

Department of Plant Pathology, Bidhan Chandra Krishi Viswavidyalaya, Mohanpur, Nadia-741252, West Bengal,
Email : basuamitava1961@hotmail.com

Abstract

The present investigation focuses on the field study of fruit rot diseases on chilli, variety Bullet during cropping season of 2013, 2014 and 2015 in the farmer's field. The disease appeared during mid August on chilli crop under field condition in consecutive three cropping seasons. The data shows a progressive increase in PDI of fruit rot which was recorded upto 14 weeks in each year from the date of sowing. Overall, the mean temperature ranged from, 25.8 C to 32.17 C, relative humidity varied between 78.6 per cent to 93.2 per cent during the disease progress of 2013, 2014 and 2015. Infection rate during 2013 reached maximum at 5th week. Finally the infection rate significantly decreased due to prevalence of unfavorable weather factors. In case of 2014, initially the infection rate during 2nd and 3rd week increased and thereafter, the infection rate reached at maximum during 4th week and gradually declined during 5th week. Year wise multiple regression equation was done for the disease prediction based on the data recorded during three cropping seasons with PDI. The three weather parameters i.e temperature, relative humidity and cumulative rainfall were contributing in *Colletotrichum* fruit rot disease prediction. Thus, the present finding may help the chilli growers by alerting them in advance for prophylactic spray of fungicides to manage the *Colletotrichum* fruit rot and enhance the production.

Key words: Chilli, *Colletotrichum capsici*, disease severity, fruit rot, West Bengal, Weather Parameters

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