

13<sup>th</sup> International Conference on

# Agriculture & Horticulture

September 10-12, 2018 | Zürich, Switzerland

## Chemical control of bacterial leaf spot, *Cercospora* leaf spot and dieback of chilli vis-à-vis weather factors on disease severity

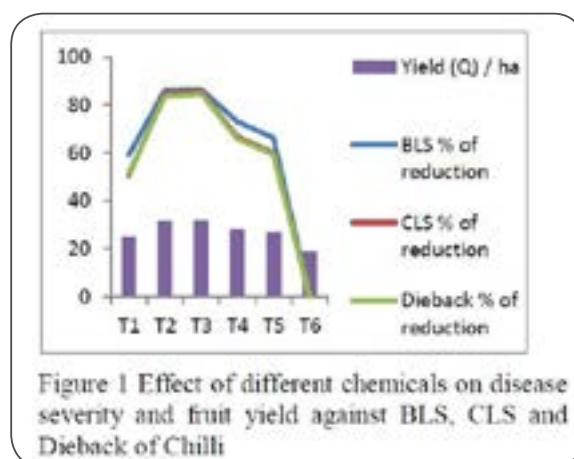
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**Statement of the Problem:** Chilli is produced in India having the highest share of production of spice crops, vulnerable to many diseases and chemical control has to be the only option adopted by farmers to protect their crops from biotic pathogens. Continuous use of conventional chemicals caused resistance against these pathogens. Second generation chemicals have proved as a new ray of hope in management of diseases.

**Methodology:** Field experiment was conducted to find out the effect of different metrological factors on severity of bacterial leaf spot, *Cercospora* leaf spot and dieback of chilli caused by *Xanthomonas campestris*, *Cercospora capsici* and *Colletotrichum capsici* respectively under six chemicals treatment during 2017-18. The four different dosages of Kasugamycin 3% SL @ 22.5 g, 30.0 g and 37.5 g a.i. h<sup>-1</sup>, Azoxystrobin 23% SC @ 125 g a.i. h<sup>-1</sup> and another one pre-mix chemicals Metiram 55% + Pyraclostrobin 5% WG @ 1050 g a.i. h<sup>-1</sup> were applied in field over the crop against this diseases, three sprays of each chemical with desired concentrations were applied starting from the first appearance of the disease at ten days interval. Different prediction equations were developed for each chemical treatments separately through step down multiple regression analysis.

**Findings:** Different meteorological factors had different effect on increase of disease severity of these three different diseases. It was found that all the chemicals reduced the three diseases significantly in comparison to untreated control. The progress of disease severity was also minimum in these treatments. Kasugamycin 3% SL @ 30.0 g a.i. h<sup>-1</sup> showed maximum reduction in disease severity with high fruit yield in comparison to other treatments. Among the meteorological factors considered only average temperature ( $T_{min}$ ),  $RH_{min}$  and total rainfall (Rt) were found to act positively and significantly whereas bright sunshine hours had negatively significant effect on progress of severity for the three diseases in chilli.



### Recent Publications

- Ahiladevi P and Prakasam V (2013) Bioefficacy of azoxystrobin 25 SC along with bioagents against chilli anthracnose diseases under field conditions. Pest Management in Horticultural Ecosystems. 19(1):57-62.
- Alexander S A and Waldenmaier C M (2002) Management of Anthracnose in Bell Pepper. Fungicide and Nematicide Tests [Online]. New Fungicide and Nematicide Data Committee of the American Phytopathological Society. 58:49.

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3. Mishra D et al. (1988) Fungicidal control of anthracnose and fruit rot (*Colletotrichum capsici*) of chilli (*Capsicum annuum*). Indian J. agricultural Science. 58(2):147-149.
4. Gopinath K, Radhakrishnan N V and Jayaraj J (2006) Effect of propiconazole and difenoconazole on the control of anthracnose of chilli fruits caused by *Colletotrichum capsici*. Crop Protection. 25(9):1024-1031
5. Sharma Pratibha et al. (2012) Integrated management of chilli die back and anthracnose in Delhi region.

## **Biography**

Srikanta Das pursued his MSc and PhD Degree in Plant Pathology from Bidhan Chandra Krishi Viswavidyalaya, Mohanpur, Nadia, West Bengal, India. He is currently a Professor in the Department of Plant Pathology at the same university and has been teaching the subject to undergraduate and post graduate students for more than thirty one years. He was invited by Bangladesh Agricultural University, France, Chiang Mai, Thailand, American Chemical Society and Berlin for presentation of his research findings on different international congress. He has guided 10 PhD students and 13 MSc students. He has so far published 89 papers in national and international journals, 3 book chapters and several conference proceedings. He served as an Academic Administrator like Head of the Department and Dean Faculty of Agriculture; has regularized the academic calendar and modernized the teaching methodology. He is a Fellow of the Society of Association for Advancement in Plant Protection and life member of different professional bodies.

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## **Notes:**