Chemical control of Bacterial leaf spot, Cercospora leaf spot and dieback of Chilli vis a vis weather factors on disease severity.

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Abstract

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 only be the 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 Kasugamycin3% SL @ 22.5 g, 30.0 g and 37.5 g a.i. h^{-1}, Azoxystrobin 23% SC @ 125 g a.i. h^{-1} and another one pre-mix chemicals Metiram 55% + Pyraclostrobin 5% WG @ 1050 g a.i. h^{-1} 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^{-1} 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.

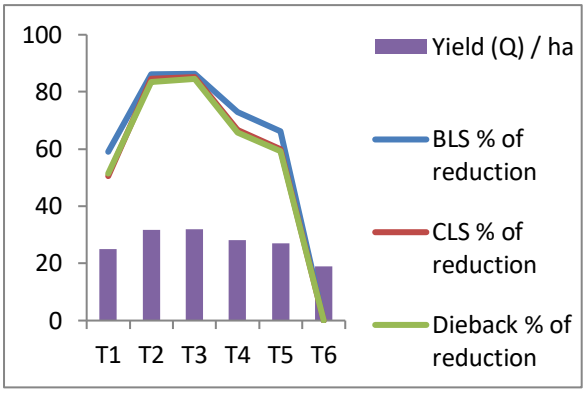


Figure 1 Effect of different chemicals on disease severity and fruit yield against BLS, CLS and Dieback of Chilli

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