

عنوان مقاله:

An appropriate method to determine the interaction type of Cucumber mosaic virus (CMV) and Bean yellow mosaic virus (BYMV)

محل انتشار:

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نویسندگان:

A. Tahmasebi - *Department of Plant Protection, College of Agriculture, Shiraz University, Shiraz I. R. Iran*

H. Hamzeh Zarghani - *Department of Plant Protection, College of Agriculture, Shiraz University, Shiraz I. R. Iran*

A. R. Afsharifar - *Department of Plant Protection, College of Agriculture, Shiraz University, Shiraz I. R. Iran*

A. Dizadji - *Department of Plant Protection, Faculty of Agricultural Sciences and Engineering, College of Agriculture, and Natural Resources, University of Tehran, Karaj, I.R. Iran*

خلاصه مقاله:

The occurrence of viral co-infection is a common phenomenon in cultivated and native plant species and can alter the dynamics of virus infection. In this study, disease progress was examined in single and mixed infections of Cucumber mosaic virus (CMV) and Bean yellow mosaic virus (BYMV) by measuring the rate of symptom development, disease severity and area under disease progress curve on infected bean and broad bean. Simultaneous infection of bean to CMV and BYMV caused higher disease severity; however, no significant differences in disease severity were found on broad bean. In this study, a novel statistical approach (Abbott s approach) was used to recognize virus joint action in bean and broad bean hosts. Abbott s approach indicated synergistic effect between CMV and BYMV on bean only while the interaction was antagonistic when growth responses were considered on the same host. In broad bean plants inoculated with CMV+BYMV, CMV and BYMV, the two viruses affected disease severity and growth responses in an additive manner. Taken together, Abbott s approach was an appropriate method to determine synergistic interaction in these pathosystems.

کلمات کلیدی:

Abbott s approach, BYMV, CMV, Growth responses, Mixed infection

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