Cucumber mosaic Virus in Bean Growing Areas of Çine Plain, Burdur, Turkey

ABSTRACT The presence of Cucumber mosaic virus (CMV) on the leaves of fresh beans grown in the Çine Plain of Burdur, Turkey was determined. Leaf samples from the plants with suspected virus infection in 2011 were analyzed by the CMV by Double Antibody Sandwich Enzyme Linked Immunosorbent Assay (DAS-ELISA) and Immunocapture Reverse Transcriptase-Polimerase Chain Reaction (IC-RT-PCR) methods. Fifty samples in total were tested by DAS-ELISA. Furthermore, 12 samples, which were positive or suspected samples in DAS-ELISA tests, were used for IC-RT-PCR for the identification of CMV. For serological testing of the samples, antisera specific to CMV were used. As a result of DAS-ELISA, 25 out of 50 samples (50%) were infected with CMV. Immunocapture RT-PCR assay was carried out using specific primer which amplified a 678 bp fragment of coat protein of CMV in suspected samples. A unique band size, as expected for CMV, was observed in 12 leaf samples.

Key Words: Bean, CMV, DAS-ELISA, IC-RT-PCR