

Title Rapid detection of *pepper mild mottle virus* in seeds of pepper (*Capsicum annuum*) by indirect dot-immunobinding assay

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Citation Journal of Plant Pathology Volume 90 (2, Supplement) August 2008, Book of Abstract, 9th International Congress of Plant Pathology, August 24-29, 2008 Torino, Italy, . 507 pages.

Keywords pepper seed; pepper mild mottle virus

Abstract

Pepper mild mottle virus (PMMoV) in pepper seeds was detected by indirect dot-immunobinding assay (I-DIBA) on nitrocellulose membranes and by DAS-ELISA. We found that in PMMoV-positive pepper seed, the detection titre was 1:12800 (w/v) by I-DIBA, and 1:51200 (w/v) by DAS-ELISA. PMMoV in pepper leaf could be detected at maximum dilution of 1:3200 (w/v) by both I-DIBA and DAS-ELISA. Healthy pepper leaf did not give a positive reaction when diluted to 1:800 (w/v). Detection PMMoV in pepper seed by I-DIBA was repeatable and uniform. To clarify rates of PMMoV infection in pepper seeds, seeds of 17 commercial pepper varieties were tested by I-DIBA. In 12 of the varieties, PMMoV was seedborne with different rates from 1.25% to 100%.