DISEASE NOTE

FURTHER SPREAD OF MOROCCAN WATERMELON MOSAIC POTYVIRUS IN ITALY IN 1998

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Moroccan watermelon mosaic virus (MWMV) was detected in different zucchini (Cucurbita pepo) cultivars in the province of Latina (central Italy) for the first time in summer/autumn 1997 (Lisa et al., 1998; Roggero et al., 1998). In October and November 1998 MWMV was detected in the same area by ELISA in samples of ‘Roberta’ F1 and ‘President’ F1 both in single infection or in mixed infection with zucchini yellow mosaic virus, papaya ringspot virus and cucumber mosaic virus. In the same period MWMV was also found in the province of Vercelli (North Western Italy) in mixed infection with watermelon mosaic 2 virus in zucchini ‘Supremo’ F1 but not ‘President’ F1 grown in the same field. Thus, MWMV occurs both in central and North Italy. However, MWMV was not found in the course of a survey carried out in summer 1998, suggesting late infections of the virus. Seeds from the same lots of the field plants grown in Vercelli were tested for seed transmission of MWMV. Two hundred and six seedlings of ‘Supremo’ F1 and one hundred and nine of ‘President’ F1 did not show symptoms and were ELISA-negative. No virus was recovered from some of these seedlings following mechanical inoculation to test plants. The frequent presence of mixed viral infections in zucchini highlights the need to conduct ELISA tests also for MWMV, to better assess of its economic importance in Italy.


DISEASE NOTE

FIRST REPORT OF A PHYTOPLASMA IN DECLINING JUDAS TREES IN ITALY

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Diseased Judas trees (Cercis siliquastrum L.) with malformation, leaf yellowing and wilting of branches were noted near Rome (central Italy). At bud burst, leaves appeared before or at the same time as the flowers, which were usually reduced in number. Leaves were wrinkled and rolled upwards or downwards and became chlorotic, sometimes with necrotic areas. In some cases, rapid wilting of the branches occurred in summer, with leaves showing edge necrosis and then withering, to remain on the tree till the following spring. Phytoplasma DNA was detected in samples from six out of seven symptomatic plants. DNA was extracted and processed by PCR from leaves of healthy and diseased Judas trees, from healthy periwinkles, and those experimentally infected with European aster yellows (EAY), chrysanthemum yellows (CY), apple proliferation (AP), Italian clover phyllody (ICPh) and Western X-disease (WX) phytoplasmas (the last two kindly provided by Dr. G. Firrao, University of Udine) as well as from healthy woody indicators and others experimentally infected with pear decline (PD/Cydonia oblonga) and European stone fruit yellows (ESFY/GF305) phytoplasmas of the ISPaVe collection. The primers used (fU5/rU3, P1/WXint, P1/P4) were directed to phytoplasma-specific sequences of the 16S rRNA gene and the 16S-23S spacer region. The fU5/rU3 and P1/P4 pairs amplified samples from six symptomatic Judas trees and from infected periwinkles and woody indicators. The P1/WXint pair gave amplified products only with the symptomatic Judas trees and the ICPh and WX infected periwinkles. This pair is specific for the Western X-disease group. When products amplified by the P1/P4 primers were digested with AluI the phytoplasma present in the Judas trees gave a restriction pattern similar to ICPh. Our results therefore indicate that this decline of Judas trees is linked to the presence of a phytoplasma of the ICPh type.

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