

Abstract

This study was conducted to identify viruses affecting squash plants in Southern Syria and Jordan Valley. 157 squash fields were surveyed (75 fields in Southern Syria and 82 fields in Jordan Valley) during the 2004/2005 and 2005/2006 growing seasons. Virus incidence in the field based on disease symptoms was in the range of 5-100%. 1760 symptomatic squash samples (851 from Southern Syria, 909 samples from Jordan Valley) were collected and tested by enzyme-linked immunosorbent assay (ELISA). Serological tests indicated the presence of 13 viruses which affect squash in Southern Syria: Zucchini yellow mosaic virus (ZYMV) was the most common in cucurbits fields (59.93%), followed by Watermelon mosaic virus (WMV) (38.3%), Cucumber mosaic virus (CMV) (34.07%), Papaya ring spot virus (PRSV) (24.6%), Cucumber green mottle mosaic virus (CGMMV) (23.38%), Squash leaf curl virus (SLCV) (22.91%), Tomato spotted wilt virus (TSWV) (4.46%), Lettuce mosaic virus (LMV) (3.17%), Tomato black ring virus (ToBRV) (2.82%), Squash mosaic virus (SqMV) (2.35%), Arabis mosaic virus (ArMV) (0.59%), Tomato ring spot virus (ToRSV) (0.24%), and Alfalfa mosaic virus (AMV) (0.24%). In the Jordan Valley, serological tests indicated the presence of 15 viruses affecting squash: ZYMV was again the most common in cucurbit fields (53.2%), followed by SLCV (43.78%), CGMMV (40%), WMV (30.47%), PRSV (25.63%), CMV (23.65%), TSWV (4.46%), Tobacco ring spot virus (TRSV) (3.08%), SqMV (1.98%), ArMV (1.43%), LMV (1.43%), AMV (1.1%), ToRSV (0.88%), ToBRV (0.44%) and Tomato bushy stunt virus (TBSV) (0.396%). This is the first record of natural infection of squash plants with SLCV, LMV, ArMV, ToBRV and ToRSV in Southern Syria and TSWV, TBSV, LMV, ArMV, ToBRV, TRSV and ToRSV in Jordan Valley.