First report of cucumber mosaic virus on Solanaceae and Cucurbitaceae crops in the Chui region of Kyrgyzstan

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No information is available on the occurrence of viruses in horticultural crops in Kyrgyzstan. Serological and molecular diagnoses of cucumber mosaic virus (CMV) were carried out in Cucurbitaceae and Solanaceae plants in the Chui region of Kyrgyzstan. A total of 96 symptomatic plant samples from cucumber, squash, tomato, pepper, melon and potato was collected from different areas of the Chui region and tested by DAS-ELISA (Bioreba) and immunocapture (IC) RT-PCR using primer pair PFor 5' - CCATCACCTTAGCTTCCATG T - 3' and PRev 5' – TAACCTCCCAGTTCTCACCGT - 3' (Grieco et al. 2000). Results showed a 3 and 6% CMV infection rate by DAS-ELISA and IC-RT-PCR, respectively. Infected samples were from melon (1), cucumber (2), pepper (2) and potato (1). CMV isolates were further typed by ELISA using monoclonal antibodies (Agdia) and identified as CMV subgroup I. Additionally, CMV subgroup I isolates were characterized in the full-length coat protein gene by RT-PCR-RFLP using primer pair of CPf 5' - GCTTCTCCGCGAG-3'

and CPr 5' – GCCGTAAGCTGGATGGAC - 3' (Bashir et al. 2006) and restriction enzymes *MspI* and *EcoRI*, and by sequencing. All CMV isolates belonged to subgroup IB, as shown by typical restriction patterns and 99% nucleotide sequence identity with CMV isolate IRN-Khs1 from *Raphanus sativus* in Iran (GenBank accession no. LC066464). To our knowledge, this is the first report of CMV subgroup IB in Kyrgyzstan.

References

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