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Hervé Lecoq, Catherine Wipf-Scheibel, Pauline Millot, Eric Verdin, Gasim Dafalla, Cecile Desbiez

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## TWO NEW WHITEFLY-TRANSMITTED CUCURBIT VIRUSES FROM SUDAN WITH CONTRASTING DISTRIBUTION PATTERNS

Lecoq, H. (1), Wipf-Scheibel, C. (1), Millot, P. (1), Verdin, E. (1), Dafalla, G. (2) and Desbiez, C. (1)

(1) INRA, UR407 Pathologie Végétale, 84143 Montfavet cedex, France

(2) Plant Pathology Center, University of Gezira, Wad Medani, Sudan



### BACKGROUND and OBJECTIVES

Surveys were conducted from 1992 to 2012 in the major cucurbit growing regions of Sudan to determine the relative incidence of viruses infecting these crops, in order to define adapted control strategies and to identify appropriate resistance sources in germplasm collection. During 2012 survey two new whitefly-borne virus species were identified, a tentative torradovirus from squash: squash chlorotic leaf spot virus (SCLSV) (1) and a tentative ipomovirus from a wild cucurbit *Coccinia grandis*: coccinia mottle virus (CocMoV) (2).

### MATERIAL and METHODS

Using specific primers developed for SCLSV and CocMoV (1,2), RT-PCR experiments were conducted on extracts kept at -20°C of samples collected during 1992-2012 surveys in order to determine the occurrence of these two viruses in different cucurbits and growing regions.

### RESULTS

SCLCV was detected in 9.5% of the 380 samples tested. It was found in all cultivated cucurbits tested (snake melon, melon, squash and watermelon) and in some wild *Cucumis* sp. Interestingly, SCLSV was detected as early as 1992 in Fadasi (near Wad Medani, Gezira State), and it was detected in samples collected in the same farm in 2003 and 2012, indicating that the virus is well established in the environment. In contrast, the tentative ipomovirus CocMoV was found only in another sample from the same host *C. grandis* collected in 1996, in the same area as the sample collected in 2012.

### CONCLUSIONS

The striking differences in the distribution patterns of SCLSV and CocMoV will be discussed in relation to the local abundance of vectors and the availability of virus sources. Although presently limited to a specific location and host, CocMoV which causes severe symptoms in cultivated cucurbits under experimental conditions may emerge in crops, assuming more favourable dissemination conditions occur.

### REFERENCES

1) Lecoq, Verdin, Tepfer, Wipf-Scheibel, Millot, Dafalla and Desbiez, 2016. Characterization and occurrence of squash chlorotic leaf spot virus, a tentative new torradovirus species infecting cucurbits in Sudan. Arch. Virol. DOI 10.1007/s00705-016-2797-8.

2) Desbiez, Verdin, Tepfer, Wipf-Scheibel, Millot, Dafalla and Lecoq, 2016. Characterization of a new cucurbit-infecting ipomovirus from Sudan. Arch. Virol. *Submitted*.

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