



HAL
open science

First report of cucurbit yellow stunting disorder virus in commercial cucumber greenhouses in France

Cecile Desbiez, Hervé Lecoq, Myriam Girard, Anne-Cécile Cotillon, L. Schoen

► To cite this version:

Cecile Desbiez, Hervé Lecoq, Myriam Girard, Anne-Cécile Cotillon, L. Schoen. First report of cucurbit yellow stunting disorder virus in commercial cucumber greenhouses in France. *Plant Disease*, 2003, 87 (5), pp.600. 10.1094/PDIS.2003.87.5.600C . hal-02678420

HAL Id: hal-02678420

<https://hal.inrae.fr/hal-02678420>

Submitted on 31 May 2020

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.



[Journals Home](#) [Books Home](#) [APS Home](#) [IS-MPMI Home](#) [My Profile](#) [Subscribe](#) [Search](#) [Advanced Search](#) [Help](#)

[Share](#) |

[Subscribe](#) [Free alerts](#) [RSS](#)



[About the current issue's cover](#)

ISSN: 0191-2917

SEARCH

Enter Keywords

- MPMI
- Phytobiomes
- Phytopathology
- Plant Disease

[search](#)

[Advanced Search](#)

Resources

[Subscribe](#)

[About Plant Disease](#)

[First Look](#)

[Most Downloaded Articles](#)

[Submit a Manuscript](#)

[Customer Care](#)

[About My Password](#)

[Rights and Permissions](#)

[Plagiarism and Ethics](#)

[Advertise](#)

[e-Xtra](#)

[Open Access](#)

[ORCID Registry](#)



plant disease

Editor-in-Chief: Alison E. Robertson
Published by The American Phytopathological Society

[Home](#) > [Plant Disease](#) > [Table of Contents](#) > [Abstract](#)
[Previous Article](#) | [Next Article](#)

May 2003, Volume 87, Number 5
Page 600
<http://dx.doi.org/10.1094/PDIS.2003.87.5.600C>

Disease Notes

First Report of *Cucurbit yellow stunting disorder virus* in Commercial Cucumber Greenhouses in France

C. Desbiez, H. Lecoq, M. Girard, INRA, Station de Pathologie Végétale; A. C. Cotillon, LNPV, Domaine Saint Maurice, 84140 Montfavet, France; and L. Schoen, Sica Centrex, 66440 Torreilles, France

[Open Access](#).

In autumn 2001, severe yellowing symptoms were observed on greenhouse-grown cucumbers near Perpignan (southern France). Leaf samples were collected from two sites where plants displayed symptoms ranging from limited yellowing of the older leaves to severe, complete yellowing of the whole plant. *Cucurbit aphid-borne yellows virus*, a polerovirus that causes similar symptoms was not detected in doubleantibody sandwich enzyme-linked immunosorbent assay (DAS-ELISA) using a specific antiserum. Total RNA was extracted from fresh leaf tissues and used in reverse transcription-polymerase chain reaction (1) with primers specific for two whitefly-borne viruses also inducing yellows and occurring in the Mediterranean basin (1): *Beet pseudo yellows virus* (BPYV, genus *Closterovirus*) transmitted by *Trialeurodes vaporariorum* (West.) and *Cucurbit yellow stunting disorder virus* (CYSDV, genus *Crinivirus*) transmitted by *Bemisia tabaci* (Genn.). No BPYV was detected in this survey, but CYSDV was present in all samples. In subsequent surveys conducted in the spring and summer of 2002, BPYV and CYSDV were detected, sometimes in mixed infections, in samples collected from the same region. The complete CYSDV coat protein gene was amplified by PCR using specific primers (2), yielding the expected-size fragment of 756 bp. The French isolate (GenBank Accession No. AY204220) shared 99.6 to 100% nucleotide sequence identity in the sequenced CP fragments (700 nt) with isolates of the most common, highly homogenous subgroup of CYSDV that has emerged recently in the Middle East, southwestern Europe (Spain and Portugal), United States, and Morocco (2). To our knowledge, this is the first report of CYSDV in France and it shows the threat represented by the current emergence of *B. tabaci*-transmitted viruses.

References: (1) I. C. Livieratos et al. *Plant Pathol.* 47:362, 1998. (2) L. Rubio et al. *J. Gen. Virol.* 82:929, 2001.

Cited by

Whitefly-transmitted RNA viruses that affect intensive vegetable production

Quick Links

[Add to favorites](#)

[E-mail to a colleague](#)

[Alert me when new articles cite this article](#)

[Download to citation manager](#)

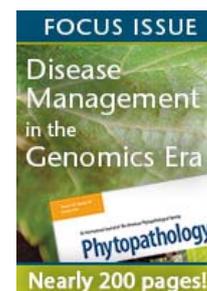
[Related articles found in APS Journals](#)



[See more details](#)

[Referenced in 1 policy sources](#)

This Journal is brought to you via a subscription from the INRA Institut National de la Recherche Agronomique



J. Navas-Castillo, J.J. López-Moya, and M.A. Aranda
Annals of Applied Biology Sep 2014, Volume 165, Number 2, 155-171
[CrossRef](#)

Whitefly-transmitted criniviruses of cucurbits: current status and future prospects

Peter E. Abrahamian and Yusuf Abou-Jawdah
VirusDisease Jan 2014, Volume 25, Number 1, 26-38
[CrossRef](#)

Scientific Opinion on the risks to plant health posed by *Bemisia tabaci* species complex and viruses it transmits for the EU territory
EFSA Journal Apr 2013, Volume 11, Number 4
[CrossRef](#)

Yellowing Disease in Zucchini Squash Produced by Mixed Infections of *Cucurbit yellow stunting disorder virus* and *Cucumber vein yellowing virus*

Francisco M. Gil-Salas, Jeff Peters, Neil Boonham, Isabel M. Cuadrado, and Dirk Janssen
Phytopathology Nov 2011, Volume 101, Number 11, 1365-1372
[Abstract](#) | [PDF Print](#) | [PDF with Links](#) |

Co-infection with *Cucumber vein yellowing virus* and *Cucurbit yellow stunting disorder virus* leading to synergism in cucumber

F. M. Gil-Salas, J. Peters, N. Boonham, I. M. Cuadrado, and D. Janssen
Plant Pathology Oct 2011, no-no
[CrossRef](#)

Biological and Molecular Characterization of the *Cucurbit aphid-borne yellows virus* Affecting Cucurbits in Tunisia

M. Mnari-Hattab, N. Gauthier, and A. Zouba
Plant Disease Oct 2009, Volume 93, Number 10, 1065-1072
[Abstract](#) | [PDF Print](#) | [PDF with Links](#)

Molecular epidemiology of Zucchini yellow mosaic virus in France: An historical overview

H. Lecog, C. Wipf-Scheibel, C. Chandeysson, A. Lê Van, F. Fabre, and C. Desbiez
Virus Research May 2009, Volume 141, Number 2, 190-200
[CrossRef](#)

Genetic structure of the invasive pest *Bemisia tabaci*: evidence of limited but persistent genetic differentiation in glasshouse populations

A Dalmon, F Halkett, M Granier, H Delatte, and M Peterschmitt
Heredity Mar 2008, Volume 100, Number 3, 316-325
[CrossRef](#)

Production of a polyclonal antiserum against the coat protein of *Cucurbit yellow stunting disorder crinivirus* expressed in *Escherichia coli*

A. C. Cotillon, C. Desbiez, S. Bouyer, C. Wipf-Scheibel, C. Gros, B. Delécolle, and H. Lecog
EPPO Bulletin Apr 2005, Volume 35, Number 1, 99-103
[CrossRef](#)

