Plant Health Newsletter on HORIZON SCANNING

July 2023

European Food Safety Authority (EFSA)
EFSA-Q-2023-00117

Science, safe food, sustainability
Introduction ........................................................................................................... 3
1. Summary ........................................................................................................... 5
2. Main issues of July 2023 .................................................................................. 9
   Bacillus pumilus ................................................................................................. 9
   Bretziella fagacearum ......................................................................................... 9
   Xylella fastidiosa ............................................................................................... 9
3. Selected articles ............................................................................................... 10
   3.1. New EU threats ........................................................................................ 10
      3.1.1 Non-regulated pests in the EU .............................................................. 10
          Bacteria ...................................................................................................... 10
          Bacillus pumilus ......................................................................................... 10
          Pseudomonas allii and Pseudomonas alliivorans ..................................... 10
          Fungi and oomycetes ............................................................................... 10
          Colletotrichum fructicola .......................................................................... 11
          Viruses, viroids and phytoplasmas ............................................................. 11
          High Plains wheat mosaic virus ................................................................ 11
          Kyuri green mottle mosaic virus ................................................................ 11
      3.1.2 EPPO lists .............................................................................................. 13
          Cucumber vein yellowing virus ................................................................... 13
3.2. Regulated pests ............................................................................................ 14
   3.2.1 Priority pests .......................................................................................... 14
      Candidatus Liberibacter asiaticus, C. L. africanus and C. L. americanus ........ 14
      Popillia japonica ........................................................................................... 14
      Xylella fastidiosa and its vectors ................................................................... 14
   3.2.2 Quarantine pests ..................................................................................... 16
      Annex II Part A ............................................................................................ 16
          Fungi and oomycetes ............................................................................... 16
          Bretziella fagacearum ................................................................................. 16
          Insects and mites ...................................................................................... 16
          Choristoneura fumiferana ......................................................................... 16
          Diaphorina citri ........................................................................................... 17
          Scirtothrips dorsalis .................................................................................... 17
          Nematodes .................................................................................................. 17
          Meloidogyne enterolobii ............................................................................. 17
Viruses, viroids and phytoplasmas ........................................................................... 18

Tomato Leaf Curl Taiwan Virus, Tomato Yellow Leaf Curl Thailand Virus and Tomato leaf curl New Delhi virus (annexII partB) ................................................................. 18

Annex II Part B ............................................................................................................. 18

Nematodes .................................................................................................................. 18

Globodera pallida ........................................................................................................ 18

Globodera pallida and Globodera rostochiensis ...................................................... 19

3.2.3 EU emergency measures ................................................................................ 20

Tomato brown rugose fruit virus ............................................................................. 20

3.3. Articles of general interest .................................................................................. 21
Introduction

Following a request from the European Commission, EFSA provides here the Horizon Scanning Newsletter summarising the monthly results of the horizon scanning activity for threats in the field of plant health, that were published on the web during the previous month (e.g. the newsletter of February 2023 covers the period 1-31 January 2023). The aim is to identify in a timely manner relevant information on plant pests that might be of concern to the EU and therefore may require consideration by risk assessors and risk managers.

The monitoring system is based on the automatic public health surveillance platform MEDISYS (Medical Information System), scanning more than 20,900 sources in 79 languages from 204 countries, covering all world’s regions. At this moment, 2,496 plant pests (pests regulated in the EU, pests listed by EPPO and new plant pests) have been daily monitored in media, scientific literature and social media (EFSA, 2021\(^2\) and data from September 2021).

The monitored plant pest species include:

1. regulated pests listed in Annexes IIA and IIB of the Commission Implementing Regulation (EU) 2019/2072\(^3\) and later amendments, in other EU plant health legal acts or present in the EPPO Alert, A1 and A2 lists.
2. Pests not regulated in the EU neither part of EPPO lists.
3. Newly identified taxa: as soon as included in a newsletter, they are also added to the list of monitored pests.

The final selection of articles and main issues for the newsletter is conducted by a dedicated EFSA working group meeting once a month\(^4\) with the support of EFSA staff and contractors. The EPPO Global Database\(^5\), CABI Crop Protection Compendium\(^6\) and previous EFSA outputs\(^7\) are fundamental tools supporting this decision process.

The newsletter is composed of three parts:

1. a summary of the content of the newsletter.
2. a presentation of the main issues of the month, identified and selected by a group of experts. They include the most relevant news, in particular: i) new threats represented by non-regulated pests, ii) first findings of pests regulated in the EU. In the first category are included pests screened by the PeMoScoring (EFSA, 2022\(^8\)) with positive result, with a few details on their biology and reasons supporting the positive score.

---

\(^1\) European Commission – Directorate General for Health and Food Safety, Request to provide a scientific and technical assistance on a horizon scanning exercise in view to crisis preparedness on plant health for the EU territory (M-2017-0012, EFSA-Q-2017-00037).
\(^5\) EPPO, 2023. EPPO Global Database (available online). [https://gd.eppo.int](https://gd.eppo.int)
3. A list with active links to the selected articles: they are organised by regulation and EPPO lists where they appear, then by taxonomy. A coloured shape to the side of each article will help identifying the type of source:

- Scientific publication
- Official media (digital newspapers, magazines), grey sources (reports, government documents, working papers, etc)
- Social media, blogs, email alerts (bulletins, news, discussion fora, etc)

This newsletter will serve the EC and Member States in addressing phytosanitary questions. Moreover, it will benefit professionals working in the field and the informed public.
1. Summary

<table>
<thead>
<tr>
<th>PeMoScoring</th>
<th>Host</th>
<th>Host range</th>
<th>Damage</th>
<th>EU distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negative PeMo Scoring</td>
<td>Forest plants</td>
<td>Monophagous / One host plant</td>
<td>Qualitative losses</td>
<td>Present in the EU</td>
</tr>
<tr>
<td></td>
<td>Fruit plants</td>
<td>Oligophagous / Restricted range of host plants</td>
<td>Quantitative losses</td>
<td>Absent from the EU</td>
</tr>
<tr>
<td></td>
<td>Vegetables</td>
<td>Polyphagous / Wide range of host plants</td>
<td>Damage leading to plant death</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ornamental and flower plants</td>
<td></td>
<td>Vector</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cereals</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Oil and fibre plants</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Other plants</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Pest Table

<table>
<thead>
<tr>
<th>Pest</th>
<th>Hosts</th>
<th>Host range</th>
<th>Damage</th>
<th>EU distribution</th>
<th>Regulatory status</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Bacillus pumilus</em></td>
<td>Potato, bean, pine tree, oak, muskmelon,</td>
<td></td>
<td>Soft rot</td>
<td>✔</td>
<td>Not listed</td>
<td>First finding</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Colletotrichum fructicola</em></td>
<td>Many cultivated host plants (sweet pepper, Citrus sp., cucumber, fig...)</td>
<td></td>
<td>Dark brown stem and fruit spots, pre- and post-harvest fruit rot, spotting and wilting of leaves</td>
<td>✔</td>
<td>Not listed</td>
<td>New host plant</td>
</tr>
<tr>
<td><strong>High Plains wheat mosaic virus</strong></td>
<td>Mainly wheat and maize</td>
<td>Poaceae</td>
<td>On wheat: Mild to severe mosaic, chlorosis and necrosis On maize: red striping and chlorotic streaks, possible plant death</td>
<td>Absent from the EU</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------------------</td>
<td>----------------------</td>
<td>----------</td>
<td>---------------------------------------------------------------</td>
<td>-----------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Kyuri green mottle mosaic virus</strong></td>
<td>Cucumber, watermelon, melon, squash, gourd</td>
<td>Cucurbitaceae</td>
<td>Severe yield reduction</td>
<td>Not listed</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Pseudomonas allii</strong></td>
<td>Onion, Chinese yam</td>
<td></td>
<td>Bacterial rot</td>
<td>Not listed</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Pseudomonas allii var</strong></td>
<td>Onion</td>
<td></td>
<td>Dark-brown water soaked lesions</td>
<td>Not listed</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Cucumber vein yellowing virus</strong></td>
<td>Mainly cucumber</td>
<td>Among Cucurbitaceae</td>
<td>Vein clearing, chlorosis and general necrosis, sudden death can occur.</td>
<td>EPPO A2 list</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Candidatus Liberibacter asiaticus</strong>, <strong>C. L. africanus</strong> and <strong>C. L. americanus</strong></td>
<td>Citrus species</td>
<td></td>
<td>Reduced size and green colour of the fruits, premature fruit drop, dieback and dwarfing of the plant</td>
<td>Priority pest</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Popillia japonica</strong></td>
<td>Mainly maize, soybean, grapevine, cherry trees, ornamental trees and shrubs</td>
<td></td>
<td>Feeding symptoms and damages closely related to the host</td>
<td>Priority pest</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Xylella fastidiosa</strong></td>
<td>Mainly almond, citrus, grapevine, olive</td>
<td></td>
<td>Dieback/reduced growth/plant death. Asymptomatic in some species or cvs.</td>
<td>Priority pest</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Bretziella fagacearum</strong></td>
<td>Oak and chestnut</td>
<td>Foliar wilt and necrosis, plant death</td>
<td>X</td>
<td>Absent from the EU</td>
<td>Quarantine pest</td>
<td>First finding</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-----------------</td>
<td>--------------------------------------</td>
<td>---</td>
<td>-------------------</td>
<td>----------------</td>
<td>--------------</td>
</tr>
<tr>
<td><strong>Choristoneura fumiferana</strong></td>
<td>White spruce, balsam fir</td>
<td>Coniferous</td>
<td>X</td>
<td>Absent from the EU</td>
<td>Quarantine pest</td>
<td>Modelling</td>
</tr>
<tr>
<td><strong>Diaphorina citri</strong></td>
<td>Fruit and ornamental species</td>
<td>Vector of Citrus greening disease</td>
<td>X</td>
<td>Absent from the EU</td>
<td>Quarantine pest</td>
<td>Vector management</td>
</tr>
<tr>
<td><strong>Globodera rostochiensis and G. pallida</strong></td>
<td>Eggplant, potato, tomato</td>
<td>Solanum sp.</td>
<td>V</td>
<td>Root cysts, patches of poor growth foliage yellowing, tubers’ reduced size</td>
<td>Quarantine pest</td>
<td>Identification method</td>
</tr>
<tr>
<td><strong>Meloidogyne enterolobii</strong></td>
<td>Sweet potato, beans, tomato and other vegetables</td>
<td>Root galling and stunting</td>
<td>PT</td>
<td>Quarantine pest</td>
<td>Potential distribution</td>
<td></td>
</tr>
<tr>
<td><strong>Scirtothrips dorsalis</strong></td>
<td>Bell pepper, tea</td>
<td>Young leaves distortion</td>
<td>ES, NL</td>
<td>Quarantine pest</td>
<td>First finding</td>
<td></td>
</tr>
<tr>
<td><strong>Tomato leaf curl New Delhi virus</strong></td>
<td>Mainly cucurbits, pepper, tomato</td>
<td>Chlorotic mottling, curling and crinkling of leaves, vein clearing or thickening, reduced size of leaves and internodes, plant stunting</td>
<td>ES, IT, GR, PT</td>
<td>Quarantine pest</td>
<td>New finding</td>
<td></td>
</tr>
<tr>
<td><strong>Tomato Leaf Curl Taiwan Virus</strong></td>
<td>Tomato</td>
<td>Leaf curling and stunting</td>
<td>X</td>
<td>Absent from the EU</td>
<td>Quarantine pest</td>
<td>Epidemiology</td>
</tr>
<tr>
<td><strong>Tomato Yellow Leaf Curl Thailand</strong></td>
<td>Bell pepper, Solanaceae</td>
<td>Leaf curling, yellowing and stunting</td>
<td>X</td>
<td>Absent from the EU</td>
<td>Quarantine pest</td>
<td>Epidemiology</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**
- Quarantine pest: The pest is subject to quarantine measures.
- First finding: Indicates the pest has been newly reported in the EU.
- Modelling: Indicates the pest has been modeled for potential spread.
- Vector management: Indicates vector management is recommended.
- Under official control: The pest is under official control.
- Identification method: The method for identifying the pest is specified.
- Potential distribution: The potential distribution of the pest is indicated.
- Surveillance: Indicates surveillance measures are in place.
- **:** All species of the mentioned genus.
Tomato brown rugose fruit virus

Mainly pepper and tomato Solanacea

Foliar chlorosis, mosaic and mottling, necrotic spots on peduncles, calyces and petioles, yellow or brown spots on fruits

Under official control

Emergency control measures

23978325, 2023, 7, Downloaded from https://efsa.onlinelibrary.wiley.com/doi/10.2903/sp.efsa.2023.EN-8200 by Test, Wiley ... on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License
2. Main issues of July 2023

**Bacillus pumilus**

⚠️ Positive PeMoScoring

*Bacillus pumilus* is a bacterium, currently not listed in any EU legal acts or EPPO lists. This newsletter includes one article about this pest.

The selected article reports the first finding of the pest in Tunisia. Potato tubers with soft rot were seen between 2018 and 2020 and were further examined. *Bacillus pumilus* was identified in 19 different isolates. The bacterium has been previously reported on common bean in Spain in 2010. This pest was included in the PeMoScoring screening and scored positive.

All the articles on *Bacillus pumilus* are available on the webpage of [MEDISYS EFSA Plant Health](https://www.medisysefspa.org).

**Bretziella fagacearum**

*Bretziella fagacearum* is a fungus listed in ANNEX II A of the Commission Implementing Regulation (EU) 2019/2072. This newsletter includes one article about this pest.

The article reports the first finding in Canada on oak trees in Niagara Falls. Previously, it had only been reported in the United States.

All the articles on *Bretziella fagacearum* are available on the webpage of [MEDISYS EFSA Plant Health](https://www.medisysefspa.org).

**Xylella fastidiosa**

*Xylella fastidiosa* is a plant pathogenic bacterium regulated as a priority pest and listed in Annex II B of the Commission Implementing Regulation (EU) 2019/2072, subject of EU emergency measures (Commission Implementing Regulation (EU) 2020/1201). This newsletter includes three articles concerning this bacterium.

The first article reports a new finding in Europe, in Apulia (Italy). The other two articles describe modelling applications for the pest. While one research paper examines the distribution and habitat preferences of the vector, the other uses Bayesian Model-Averaging to estimate the pathogen dynamics.

All the articles on *Xylella fastidiosa* are available on the webpage of [MEDISYS EFSA Plant Health](https://www.medisysefspa.org).
3. Selected articles

3.1. New EU threats

3.1.1 Non-regulated pests in the EU

Bacteria

*Bacillus pumilus*
Authority: Meyer & Gottheil
Firmicutes, Bacillales, Bacillaceae

⚠️ Positive PeMoScoring

- First finding (TN)

**Characterisation of Pectinolytic Bacillus pumilus and Paenibacillus amyloliticus Strains, New Pathogens of Potato in Tunisia**

*Agriculture 20.Jun.2023*

Soft rot disease in potato is a major problem in fields and warehouses all over the world. Although it is known that bacteria from the genera *Pectobacterium* and *Dickeya* are the main causative agents of soft rot diseases, recent studies indicate the involvement of pectinolytic *Bacillus* and *Paenibacillus* in this disease. In the present research, samples of potato with soft rot symptoms were collected from eight governorates of Tunisia. *(more)*

*Pseudomonas allii* and *Pseudomonas alliivorans*
Authority: Sawada et al. 2021 | Zhao et al. 2022
Gammaproteobacteria, Pseudomonadales, Pseudomonadaceae

- First finding (US) and New finding (US)

**Isolation and Characterization of Bacteria Associated with Onion and First Report of Onion Diseases Caused by Five Bacterial Pathogens in Texas, U.S.A.**

*Plant Disease 05.Jun.2023*

Bacterial diseases pose a severe challenge to growers and cause significant loss to the billion-dollar onion industry in the United States. Texas is the sixth largest onion producing state, yet the bacterial communities associated with short-day onion crops grown in Texas have not been studied. *(more)*

Fungi and oomycetes
**Colletotrichum fructicola**

Authority: Prihastuti, L. Cai & K.D. Hyde  
Sordariomycetes, Glomerellales, Glomerellaceae

*EFSA pest categorization of Colletotrichum fructicola*

- New host plant

**First Report of Colletotrichum fructicola Causing Anthracnose on Punica granatum in China**

_Punica granatum_ L. (Pomegranate), a deciduous shrub, is widely cultivated as a fruit tree and decorative plant in China. Its flowers, leaves, roots and fruit bark also has been widely used for the treatment of different types of human disease because of the high anti-inflammatory and antibacterial activity (Tehranifar et al. 2011). In October 2022, leaf spot symptoms were observed on _P. granatum_ leaves in a landscaped area on the campus of Jiangxi Agricultural University (28.75°N, 115.83°E), Nanchang, Jiangxi Province, China. *(more)*

**Viruses, viroids and phytoplasmas**

**High Plains wheat mosaic virus**

_Viruses, Fimoviridae, Emaravirus_

- First finding (IR)

**First report of High Plains wheat mosaic virus in Iran**

_New Disease Reports 21.June.2023_

**High Plains wheat mosaic virus** (HPWMoV, genus Emaravirus) has an octopartite, negative-sense RNA genome, each segment encoding a single open reading frame. The virus is transmitted by the wheat curl mite (_Aceria tosichella_) (Tatineni et al., 2014). HPWMoV has been reported from Argentina, Australia, Canada, New Zealand, Ukraine and the USA (Abdullahi et al., 2020; Snihur et al., 2020). *(more)*

**Kyuri green mottle mosaic virus**

_Viruses, Virgaviridae, Tobamovirus_

- Negative PeMoScoring

- First finding (TR)

**Kyuri green mottle mosaic virus detected for the first time in Turkey**

_Australasian Plant Disease Notes 08.Jun.2023_

Turkey is among the top 10 producers of cucumber, melon, watermelon, and squash in the world. Lately, seed-borne viruses have become a major issue in greenhouse and field-grown cucurbits. In this study, the incidence of _kyuri green mottle mosaic virus_ (KGMMV)
was determined in seeds from various species (cucumber, melon, watermelon, summer squash, bottle gourd, winter squash) of Cucurbitaceae. (more)
3.1.2 EPPO lists

Cucumber vein yellowing virus
Viruses, Potyviridae, Ipomovirus

- First finding (IQ)

First report of Cucumber vein yellowing virus in Iraq

New Disease Reports 13-Jun.2023

Courgette (Cucurbita pepo) is one of the main cucurbit crops grown in Iraq for local consumption. Viruses are a major threat to cucurbit production in Iraq, particularly whitefly-transmitted viruses (Mohammed et al., 2021). In the 2022 growing season, courgette plants with extensive leaf vein-yellowing symptoms (Figure 1), associated with whitefly infestation, were observed in fields around Al-Yusufiyah, Baghdad Province, Iraq. (more)

---

9 EPPO A2 list: https://www.eppo.int/ACTIVITIES/plant_quarantine/A2_list
3.2. Regulated pests

3.2.1 Priority pests

*Candidatus* Liberibacter asiaticus, *C. L*. africanus and *C. L*. americanus

Authority: Jagoueix, Bové & Garnier | Jagoueix, Bové & Garnier | Teixeira, Saillard, Eveillard, Danet, da Costa, Ayres & Bové

Alphaproteobacteria, Rhizobiales, Phyllobacteriaceae

- Detection method

  Real-time on-site detection of the three ‘*Candidatus Liberibacter*’ species associated with HLB disease: a rapid and validated method


Huanglongbing (HLB) is a devastating disease that affects all commercial citrus species worldwide. The disease is associated with bacteria of three species of the genus ‘*Candidatus Liberibacter*’ transmitted by psyllid vectors. To date, HLB has no cure, so preventing its introduction into HLB-free areas is the best strategy to control its spread. *(more)*

*Popillia japonica*

Authority: Newman

Insecta, Coleoptera, Scarabaeidae

- Spread

  Tracing the dispersal route of the invasive Japanese beetle *Popillia japonica*


The Japanese beetle, *Popillia japonica*, is a highly polyphagous Scarabaeidae native to Japan that colonized North America and Azores in the last century and has recently invaded Italy and Switzerland. Considering its economic impact on the horticulture and turfgrass industries, this species was ranked within the EU priority pests list in 2019. *(more)*

*Xylella fastidiosa* and its vectors

Authority: Wells, Raju, Hung, Weisburg, Parl & Beemer

Gammaproteobacteria, Lysobacterales, Lysobacteraceae

- Modelling

---

Forecasting Pathogen Dynamics with Bayesian Model-Averaging: Application to Xylella fastidiosa

Bulletin of Mathematical Biology 10-Jun.2023

Forecasting invasive-pathogen dynamics is paramount to anticipate eradication and containment strategies. Such predictions can be obtained using a model grounded on partial differential equations (PDE; often exploited to model invasions) and fitted to surveillance data. This framework allows the construction of phenomenological but concise models relying on mechanistic hypotheses and real observations. (more)

◼ New finding (IT)

La Xylella è arrivata alle porte di Bari: «Mai rilevata così a Nord»

Xylella has arrived at the gates of Bari: «Never detected so far in the North»

La gazzetta del mezzogiorno 26-Jun.2023

Lotta alla Xylella: prorogato al 10 luglio il termine per il secondo trattamento insetticida contro la Philaneus Spumarius, la cosiddetta Sputacchina, vettore che per la prima volta viene segnalato alle porte di Bari, nei campi di Triggiano. Le nuove disposizioni sono state autorizzate in 20 comuni delle province di Bari, Brindisi e Taranto. (more)

Fight against Xylella: the deadline for the second insecticide treatment against Philaneus Spumarius, the so-called Sputacchina, a vector which for the first time is reported close to Bari, in the fields of Triggiano, has been extended to 10 July. The new provisions have been authorized in 20 municipalities in the provinces of Bari, Brindisi and Taranto.

◼ Modelling

Bioclimatic and Landscape Factors drive the Potential Distribution of Philaenus spumarius, Neophilaenus campestris and N. lineatus (Hemiptera, Aphrophoridae) in Southeastern Iberian Peninsula

Insects 30 June 2023

Philaenus spumarius and Neophilaenus campestris are the main vectors of the invasive bacteria Xylella fastidiosa and key threats to European plant health. Previous studies of the potential distribution of P. spumarius reveal that climatic factors are the main drivers of its distribution on the Mediterranean Basin scale. Other local studies reveal that the landscape could also have a role in the distribution of both species of P. spumarius and N. campestris. (more)
3.2.2 Quarantine pests

Annex II Part A

Fungi and oomycetes

*Bretziella fagacearum*
Authority: (Bretz) Z.W. de Beer, Marincowitz, T.A. Duong & M.J. Wingfield
Sordariomycetes, Microascales, Ceratocystidaceae

- First finding (CA)

*Oak wilt found in Canada for first time, sparking concern disease could spread and kill trees*

**Digitpatrox 28.Jun.2023**
For the first time, federal authorities officers say a fungal illness referred to as oak wilt has been confirmed to be in Canada — a discovery that’s sparking concern about the way it might affect oak bushes. *(more)*

Insects and mites

*Choristoneura fumiferana*
Authority: (Clemens)
Insecta, Lepidoptera, Tortricidae

- Modelling

*Species distribution model identifies influence of climatic constraints on severe defoliation at the leading edge of a native insect outbreak*

Eastern North America is in the midst of a spruce budworm (*Choristoneura fumiferana* Clem., SBW) epidemic. SBW is one of the most important forest insects with regard to outbreak coverage and impacts to the forest industry in this region. Numerous bioclimatic, vegetation, and spatial–temporal variables can influence the distribution and outbreak patterns of phytophagous insects such as SBW. *(more)*

---


**Diaphorina citri**  
Authority: Kuwayama  
Insecta, Hemiptera, Psyllidae  

- Vector management  
**Primeros casos de psílidos resistentes a insecticidas en Brasil**  
First cases of insecticide-resistant psyllids in Brazil  
**Phytoma 19-Jun.2023**  

Un estudio ha confirmado los primeros psílidos resistentes a piretroides y neonicotinoides en Brasil, lo que puede complicar el control de *Diaphirina [Diaphorina] citri*, transmisor del HLB. Este hallazgo supone el primer caso de resistencia a estos insecticidas en el país sudamericano, pero ya se han confirmado 123 casos para nueve ingredientes activos diferentes en otros países y regiones, como Florida (EE UU), México, China y Pakistán. *(more)*

> A study has confirmed the first presence of psyllids resistant to pyrethroids and neonicotinoids in Brazil, which may complicate the control of *Diaphirina [Diaphorina] citri*, the transmitter of HLB. This finding represents the first case of resistance to these insecticides in the South American country, but 123 cases have already been confirmed for nine different active ingredients in other countries and regions, such as Florida (USA), Mexico, China and Pakistan.

**Scirtothrips dorsalis**  
Authority: Hood  
Insecta, Thysanoptera, Thripidae  

- First finding (PE)  
**Primer registro de Scirtothrips dorsalis Hood, 1919 (Thysanoptera: Thripidae) en Perú, y su potencial riesgo fitosanitario para la agricultura chilena**  
First record of *Scirtothrips dorsalis* Hood, 1919 (Thysanoptera: Thripidae) in Peru, and its potential phytosanitary risk for Chilean agriculture  

Se informa el primer registro del trips del chile *Scirtothrips dorsalis* en Perú, con base en ejemplares recolectados durante julio y abril 2022-2023 sobre plantas de arándano. La identificación específica se fundamentó en los caracteres morfológicos del adulto y de evidencia molecular. *(more)*

> The first record of the chilli thrips *Scirtothrips dorsalis* in Peru is reported, based on specimens collected during July and April 2022-2023 on blueberry plants. The specific identification was based on the morphological characters of the adult and molecular evidence.

**Nematodes**

**Meloidogyne enterolobii**  
Authority: Yang & Eisenback  
Chromadorea, Rhabditida, Meloidogynidae
Potential distribution

Potential global distribution of the guava root-knot nematode *Meloidogyne enterolobii* under different climate change scenarios using MaxEnt ecological niche modeling

*Journal of Integrative Agriculture* 28 June 2023

In recent years, *Meloidogyne enterolobii* has emerged as a major parasitic nematode infesting many plants in tropical or subtropical areas. However, the regions of potential distribution and the main contributing environmental variables for this nematode are unclear. Under the current climate scenario, we predicted the potential geographic distributions of *M. enterolobii* worldwide and in China using a Maximum Entropy (MaxEnt) model with the occurrence data of this species. (more)

Viruses, viroids and phytoplasmas

*Tomato Leaf Curl Taiwan Virus, Tomato Yellow Leaf Curl Thailand Virus* and *Tomato leaf curl New Delhi virus* (annexII partB)

*Viruses, Geminiviridae, Begomovirus*

Epidemiology

Seed and Pollen Transmission of *Tomato Leaf Curl New Delhi Virus, Tomato Leaf Curl Taiwan Virus, and Tomato Yellow Leaf Curl Thailand Virus* in Cucumbers and Tomatoes

*Plant Disease* 21 Jun. 2023

Understanding the seedborne nature of plant viruses is essential for developing disease control strategies and is impactful to the seed market. Here, we investigated seed transmissibility of *tomato leaf curl New Delhi virus*-cucumber isolate (ToLCNDV-CB) and -oriental melon isolate (ToLCNDV-OM) in cucumber and seed transmissibility of *tomato leaf curl Taiwan virus* (ToLCTV) and *tomato yellow leaf curl Thailand virus* (TYLCTHV) in tomato. (more)

Annex II Part B

Nematodes

*Globodera pallida*

Authority: (Stone) Behrens

*Cromadorea, Rhabditida, Heteroderidae*

First finding (LV)
Potato pale cyst nematode was detected for the first time in Latvia
LV portals 02.Jun.2023

In a potato sample taken during an inspection by the State Plant Protection Service (VAAD) at a potato growing farm in Zemgale, a European Union quarantine organism - the potato pale cyst nematode (Globodera pallida) - was found and confirmed with laboratory testing. The organism was found in a potato cultivation field on an area of 10.33 ha.


Globodera pallida and Globodera rostochiensis
Authority: (Stone) Behrens | (Wollenweber) Behrens
Chromadorea, Rhabditida, Heteroderidae

Identification method
Development of SNP-based assays for identification of Globodera rostochiensis and Globodera pallida

Potato cyst nematodes (PCNs), Globodera rostochiensis and G. pallida, are one of the major pathogens of potato and cause significant losses worldwide. These species, which are on the worldwide quarantine list, can survive in infected areas for more than 20 years. Therefore, these species need to be identified accurately and quickly. (more)
3.2.3 EU emergency measures

Tomato brown rugose fruit virus
Viruses, Virgaviridae, Tobamovirus

- Surveillance

Detection of tomato brown rugose fruit virus is influenced by infection at different growth stages and sampling from different plant parts

Plant Pathology 19.June.2023
Since the first report of the virus in 2014, tomato brown rugose fruit virus (ToBRFV) has spread widely through Europe, the Americas and Asia. Within Europe there is currently a requirement for annual surveillance for the virus. However, little is known about the relative impact of sampling strategy with respect to timing of infection and the detection of virus from different plant parts. (more)
3.3. Articles of general interest

Development and Validation of a High-Throughput Sequencing Test for Mitogenome and rDNA Assembly and Annotation, and Its Use in Support of Nematode Identification of Regulatory Concern
PhytoFrontiers 11.May.2023
Nematoda is a diverse phylum, and representatives are found in most habitats, including in and on animals and plants. Nematodes are regarded as the most abundant group in terms of individuals in marine and terrestrial sediments. Plant-parasitic nematodes are globally responsible for an annual yield loss of $125 billion. Reliable species identification is essential to take appropriate phytosanitary measures. (more)

Multivariate Bayesian analysis to predict invasiveness of Phytophthora pathogens
Ecosphere 23.June.2023
Global concerns are many for the invasive impacts of Phytophthora pathogens on native vegetation, agriculture, nurseries, and urban parks and gardens. We compiled a database of 32 traits on 204 species of Phytophthora including data on each species’ taxonomy (clade and subclade), historical knowledge (years since first described), impacted ecosystems, microenvironments inhabited, dispersal mode, physiology, and morphology. (more)
Acknowledgements

EFSA wishes to thank the following for the support provided to this newsletter:

Alexia Antoniou, Sara Tramontini, Sybren Vos, EFSA Environment, Plants and Ecotoxicology (PLANTS)

Marco Verile, Brian Doherty and Jens Linge, Unit I.3 - European Commission, Joint Research Centre (JRC), Ispra, Italy

Magali Larenaudie, Emmanuel Gachet, ANSES, French Agency for Food, Environmental and Occupational Health & Safety

EFSA wishes to thank the experts of the working group on Horizon Scanning: i) Andy Bourke, Thierry Candresse, Josep Anton Jaques Miret and Michael Jeger for reviewing and providing suggestions for the draft and ii) Michela Chiumenti, Eduardo De La Peña and Marianne Loiseau for conducting the PeMo screening.

Disclaimer

The selection of articles reflects the media and scientific coverage during the one-month time period in question. It does not reflect EFSA opinion on the articles’ content, the presence of plant pests in a particular country and/or concerning a particular plant or plant product and/or endorsement of proposed control practices.

Note to the reader

This newsletter combines and substitutes the two pre-existent monthly publications: “Plant Health Newsletter: Media Monitoring” (58 published items) and “Plant Health Newsletter: Scientific Literature Monitoring” (37 published items), all accessible from the EFSA Virtual Issue “Horizon Scanning for Plant Health”


ISSN: 2397-8325

© European Food Safety Authority, 2023

For feedback on this Newsletter please write to

PLANTS@efsa.europa.eu