



EUROPEAN FOOD SAFETY AUTHORITY

Plant Health Newsletter on HORIZON SCANNING June 2023

European Food Safety Authority (EFSA) EFSA-Q-2023-00116 doi: 10.2903/sp.efsa.2023.EN-8187

Science, safe food, sustainability

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Introduction

Following a request from the European Commission¹, 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 <u>MEDISYS (Medical Information System)</u>, 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, 2021² 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) 2019/2072³ and later amendments, in other <u>EU plant health legal</u> <u>acts</u> or present in the <u>EPPO Alert</u>, <u>A1</u> and <u>A2</u> 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 month⁴ with the support of EFSA staff and contractors. The EPPO Global Database⁵, CABI Crop Protection Compendium⁶ and previous EFSA outputs⁷ 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, 2022⁸) with positive result, with a few details on their biology and reasons supporting the positive score.

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 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).
 ² EFSA (European Food Safety Authority), Mannino M R, Larenaudie M, Linge J P, Candresse T, Jaques Miret J A, Jeger M J, Gachet E, Maiorano A, Muñoz Guajardo I, Stancanelli G, 2021. Horizon Scanning for Plant Health: report on 2017-2020 activities. EFSA supporting publication 2021:EN-2010. 113 pp. doi:10.2903/sp.efsa.2021.EN-2010

³ Commission implementing Regulation (EU) 2019/2072 of 28 November 2019 establishing uniform conditions for the implementation of Regulation (EU) 2016/2031 of the European Parliament and the Council, as regards protective measures against pests of plants, and repealing Commission Regulation (EC) No 690/2008 and amending Commission Implementing Regulation (EU) 2018/2019. Official Journal of the European Union L 319, latest consolidated version.

⁴ Minutes of the meetings are available here <u>https://www.efsa.europa.eu/sites/default/files/wgs/plant-health/wg-plh-horizon-scanning.pdf</u>

⁵ EPPO, 2023. EPPO Global Database (available online). <u>https://gd.eppo.int</u>

⁶ CABI, 2023. Crop Protection Compendium. Wallingford, UK: CAB International. <u>www.cabi.org/cpc</u>

⁷ EFSA Journal <u>https://efsa.onlinelibrary.wiley.com/</u>

⁸ EFSA (European Food Safety Authority), Tayeh C, Mannino MR, Mosbach-Schulz O, Stancanelli G, Tramontini S, Gachet E, Candresse T, Jaques Miret JA and Jeger MJ, 2022. Scientific Report on the proposal of a ranking methodology for plant threats in the EU. EFSA Journal 2022;20 (1):7025, 59 pp. https://doi.org/10.2903/j.efsa.2022.7025

- 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	e legend								
РеМо	Scoring	Host		Hos	t range	Dam	age	EU dist	ribution
	Negative PeMo Scoring		Forest plants	ø	Monophagous / One host plant	() () () () () () () () () () () () () (Qualitative losses	•	Present in the EU
	Positive		Fruit plants		Oligophagous /		Quantitative		Abcont
4	PeMo Scoring	Ó	Vegetables		Restricted range of host plants		Damage leading	×	from the EU
		*	Ornamental and flower		Polyphagous /	\bigotimes	to plant death		
			plants		wide range of nost plants	V	Vector		
		2	Cereals						
		2000	Oil and fibre plants						
		Ť	Other plants						

Pest	Hosts	Host range	Damage	EU distributio n	Regulatory status	Торіс
<u>Capsicu</u> <u>m</u> <u>chlorosis</u> <u>virus</u>	فَوْبُ Pepper,	M	Chlorotic or necrotic	GR	Not listed	New finding
	pineapple, tomato		ringspot pattern, mottling, irregular growth			
<u>Chickpea</u> <u>chlorotic</u> <u>dwarf</u>	Ö Ö 227	M		×	Not listed	New finding
virus	Pepper, chickpea, faba bean, cotton		Extreme stunting, leaf reddening or yellowing, phloem discoloration	Absent from the EU		
	ĕ Č			 ✓ 	Not listed	New host plant

	1		1	1		
<u>Colletotr</u> <u>ichum</u> <u>siamens</u> <u>e</u>	Many host plants from different families	V	Anthracnose: dark brown stem and fruit spots, stem cankers, fruit rot, leaf spots and wilt, shoot-tip dieback and defoliation	IT		
<u>Cytospor</u>	ॉ			×	Not listed	First finding &
<u>a</u> azerbaij anica M	Apple, peach	Rosaceae	Branch and scaffold canker, shoot dieback	Absent from the EU		new nost plant
<u>Diaporth</u>				×	Not listed	New pest
<u>e</u> <u>actinidiic</u> <u>ola sp.</u> nov	Pear, walnut, kiwifruit	-	Canker or dieback symptoms	Absent from the EU		
<u>Fusariu</u> <u>m</u>	}}	,		×	Not listed	New pest
<u>amarant</u> <u>huense</u> sp. nov.	Amaranth		Stem rot, plant death if severe infection	Absent from the EU		
<u>Janus</u> dujuan	*	\checkmark		×	Not listed	New pest
<u>sp. nov.</u>	Rhododend ron fortunei		Stem boring	Absent from the EU		
<u>Lissacha</u> <u>tina</u> fulica	é Č			~	Not listed	New finding
	Many fruits and vegetables (e.g. melon, cabbage, cucumber, tomato, beans)		Complete consumption of fruit or removal of bark	ES		
<u>Megalur</u> <u>othrips</u> usitatus	۵			×	Not listed	First finding
	Mainly beans, peas, soyabean and groundnut	mainly among the Fabaceae family	Young leaves and flower wilting	Absent from the EU		
Paramicr		ø		×	Not listed	New pest
<u>osphaer</u> <u>opsis</u> <u>eriobotr</u> <u>yae sp.</u> <u>nov</u>	Loquat	, 	Branch and trunk canker, dieback, leaf yellowing, growth reduction and defoliation	Absent from the EU		
<u>Phytoph</u> <u>thora</u>	¥ّ	M		 ✓ 	Not listed	New host plant New finding

<u>hibernali</u> <u>S</u>	Mainly <i>Citrus</i> sp. also some ornamenta		Brown rot of citrus	ES, FR, GR, IE, IT, PT		
Platypus	ls		N N	×	Not listed	First finding
koryone nsis	Mainly Mongolian	Fagaceae	Vector of Korean oak wilt	Absent from the EU		
	oak				N	
<u>quercivo</u>	?		V	×	NOT IISTED	First finding
<u>rus</u>	Oak	Fagaceae	Vector of Japanese oak wilt	Absent from the EU		
<u>Pseudoc</u> erradoa	*			×	Not listed	New finding
paullula	Mainly Swiss cheese plant	Araceae	Stem basal canker-: reddish-brown canopies and dieback	Absent from the EU		
<u>Takahas</u> <u>hia</u> iaponica		V -		~	Not listed	First finding
	Apple, cherry, maple, walnut		Dieback and necrosis of buds, heavy infestation can lead to plant dieback	HR, IT		
<u>Tomato</u>	Ó			 ✓ 	EPPO Alert list	New host plant
<u>mosaic</u> <u>virus</u>	Mainly bell pepper, chilli pepper and tomato	Solanacea e, Fabaceae	Leaf distortion, mosaic, mottle and necrosis	CZ, NL		
<u>Bursaph</u> <u>elenchus</u> <u>xylophil</u> us			8	~	Priority pest	Absence
	Pine, fir, cedar		Dieback and plant death.	ES, PT		
<u>Bretziell</u> <u>a</u> fagacear	•			×	Quarantine pest	Surveillance
<u>um</u>	Oak and chestnut	Fagaceae	Foliar wilt and necrosis, plant death	Absent from the EU		
<u>Candidat</u> <u>us</u> Phytopla			•	×	Quarantine pest	New finding
<u>sma</u> aurantif olia	Lime	Rutaceae	Witches' broom disease, dieback	Absent from the EU		
<u>Ceratocy</u>	۲			~	Quarantine	New finding
platani	Plane tree	Platanus	Abnormal leaf fall, discolouration, canker and wilt of woody stems, plant death	FR, GR, IT	pest	

<u>Elsinoe</u> <u>australis</u> , Elsinoe <u>citricola,</u> <u>Elsinoe</u> fawcetti	Gitrus	Rutaceae	Citrus scab. Lesions on leaves and fruits, fruits premature fall.	× Absent from the EU	Quarantine pest	Detection method
<u>Meloidoq</u> <u>yne</u> <u>chitwoo</u> <u>di</u>	Tomato, potato, cotton, wheat	V -	Root galling and stunting	Vnder official control	Quarantine pest	Absence
<u>Meloido</u> <u>gyne</u> <u>fallax</u>	Tomato, potato, strawberry , barley,		Stunting and yellowing, root galling	Vnder official control	Quarantine pest	Absence
Phytoph thora ramoru <u>m</u>	Mainly oak trees, Japanese larch, <i>Rhododend</i> <i>ron</i> spp., <i>Viburnum</i> spp.	***	Eeaf and twig blight then dieback and death of the plant	Vnder official control	Quarantine pest	Identification method
<u>Tomato leaf curl</u> <u>New</u> <u>Delhi</u> <u>virus</u>	Mainly cucurbits, pepper, tomato		Chlorotic mottling, curling and crinkling of leaves, vein clearing or thickening, reduced size of leaves and internodes, plant stunting	S, IT, GR, PT	Quarantine pest	First finding
<u>Trioza</u> <u>erytreae</u>	é Citrus	W Rutaceae	V Vector of Huanglongbing	✓ ES, PT	Quarantine pest	Modelling
<u>Xanthom</u> <u>onas</u> <u>citri pv.</u> <u>citri</u>	é Citrus	W Rutaceae	Canker lesions on leaves, twigs and fruits. Fruit premature drop.	× Absent from the EU	Quarantine pest	New findings
<u>Tomato</u> <u>brown</u> <u>rugose</u> <u>fruit</u> <u>virus</u>	Mainly pepper and tomato	Solanacea e	Foliar chlorosis, mosaic and mottling, necrotic spots on	✓ Under official control	Emergency control measures	Spread

|--|

2. Main issues of June 2023

Ceratocystis platani

Ceratocystic platani is a fungus, listed in Annex II B of the Commission Implementing Regulation (EU) 2019/2072. This newsletter includes one article about this pest.

The article reports a new finding of the pest in Greece, in the Tempe Valley. It was first reported in Greece in 2004 and is also described in other European countries such as Italy and France. The host plants of this fungus are trees from the *Platanus* genus.

All the articles on *Ceratocystis platani* are available on the webpage of <u>MEDISYS EFSA</u> <u>Plant Health</u>.

Lissachatina fulica

Lissachatina fulica is a giant snail, currently not listed in any EU legal acts or EPPO lists. This newsletter includes one article about this pest.

The article reports a new finding in Italy, in the Cottian Alps. Its host plants include many fruits and vegetables such as melon, cabbage, cucumber, and tomato. In the EU territory, it has been reported in Spain (Andalusia) and Slovakia.

All the articles on *Lissachatina fulica* are available on the webpage of <u>MEDISYS EFSA Plant</u> <u>Health</u>.

Phytophthora hibernalis

A Positive PeMoScoring

Phytophthora hibernalis is an oomycete known to occur the EU, mainly in Mediterranean MSs. As a soilborne pathogen, it can spread through the movement of infested soil, water, and infected plants. In the EU, it is found on citrus and ornamental plants. The ornamental plant trade is an important pathway for the spread of the oomocyte. The pathogen is also known to spread to natural or semi-natural habitats

The selected article reports for the first time the presence of *P. hibernalis* on Eucalyptus globulus, as a result of a study conducted on three *E. globulus* plantations in central Portugal.

All the articles on *Phytophthora hibernalis* are available on the webpage of <u>MEDISYS EFSA</u> <u>Plant Health</u>

<u>Takahashia japonica</u>

Takahasia japonica is an insect pest, currently not listed in any EU legal acts or EPPO lists. This newsletter includes one article about this pest.

The article reports the first finding of the insect in Brissago (Ticino, Switzerland). The pest damages ornamental plants, such as mulberries. An EFSA pest categorisation published on May 8th 2023 is available on the <u>EFSA website</u>.

All the articles on *Takahashia japonica* are available on the webpage of <u>MEDISYS EFSA</u> <u>Plant Health</u>.

Tomato brown rugose fruit virus

Tomato brown rugose fruit virus (ToBRFV) is included in the EPPO A2 list and it is the subject of EU emergency measures (Commission Implementing Regulation (EU) 2020/1191/EU). This newsletter includes two articles about this virus.

Both articles report on the spread of ToBRFV. The first article describes the survival and possible dispersal of the virus on surfaces in greenhouses, packaging hall and accommodations in a tomato production site. The second article describes the quantification of the virus in wastewater in the state of Louisiana (USA), a strategy which could be useful for monitoring ToBRFV.

All the articles on *Tomato brown rugose fruit virus* are available on the webpage of <u>MEDISYS EFSA Plant Health</u>.

Tomato leaf curl New Delhi virus

Tomato leaf curl New Delhi virus is a begomovirus listed in ANNEX II B of the Commission Implementing Regulation (EU) 2019/2072. In this newsletter, one scientific article reports the expansion of this virus.

The article reports the first finding of the virus in Türkiye. Symptoms on cucumber, melon and squash were observed in Antalya since 2019. The whitefly *Bemisia tabaci* (Hemiptera: Aleyrodidae) transmits this virus, which causes damage to a wide range of plant species, particularly those in the Solanaceae and Cucurbitaceae families.

All the articles on *Tomato leaf curl New Delhi virus* are available on the webpage of <u>MEDISYS EFSA Plant Health</u>.

Tomato mottle mosaic virus

Tomato mottle mosaic virus is a tobamovirus listed in the EPPO Alert List. This newsletter includes one article about this pest.

The article reports a new host plant for the virus in China, *Trichosanthes kirilowii*. Other described host plants of the virus include solanaceous and leguminous crops, but this finding is the first in the *Cucurbitaceae* family.

All the articles on *Tomato mottle mosaic virus* are available on the webpage of <u>MEDISYS</u> <u>EFSA Plant Health</u>.

3. Selected articles

3.1. New EU threats

3.1.1 Non-regulated pests in the EU

Fungi and oomycetes

Colletotrichum siamense

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

New host plant

First Report of Anthracnose Caused by *Colletotrichum siamense* on *Hydrangea macrophylla* in China

Plant Disease 07.May.2023

Hydrangea macrophylla (Thunb.) Ser. (Hydrangeaceae), a shrubby perennial plant, is widely used as an ornamental flowering plant because of its showy inflorescences and colorful sepals. In October 2022, leaf spot symptom was observed on *H. macrophylla* in Meiling Scenic Spot, which covers an area of about 143.58 km2 in Nanchang, Jiangxi Province, China (28.78°N, 115.83°E). (more)

Cytospora azerbaijanica

Authority: S. Hanifeh & D. Zafari Sordariomycetes, Diaporthales, Valsaceae

Negative PeMoScoring

• First finding (US) & New host plant

<u>First Report of Cytospora azerbaijanica</u> Causing Cytospora Canker and Shoot Dieback on Peach (Prunus persica) in California, U.S.A</u>

Plant Disease 25.May.2023

Peaches (*Prunus persica* L.) are an important crop in the United States with California leading the nation in peach production, with approximately 505,000 tons valued at \$378.3 million (USDA National Agricultural Statistics Service, 2021, https://www.nass.usda.gov/). From April to July 2022, symptoms of branch and scaffold canker as well as shoot dieback were observed in three peach (cvs. Loadel, Late Ross and Starn) orchards located in San Joaquin County, California. Samples were collected from about 12 trees for each cultivar. Fast-growing, white, flat colonies were consistently isolated from active cankers on acidified potato dextrose agar (APDA) following the method described by (Lawrence et al. 2017).(more)

Diaporthe actinidiicola sp. nov

Authority: M. Zhang, Y. S. Guo & J. Y. Cao Sordariomycetes, Diaporthales, Diaporthaceae

New pest

Diaporthe actinidiicola: A novel species causing branch canker or dieback of fruit trees in Henan Province, China

Plant Pathology 13.May.2023

Pear (*Pyrus*), walnut (*Juglans*) and kiwifruit (*Actinidia*) are important cash crops in China. Recently, symptoms of branch canker or dieback have been frequently observed in many orchards in Henan Province and have resulted in high losses of fruit production. In this study, symptomatic branches were collected for aetiological isolation from three hosts during 2020 and 2021. (more)

Fusarium amaranthuense sp. nov.

Authority: O. Hassan, H. Ryu, S.-Y. Lee & H.-W. Choi Sordariomycetes, Hypocreales, Nectriaceae

New pest

Fusarium amaranthuense sp. nov. from amaranth is an emergent species closely related to *Fusarium circinatum*

Molecular Biology Reports 09.May.2023 - Not peer-reviewed

Amaranth (*Amaranthus* spp. L) is not native in South Korea but cultivated in small scales for ornamental purpose as well as a leafy vegetables and pseudo cereals. In this study, a new species within the genus *Fusarium* was isolated from amaranth showing stem rot symptom from a farmer field in Hwaseong, South Korea. (more)

Paramicrosphaeropsis eriobotryae sp. nov

Authority: B. Tavakolian & Mostowf. Dothideomycetes, Pleosporales, Didymellaceae

New pest

Paramicrosphaeropsis eriobotryae sp. nov., a new agent of loquat canker in Iran

Plant Pathology 02.May.2023

Loquat (*Eriobotrya japonica*) is a subtropical evergreen plant, important in terms of both horticulture and green space in the urban environment. In recent years, symptoms of branch and trunk canker, dieback and decline have been observed in the main cultiva-tion areas of this tree in Iran. To study the aetiology of loquat canker in Fars Province, branches and trunks of loquat trees with disease symptoms were sampled from 2018 to 2019. Several isolates of an unknown *Paramicrosphaeropsis* species (Didymellaceae, Pleosporales, Dothideomycetes) were recovered from the trunks and branches of infected loquat trees. (more)

Phytophthora hibernalis

Authority: Carne Oomycetes, Peronosporales, Peronosporaceae

A Positive PeMoScoring

New host plant & new finding (PT)

<u>First report of *Phytophthora hibernalis*, *P. multivora* and *P. niederhauserii* causing root rot and bleeding cankers on Eucalyptus globulus in Portugal</u>

New Disease Reports 01.May.2023

During spring 2022 *Phytophthora* related-disease symptoms were observed in three *Eucalyptus globulus* plantations in central Portugal (Aveiro district). Affected trees displayed a range of symptoms including root rot, bleeding cankers and extensive canopy dieback (Figure 1). Average disease incidence and tree mortality rate were estimated as 67 and 20% along three linear transects of 50 m, respectively. (more)

Pseudocerradoa paullula

Authority: M. Ebinghaus & Dianese Pucciniomycetes, Pucciniales, Pucciniaceae

Negative PeMoScoring

New finding (US)

First report of *Pseudocerradoa paullula* causing aroid leaf rust on Swiss cheese plant Monstera deliciosa in South Carolina, USA

Plant Disease 23.May.2023

In February 2023, two *Monstera deliciosa* Liebm. (Araceae) plants with typical symptoms of leaf rust disease were detected at a grocery store in Oconee Co., South Carolina. Symptoms included chlorotic leaf spots and abundant brownish uredinia, mainly on the adaxial surface of more than 50% of leaves. The same disease was detected on 11 out of 481 (more)

Insects and mites

Janus dujuan sp. nov. Authority: Wei Insecta, Hymenoptera, Cephidae

New pest

<u>A New Species of Genus Janus Stephens (Hymenoptera, Cephidae) Harmful to</u> <u>Rhododendron fortunei and Its Systematic Significance</u>

Scientica Silvae Sinicae 27.May.2023

The species of Ericaceae are important flower resources. A stem sawfly pest feeding on twigs of *Rhododendron fortune* was found in 2021 from Ningbo, China. This study aims to

clarify its species and taxonomic status, and the explore the possible bearings on the diversification mechanism of stem sawflies. (more)

Megalurothrips usitatus Authority: (Bagnall) Insecta, Thysanoptera, Thripidae

• First finding (CR)

First report of Common Bean Flower Thrips Megalurothrips usitatus Bagnall in Costa Rica

Tropical and Subtropical Agroecosystems May.2023

Background: The species *Megalurothrips usitatus* is a thrips insect that has been recorded in Asia, Oceania, Australia and recently in America, attacking legume crops. Objective: to report *Megalurothrips usitatus* as species associated with flowers of common bean plants in Costa Rica. (more)

Platypus koryoensis and *Platypus quercivorus* Authority: (Murayama) | (Murayama) Insecta, Coleoptera, Curculionidae

Negative PeMoScoring

• First finding (CN)

First record of two ambrosia beetle, *Platypus quercivorus* (Murayama) and *Platypus koryoensis* (Murayama) (Coleoptera: Curculionidae, Platypodinae) in Mainland China

Zootaxa 11.May.2023

Platypus quercivorus (Murayama) and *P. koryoensis* (Murayama) are destructive tree pests that have killed thousands of oak trees in Japan and South Korea (Kinuura & Kobayashi 2006; Kim et al. 2009). These species are considered regulated pests in China because of their potential to cause serious damage (General Administration of Quality Supervision, Inspection, and Quarantine of the People's Republic of China 2017). (more)

Takahashia japonica Authority: (Cockerell) Insecta, Hemiptera, Coccidae

First finding (CH)

Un nuovo flagello giapponese

A new Japanese pest

RSI NEWS 02.May.2023

Un nuovo insetto invasivo e nocivo è arrivato in Svizzera e sta prendendo di mira le piante ornamentali ticinesi, ma potrebbe presto minacciare anche i boschi. (more)

A new invasive and harmful insect has arrived in Switzerland and is targeting Ticino's ornamental plants, but could soon threatens the forests as well.

Molluscs

Lissachatina fulica

Authority: (Bowdich) Gastropoda, Sigmurethra, Achatinidae

New finding (IT)

<u>First Report of Giant African Snail (*Lissachatina fulica*) in a Protected Area of the Cottian Alps, Northwest Italy</u>

Sustainability 25.May.2023

The Giant African snail (*Lissachatina fulica*) is listed among the top 100 worst invasive alien species. Native to East Africa, it has been introduced voluntarily or accidentally into more than 50 countries, where it impacts negatively on biodiversity, ecosystems, agriculture, and public health. (more)

Viruses, viroids and phytoplasmas

Capsicum chlorosis virus

Viruses, Tospoviridae, Orthotospovirus

New finding (CN)

First report of Capsicum chlorosis virus naturally infecting Ageratum conyzoides in China

Plant Disease 25.May.2023

Capsicum chlorosis virus (CaCV; family Tospoviridae, genus Orthotospovirus) was first reported to infect capsicum (Capsicum annuum) and tomato (Solanum lycopersicum) in Australia in 2002 (McMichael et al., 2002). Subsequently, its infection was detected in different plants including waxflower (Hoya calycina Schlecter) in the United States (Melzer et al. 2014), peanut (Arachis hypogaea) in India (Vijayalakshmi et al. 2016), and spider lily (Hymenocallis americana) (Huang et al. 2017), Chilli pepper (Capsicum annuum) (Zheng et al. 2020), and Feiji cao (Chromolaena odorata) (Chen et al. 2022) in China. (more)

Chickpea chlorotic dwarf virus Viruses, Geminiviridae, Mastrevirus

New finding (TN)

First report of chickpea chlorotic dwarf virus in pepper in Tunisia and in Mediterranean countries

Journal of Plant Pathology 25.May.2023

Pepper (*Capsicum annuum*) is one of the main crops grown and consumed in Tunisia. The main production areas are located in Cap Bon, Center and Sahel regions. Chickpea chlorotic dwarf virus (CpCDV, genus *Mastrevirus*, family *Geminiviridae*) has a monopartite single-stranded circular DNA genome, a very broad host range and is reported in many tropical and subtropical countries. (more)

3.1.2 EPPO lists

*Tomato mottle mosaic virus*⁹ *Viruses, Virgaviridae, Tobamovirus*

New host plant (Cucurbitaceae)

First Report of *Tomato mottle mosaic virus* infecting Chinese snake gourd (*Trichosanthes kirilowii*) in China

Plant Disease 08.May.2023

Tomato mottled mosaic virus (ToMMV) was first identified in tomato in Mexico (Li et al. 2013). It belongs to the genus *Tobamovirus* and family *Virgaviridae*, and is a positive-sense single-stranded RNA virus. The viral genome contains about 6400 nucleotides, encoding four proteins, including the 126 K protein, 183 K protein, movement protein (MP) and coat protein (CP) (Tu et al. 2021). (more)

⁹ EPPO Alert List: <u>https://www.eppo.int/ACTIVITIES/plant_quarantine/alert_list</u>

3.2. Regulated pests

3.2.1 Priority pests¹⁰

Bursaphelenchus xylophilus

Authority: (Steiner & Bührer) Nickle Chromadorea, Rhabditida, Aphelenchoididae

Absence (FR)

<u>Two decades of epidemiological surveillance of the pine wood nematode in France reveal</u> <u>its absence despite suitable conditions for its establishment</u>

Annals of Forest Science 19.May.2023

This study takes stock of the first 20 years (2000–2019) of monitoring the pine wood nematode (PWN) in metropolitan France. While PWN was never found in the wild during this period, it was reported in some wood-based commodities entering or circulating on French territory. (more)

¹⁰ Commission Delegated Regulation (EU) 2019/1702 of 1 August 2019 supplementing Regulation (EU) 2016/2031 of the European Parliament and of the Council by establishing the list of priority pests. OJ L 260, 11.10.2019, p. 8–10

3.2.2 Quarantine pests^{11,12}

Annex II Part A

Bacteria

Xanthomonas citri pv. citri

Authority: (Hasse) Constantin, Cleenwerck, Maes, Baeyen, Van Malderghem, De Vos, Cottyn

Gammaproteobacteria, Lysobacterales, Lysobacteraceae

New finding (PE)

Perú: Declaran emergencia fitosanitaria en dos regiones por plaga que afecta cítricos

Peru: Declare phytosanitary emergency in two regions per pest affecting citrus fruits

Portal del campo 26.May.2023

El Midagri, a través del Senasa (Servicio Nacional de Sanidad y Calidad Agroalimentaria), detalla las acciones sanitarias que ejecutarán en los dos departamentos debido a que esta plaga viene afectando los cultivos de cítricos para el mercado nacional e internacional. (more)

The Midagri, through the Senasa (National Service of Health and Agrifood Quality), details the health actions that will be carried out in the two departments because this pest has affected citrus crops for the national and international market.

New finding (SA)

<u>Re-occurrence of Asiatic citrus canker in the Makkah Province of Saudi Arabia and characterization of the causal agent Xanthomonas citri pv. citri isolated from Mexican lime</u>

Journal of Plant Pathology 10.May.2023

Asiatic citrus canker (ACC) caused by *Xanthomonas citri* pv. *Citri* (Xcc) is a destructive disease of citrus crops, worldwide. Typical ACC symptoms were observed on Mexican lime trees in the Makkah Province, Saudi Arabia, where the disease had been thought to be eradicated after its first occurrence in the late 1980ies. It was postulated that insufficient uprooting and burning of infected as well as neighboring symptomless trees proved to have been insufficient. (more)

Fungi and oomycetes

¹¹ Commission Implementing Regulation (EU) 2019/2072 of 28 November 2019 establishing uniform conditions for the implementation of Regulation (EU) 2016/2031 of the European Parliament and the Council, as regards protective measures against pests of plants, and repealing Commission Regulation (EC) No 690/2008 and amending Commission Implementing Regulation (EU) 2018/2019. OJ L 319, consolidated version 16.12.2021, p. 1–258
¹² Commission Implementing Regulation (EU) 2021/2285 of 14 December 2021 amending Implementing Regulation (EU) 2019/2072

¹² Commission Implementing Regulation (EU) 2021/2285 of 14 December 2021 amending Implementing Regulation (EU) 2019/2072 as regards the listing of pests, prohibitions and requirements for the introduction into, and movement within, the Union of plants, plant products and other objects, and repealing Decisions 98/109/EC and 2002/757/EC and Implementing Regulations (EU) 2020/885 and (EU) 2020/1292. OJ L 458, 22.12.2021, p. 173–283.

Bretziella fagacearum

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

Surveillance

Mapping oak wilt disease using phenological observations from space

BioRxiv 26.May.2023 – Not peer-reviewed

Protecting the future of forests relies on our ability to observe changes in forest health. Thus, developing tools for sensing diseases in a timely fashion is critical for managing threats at broad scales. Oak wilt —a disease caused by a pathogenic fungus (*Bretziella fagacearum*)— is threatening oaks, killing thousands yearly while negatively impacting the ecosystem services they provide. (more)

Elsinoë australis, Elsinoë citricola and Elsinoë fawcettii

Authority: Bitancourt & Jenkins | X.L. Fan, R.W. Barreto & P.W. Crous | Bitancourt & Jenkins

Dothideomycetes, Myriangiales, Elsinoaceae

Detection method

Real-Time PCR Detection of Elsinoë spp. on Citrus

PhytoFrontiers 10.May.2023

Elsinoë species are the causal agents of scab and spot diseases on many economically important plant species. Diagnosis based on symptomology is often problematic, and traditional methods are not appropriate as *Elsinoë* spp. are notoriously difficult to isolate and slow growing. Three *Elsinoë* species that infect Citrus are regulated as quarantine organisms within the European Union. Reliable and fast detection of *Elsinoë* species on citrus fruit is essential for effective phytosanitary control. (more)

Phytophthora ramorum

Authority: Werres, De Cock & Man in 't Veld *Oomycetes, Peronosporales, Peronosporaceae*

Identification method

Rapid new diagnostic LAMP (Loop-mediated Isothermal Amplification) assays to distinguish among the four lineages of *Phytophthora ramorum*

Plant Disease 17.May.2023

Sudden oak death (SOD) is caused by *Phytophthora ramorum*, an invasive oomycete pathogen. This pathogen is of major regulatory concern for nurseries, horticulture, and forestry in the U.S. and around the world. Three of the twelve identified lineages of *P. ramorum* currently occur in the U.S. (more)

Viruses, viroids and phytoplasmas

Candidatus Phytoplasma aurantifolia

Authority: Zreik, Bové & Garnier Mollicutes, Acholeplasmatales, Acholeplasmataceae

New finding (JO)

Grapevine yellows in Jordan: Associated phytoplasmas, putative insect vectors and reservoir plants

Plant Pathology 23.May.2023

Field surveys were conducted in wine and table grape vineyards from June to October 2020 in 13 locations belonging to five governorates in North and South Jordan. Typical grapevine yellows symptoms, including leaf reddening/yellowing and rolling were observed on 10% to 55% of vines. (more)

Annex II Part B

Fungi and oomycetes

Ceratocystis platani

Authority: (Walter) Engelbrecht & Harrington Sordariomycetes, Microascales, Ceratocystidaceae

New finding (GR)

Επικίνδυνος μύκητας «χτύπησε» τα πλατάνια στην Κοιλάδα των Τεμπών

A dangerous fungus "hit" the plane trees in the Tempe Valley

Eleftheria 11.May.2023

Στην υλοτομία πλατάνων σε παραπήνειες περιοχές που έχουν προσβληθεί από τον μύκητα Ceratocystis platani, προχωρά η Επιθεώρηση Εφαρμογής Δασικής Πολιτικής Θεσσαλίας Στερεάς Ελλάδας του Υπουργείου Περιβάλλοντος. Η αρμόδια Επιθεώρηση ανακοίνωσε ότι «προκειμένου να αντιμετωπιστεί η ασθένεια του μεταχρωματικού έλκους του πλατάνου, στην περιοχή ευθύνης του Δασαρχείου Λάρισας ξεκινά η υλοτομία νεκρών (ξηρών) ατόμων πλατάνου, τα οποία έχουν προσβληθεί από τον μύκητα *Ceratocystis platani*, καθώς και υγειών (υπόπτων προσβολής) ατόμων, που φύονται περιμετρικά και σε ακτίνα δεκαπέντε μέτρων από τα προσβεβλημένα άτομα πλατάνου». (more)

In the felling of sycamore trees in affected areas from the fungus Ceratocystis platani, the Forestry Policy Implementation Inspection of Thessaly Central Greece of the Ministry of the Environment is proceeding. The competent Inspectorate announced that "in order to treat the disease of the canker stain of the sycamore, in the area of responsibility of the Forestry of Larissa, the felling of dead (dry) sycamore trees, which have been infected by the fungus Ceratocystis platani, will begin as well as healthy (suspected of infection) individuals, which grow around the perimeter and within a radius of fifteen meters from the affected sycamore individuals".

Insects and mites

Trioza erytreae

Authority: (Del Guercio) Insecta, Hemiptera, Triozidae

Modelling

Modelling the invasion dynamics of the African citrus psyllid: The role of humanmediated dispersal and urban and peri-urban citrus trees

NeoBiota 18.May.2023

The African citrus psyllid, *Trioza erytreae* (Del Guercio) (Hemiptera, Triozidae), is native to tropical Africa and invasive species in North America and Europe. The main host plants are citrus, displaying a preference for lemon trees. This psyllid was recently detected in the northwest region of the Iberian Peninsula, both in Spain and Portugal. Here, we used a model combining a reaction-diffusion model to a stochastic long-distance dispersal model to simulate the invasion dynamics of *T. erytreae* in Portugal. (more)

Nematodes

Meloidogyne chitwoodi and *Meloidogyne fallax* Authority: Golden, O'Bannon, Santo & Finley | Karssen *Chromadorea, Rhabditida, Meloidogynidae*

Absence (NO)

<u>Overvåkings- og kartleggingsprogram for Meloidogyne chitwoodi og Meloidogyne fallax</u> 2021

Monitoring and mapping program for *Meloidogyne chitwoodi* and *Meloidogyne fallax* 2021

Mattilsynet 12.May.2023

Rapporten presenterer resultatene fra den delen av overvåkings- og kartleggingsprogrammet (OK-programmet) «Skadegjørere i potet» som omhandler rotgallnematodene *Meloidogyne chitwoodi* og *Meloidogyne fallax*. Programmet gjennomføres for å få kunnskap om status, og vil sammen med et system for bekjemping på sikt kunne legge til rette for en mulig eksport av matpoteter til EU. (more)

The report presents the results from the part of the monitoring and mapping program (OK programme) "Potato pests" which deal with the root gall nematodes Meloidogyne chitwoodi and Meloidogyne fallax. The program is carried out to gain knowledge of the status, and together with a system for combating it, will in the long run be able to facilitate a possible export of food potatoes to the EU.

Viruses, viroids and phytoplasmas

Tomato leaf curl New Delhi virus

Viruses, Geminiviridae, Begomovirus

First finding (TR)

First report of Tomato leaf curl New Delhi virus in Türkiye

New Disease Reports 21.May.2023

A leaf curl disease has been observed frequently in greenhouses where cucumber (*Cucumis sativus*), melon (*Cucumis melo*) and squash (*Cucurbita pepo*) are produced in Antalya since 2019. The infected plants showed symptoms including apical leaf curl, vein swelling, severely stunted, wrinkled leaves, fruit shape and texture disorder and a conspicuous mosaic pattern (Figure 1-5). (more)

3.2.3 EU Emergency control measures

Tomato brown rugose fruit virus

Viruses, Virgaviridae, Tobamovirus

Spread

Analysis of the Spatial Dispersion of Tomato Brown Rugose Fruit Virus on Surfaces in a Commercial Tomato Production Site

Horticulturae 22.May.2023

The tomato brown rugose fruit virus (ToBRFV) causes severe damage to tomato cultivars and has international economic importance. The harmful tobamovirus is easily mechanically transmissible and highly stable. An ongoing cultivation of infected tomato plants may lead to the spread of ToBRFV in and around the production area of the infested tomato farm. We conducted a study in which we collected a representative number of swab samples from various inanimate surfaces in greenhouses, packaging halls, and shared and private accommodations. (more)

Spread

First quantitative detection of tomato brown rugose fruit virus in wastewater in Louisiana

Science of the Total Environment 24.May.2023

We investigated the occurrence of tomato brown rugose fruit virus (ToBRFV) at a conventional wastewater treatment plant in Louisiana over a 13-month period, from March 2017 to March 2018. Influent, secondary effluent, and final effluent wastewater samples were collected monthly, and viruses were concentrated by the adsorption-elution method using an electronegative filter, followed by the detection using quantitative polymerase chain reaction. (more)

3.3. Articles of general interest

Climate change impacts on plant pathogens, food security and paths forward Nature Reviews Microbiology 02.May.2023

Plant disease outbreaks pose significant risks to global food security and environmental sustainability worldwide, and result in the loss of primary productivity and biodiversity that negatively impact the environmental and socio-economic conditions of affected regions. Climate change further increases outbreak risks by altering pathogen evolution and host-pathogen interactions and facilitating the emergence of new pathogenic strains. (more)

Exploring pest mitigation research and management associated with the global wood packaging supply chain: What and where are the weak links?

Biological Invasions 11.May.2023

Global trade continues to increase in volume, speed, geographic scope, diversity of goods, and types of conveyances, which has resulted in a parallel increase in both quantity and types of pathways available for plant pests to move via trade. Wood packaging material (WPM) such as dunnage, pallets, crates, and spools, is an integral part of the global supply chain due to its function in containing, protecting, and supporting the movement of traded commodities. (more)

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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 <u>EFSA Virtual Issue "Horizon Scanning for Plant Health"</u>

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