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POUR LA PROTECTION DES PLANTES

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EPPO

Reporting

Service

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EPPO *Reporting Service*

2003/127 Modifications made to the EPPO A1 and A2 lists

In September 2003, the EPPO Council decided of the following changes to be made to the EPPO A1 and A2 lists:

Additions to the EPPO A1 list:

Chrysanthemum stem necrosis tospovirus
Maconellicoccus hirsutus
Stegophora ulmea

Additions to the EPPO A2 list:

Cucumber vein yellowing virus
Dryocosmus kuriphilus
Erschoviella musculana
Lepidosaphes ussuriensis
Malacosoma parallela

Transfer from A1 to A2 list:

Liriomyza sativae

Information on these pests can be found on the EPPO web site:
http://www.eppo.org/QUARANTINE/Data_sheets/datasheets.html

Source: **EPPO Secretariat, 2003-09.**

Additional key words: EPPO lists

Computer codes: CSNV00, CVYV00, DRYCKU, ERSHMU, GNOMUL, LEPSUS, LIRISA, MALAPA, PHENHI

EPPO *Reporting Service*

2003/128 First report of transmission of *Xylella fastidiosa* through citrus seeds

Xylella fastidiosa (EPPO A1 list), among other diseases, is responsible for citrus variegated chlorosis which severely affects citrus orchards in Brazil. So far, it has been shown that this disease was transmitted by sharpshooters (Cicadellidae), infected bud wood and natural root grafts. Studies were done in Brazil to characterize the distribution of *X. fastidiosa* in various parts of sweet orange (*Citrus sinensis*) fruit and seeds and to determine whether the bacterium could be transmitted through seeds to seedlings. Symptomatic and asymptomatic fruits of *C. sinensis* cvs Pera, Valencia and Natal were collected and tested (PCR assays) for the presence of *X. fastidiosa*. The bacterium could be detected in samples of peduncles, peel, endocarp, septum, locular membrane and central axis of symptomatic fruits. It was also observed that fresh weight of affected fruits was reduced by 25% compared to healthy fruits. *X. fastidiosa* was detected on seeds collected from diseased fruits, both in the embryo and seed coat. No apparent symptoms were observed on diseased seeds. However, the weight of affected embryos was reduced by 25 % compared to healthy ones, and seed germination was lower. Finally, *X. fastidiosa* was detected in seedlings (PCR assays and *in vitro* isolation) grown from seeds which had been collected on symptomatic fruits. The authors concluded that this is the first report of seed transmission of *X. fastidiosa*. They felt that further studies should be done on citrus rootstocks (such as Rangpur lime) as these are multiplied by seedlings, as well as on coffee varieties and rootstocks which are also largely multiplied by seedlings and affected by *X. fastidiosa* (causing coffee leaf scorch).

Source: Li, W.B.; Pria, W.D.; Lacava, Jr P.M.; Qin, X.; Hartung, J.S. (2003) Presence of *Xylella fastidiosa* in sweet orange fruit and seeds and its transmission to seedlings.
Phytopathology, 93(8), 953-958.

Additional key words: epidemiology **Computer codes:** XYLEFA

EPPO *Reporting Service*

2003/129 Recent papers on *Xylella fastidiosa*

Several papers on *Xylella fastidiosa* (EPPO A1 list) and its associated diseases were recently published.

A review of the current knowledge about this complex bacterium has been published by Hopkins & Purcell (2002). In particular, it gives details on Pierce's disease in California and the epidemics which has followed the introduction of an efficient vector *Homalodisca coagulata*. A table also summarizes crop and forest tree diseases confirmed or suspected* (Koch's postulates not confirmed) to be caused by *X. fastidiosa* with their distribution.

Plant diseases	Reported occurrence
Grape strains	
Pierce's disease	North and Central Americas, Peru, Kosovo[1]
Alfalfa dwarf	California (US)
Almond leaf scorch	California (US), Argentina
Peach-plum strains	
Phony peach	Southeastern USA
Plum leaf scald (US)	Southeastern USA
Citrus variegated chlorosis	Brazil, Argentina (known there as pecosita)
Coffee leaf scorch	Brazil
Unknown cross-infectivity strains	
Oak leaf scorch (related to peach strains)	Eastern USA
Maple leaf scald	Eastern USA
Elm leaf scorch	Eastern USA
Sycamore leaf scorch	Eastern USA
Mulberry leaf scorch	Eastern USA
Plum leaf scald (South America)	Paraguay, Brazil
Periwinkle wilt	Florida (US)
Pear leaf scorch*	Taiwan
Pecan leaf scorch	Louisiana (US)
Oleander leaf scorch	California, Florida (US)

1) see EPPO RS 98/006 and 98/157: this record is considered as dubious. Material came from Cermjan, Kosovo (near Albanian border) but isolations and further studies were done in USA. Lack of detailed information on the origin of the material and of further study in the area concerned leaves considerable doubt about the nature of the original material.

Host range of different strains

Strains of *X. fastidiosa* isolated from diseased citrus and coffee in Brazil can incite symptoms of Pierce's disease after artificial inoculation into 7 grapevine cultivars grown in glasshouse conditions. These cultivars are commercially grown in Brazil and California. Although this was observed under artificial conditions, this result appeared slightly surprising because earlier work had showed that strains from grapevine and citrus were the most distantly related within *X. fastidiosa* (Li *et al*., 2002).

Vectors

Studies done in Florida (US) showed that *Oncometiopa nigricans* (Homoptera: Cicadellidae) is a vector of citrus variegated chlorosis disease. This insect is commonly found feeding on citrus in Florida. Although *X. fastidiosa* is present in Florida, citrus variegated chlorosis does not occur there. But the presence of a suitable vector adds to the threat this disease represents for the citrus industry (Brlansky *et al*, 2002).

Diagnostics

A real-time PCR technique has been developed by Schaad *et al*. (2002) to detect *X. fastidiosa* within 1-2 hours in the field (with a portable thermocycler). This technique can be used to detect the bacterium in asymptomatic grapevines, either on naturally exuding sap (as soon as vines are coming out of dormancy in early spring) or on wood chips (during dormancy). This technique could be useful in areas where the disease occurs to map field infections and destroy infected plants early in the season to prevent any further spread.

Taxonomy

As *X. fastidiosa* is a heterogeneous species, Schaad *et al*. (2003) proposed new taxa on the basis of DNA homology and ITS sequencing. 26 strains from 10 host plants were compared and 3 new taxa and names are now proposed:

- taxon A (grape, alfalfa, maple, and 2 almond strains)	*X. fastidiosa* subsp. *piercei*
- taxon B (peach, elm, plum, wild grape, 1 almond, and sycamore strains)	*X. fastidiosa* subsp. *agglomeri*
- taxon C (citrus strains)	*X. fastidiosa* subsp. *idiotraposa*

Source:

Brlansky, R.H.; Damsteegt, V.D.; Hartung, J.S. (2002) Transmission of the citrus variegated chlorosis bacterium *Xylella fastidiosa* with the sharpshooter *Oncometopia nigricans*. **Plant Disease, 86(11), 1237-1239.**

Hopkins, D.L.; Purcell, A.H. (2002) *Xylella fastidiosa*: cause of Pierce's disease of grapevine and other emergent diseases. **Plant Disease, 86(10), 1056-1066.**

Li, W.B.; Zhou, C.H.; Pria, W.D. Jr; Teixeira, D.C., Miranda, V.S.; Pereira, E.O.; Ayres, A.J.; He, C.X.; Costa, P.I.; Hartung, J.S. (2002) Citrus and coffee strains of *Xylella fastidiosa* induce Pierce's disease in grapevine. **Plant Disease, 86(11), 1206-1210.**

Schaad, N.W.; Opgenorth, D.; Gaush, P. (2002) Real-time polymerase chain reaction for one-hour on-site diagnosis of Pierce's disease of grape in early season asymptomatic vines. **Phytopathology, 92(7), 721-728**

Schaad, N.W.; Postnikova, E.; Fatmi, M.; Lacy, G.H.; Chang, C.J. (2003) *Xylella fastidiosa* taxonomy. Abstract of a paper presented at the APS Annual Meeting (Charlotte, US, 2003-08-09/13). **Phytopathology 93(6), supplement, S76.**

Additional key words: diagnostics, epidemiology, host plants, taxonomy

Computer codes: XYLEFA

2003/130 Situation of *Monilinia fructicola* in EPPO countries

As *Monilinia fructicola* (EPPO A1 list) was detected for the first time in Europe in 2001 (in France), the EPPO Secretariat has sent a questionnaire to all its member countries to review its present situation, and this point was discussed by the EPPO Working Party on Phytosanitary Measures. The EPPO Secretariat has summarized below the answers received. When countries have stated the pest status, this is indicated in bold. In other cases, the EPPO Secretariat has summarized the pest situation which is in also indicated in bold according to the terms of FAO ISPM no 8.

Algeria
M. fructicola has never been detected in Algeria. **Absent, no pest record.**

Belgium
Inspections for *M. fructicola* have been carried out at fruit-tree nurseries. From November to December 2002, 60 samples of *Malus*, *Prunus* (*P. avium, P. domestica*) and *Pyrus* were tested by PCR and all gave negative results. **Absent, confirmed by survey.**

Denmark
A small survey was carried out in 2002 and samples of different fruits were examined. *M. fructicola* was not found. **Absent, confirmed by survey.**

Estonia
Absent, no pest record.

France
Following the first finding of the disease in summer 2001 (see EPPO RS 2002/03), a survey was initiated in peach orchards in the south-east of France. The disease was detected in a zone extending from the department of Gard (near Costières) to Drôme (north of Valence). In 2002, it was decided to extend the survey to the whole of France and to all susceptible fruit-tree species (*Prunus, Malus, Pyrus*). In zones which had already been found infected in 2001, the survey was extended to species other than peach, and to peach-growing areas which had not been inspected in 2001, in order to delimit the focus better. In 2002, positive results were only detected on peach, in areas which had already been found infected in 2001 (Gard, Vaucluse, Drôme, Ardèche (Rhône valley only)). On peach, which appears to be the most susceptible species, no infection was detected in other parts of France. **The declared status of *M. fructicola* in France is: Present but contained, under official control.**

Germany
In 2002, a survey on the occurrence of *M. fructicola* was carried out in the whole of Germany focussing especially on the main production areas of stone fruit. From July until October, 383 samples were taken from fruits with suspicious symptoms of *Monilinia* infections. The samples were collected from orchards (246), scattered orchards (36), private gardens (73) and from traded fruit (28). Fruit samples were taken mainly from stone fruit (peach, nectarine, apricot, plum, sweet cherry, sour cherry, almond), and to a lesser extent, from pome fruit (apple, pear, quince). *M. fructicola* was not detected on any of the 383 samples tested, indicating that Germany can be considered to be free from this harmful organism. **Pest status: Absent, confirmed by survey**

Guernsey

M. fructicola is not present. **Absent, no pest record.**

Hungary
The declared pest status of *M. fructicola* in Hungary is the following: I/A list in the Ministerial Decree 7/2001 (I.17.) FVM, which means: "Quarantine pests whose introduction into, and spread within, Hungary shall be banned" - "A) Quarantine pests not known to occur on the territory of EPPO member countries"**. The pest is considered to be absent in Hungary.**

Ireland
M. fructicola was not found during the survey carried out late in 2002. The acreage of apples is low (approximately 620 ha - 300 ha culinary, 170 ha dessert and 150 ha cider apples). Other top fruit is not grown in Ireland. **Absent, confirmed by survey.**

Jersey
M. fructicola is not recorded in Jersey. **Absent, no pest record.**

Latvia
M. fructicola is absent from Latvia. **Absent, no pest record.**

Lithuania
The other species, *M. fructigena* is widespread in Lithuania. Symptoms of *M. fructigena* and *M. fructicola* are very similar, but so far *M. fructicola* has not been identified in Lithuania. Survey for *M. fructicola* will continue in 2003. **Absent, confirmed by survey.**

Malta
M. fructicola has never been recorded. **Absent, no pest record.**

Netherlands
A survey was carried out between June and September 2002 in orchards throughout the country. A total of 113 locations was visited and 123 samples were taken. The survey focused on plums *(P. domestica*) although some samples of sweet cherry (*P. avium*), apple (*M. domestica*), pear (*P. communis*) and apricot (*P. armeniaca*) were also collected. 99 samples had *Monilinia fructigena*, 4 had *M. laxa*, and 20 had mixed infections. But *M. fructicola* was not found on the 123 tested samples. **The declared pest status of *M. fructicola* in the Netherlands is: not present.**

Norway
M. fructicola is not known to occur in Norway and has never been found. Some fruit producing areas will be sampled and specifically tested for this pathogen in 2003. **Absent, no pest record.**

Poland
Monilinia fructicola has never been found. **Absent, no pest record.**

Portugal
As regards *M. fruticola*, a survey protocol is in place, plant health inspections are made in the production fields and samples are taken whenever the fruits show symptoms. The inspection and results of the lab testing so far have indicated that the fungus is not present in our country. **Absent, confirmed by survey.**

Slovenia
A preliminary survey on *M. fructicola* was done in 2002: 50 samples of infected fruits or twigs from 19 locations in the main fruit growing areas in the central and southern part of the country were collected. Mainly plants from the genus *Prunus* were sampled (*P. persica, P. armeniaca, P. domestica, P. avium, P. cerasus, P. serrulata*), some samples were taken also from *Malus domestica, Pyrus communis* and *Corylus avellana*. 44 samples had *M. laxa*, and 6 had *M. fructigena*. But the quarantine species *M. fructicola* was not found. Official detection survey for *Monilinia fructicola* is planned for 2003. **The declared status for *Monilinia fructicola* in Slovenia is: absent, confirmed by survey.**

Spain
M. fructicola has not been detected in Spain. After the appearance of the fungus in France, Spain implemented the EU Commission's recommendation to investigate the situation of *M. fructicola*, and the fungus was not found. **Absent, confirmed by survey.**

Turkey
M. fructicola has never been found in Turkey. **Absent, no pest record.**

United Kingdom
A detection survey for the disease was carried out between September and November 2002. 107 samples of *Prunus, Malus, Pyrus* and *Cydonia* were tested and no *Monilinia fructicola* was detected. 86 samples had *Monilinia fructigena*, 19 *M. laxa*, and 2 had other diseases. The survey will continue in 2003. On this basis *M. fructicola* is not considered to be present in the United Kingdom. **Absent, confirmed by survey.**

Ukraine
M. fructicola has never been found in Ukraine. **Absent, no pest record.**

Source: **NPPOs of EPPO member countries.**
EPPO Secretariat, 2003-09.

2003/131 *Monilinia fructicola* found on *Vitis vinifera* in Canada

Surveys were carried out in 2001/2002 on the incidence of grapevine diseases in the south of British Colombia, Canada. In 2002, a fungus resembling *Monilinia fructicola* (EPPO A1 list) was observed sporulating on immature grapes (*Vitis vinifera* cv. Pinot noir) collected from Kelowna, and later on grapes (cv. Riesling) from Summerland. There was no evidence of brown rot near the vineyard of Kelowna, but diseased stone fruits were present near the vineyard of Summerland. The fungus was identified as *M. fructicola*. This indicates that *M. fructicola* can cause decay on *V. vinifera* and could be confused with *Botryotinia fuckeliana*. *M. fructicola* had previously been reported from other *Vitis* species in Oklahoma but not on *V. vinifera*. The authors thought that this is the first record of *M. fructicola* on *V. vinifera* in North America.

Source: Sholberg, P.L.; Haag, P.D.; Hambleton, S.; Boulay, H. (2003) First report of brown rot in wine grapes caused by *Monilinia fructicola* in Canada. **Plant Disease, 87(10), p 1268.**

Additional key words: host plant **Computer codes:** MONCFC, CA

2003/132 Situation of *Pepino mosaic potexvirus* in EPPO countries

As *Pepino mosaic potexvirus* (PepMV – EPPO Alert List) is causing a new disease of tomato which is spreading in the EPPO region, the EPPO Secretariat send a questionnaire to all its member countries to review the present situation. Results of the questionnaire were discussed by the EPPO Working Party on Phytosanitary Regulations. The EPPO Secretariat has summarized below the answers received. When countries have stated the pest status, it is indicated in bold. In other cases, the EPPO Secretariat has summarized the pest situation which is in also indicated in bold according to the terms of FAO ISPM no 8.

Algeria
Absent, no pest record.

Belgium
As required by the Commission Decision 2001/536/EC, a survey for the presence of PepMV was done from 2001-02-01 to 2002-09-30. All collected samples were tested at CRA Gembloux (ELISA-test).
Production of fruits
During quality inspections on tomatoes at auctions, special attention was given to the presence of suspicious symptoms. 3 fruit samples with suspicious symptoms were taken for further investigation and 1 of them was found positive. The producer concerned was visited and strict hygienic measures were imposed. On 39 production units of tomatoes, leaf samples with suspicious symptoms were taken. Positive samples were found on 2 premises. Strict hygienic measures were imposed and later on no more positive samples were found.
Production of plants for planting

Every week, the production units of tomato plants intended for planting were inspected so that samples could always be taken from 4 weeks old plants or elder ones. In total 212 mixed leaf samples were taken, covering all the lots. None of these samples were found positive.
Absent: found in 2001/2002 at 2 production sites of tomato fruits and eliminated; never been found in nurseries producing tomato plants for planting.

Denmark
A survey was carried out in 2003 in nurseries producing tomato plants and tomato fruits without any finding of this virus. During surveys done in 2001 and 2002, PepMV was found each year in one nursery (not the same) producing tomato fruits. **Absent, no longer found. Found in 2001 and 2002, each year in one nursery of tomato fruits, but not found in 2003.**

Estonia
In 2002, tomato producers of 6 districts were inspected and 18 samples were tested on site for PepMV using 'pocket diagnostic kits'. PepMV was not detected. **Absent, confirmed by survey.**

France
In the framework of Commission Decision 2003/64/EC, a national survey of tomato crops was set up. During summer 2002, one outbreak of PepMV was detected in one glasshouse producing tomato fruits in the region 'Centre'. At the beginning of 2003, new outbreaks were detected in Bretagne in glasshouses producing tomato fruits. The origin of these outbreaks could be related to the import of one infected seed lot from another EU Member State. Compulsory control measures were applied, including prophylactic measures at infected premises. **Present, under official control.**

Germany
Since 1999, there have been four outbreaks of *Pepino mosaic virus* in tomato-producing companies in Germany, which have been communicated to EPPO earlier. Although the survey for 2003 has not yet been accomplished there are no new findings of PepMV up to now. Nevertheless, one of the companies which was found to be infested last year proved to be infested again in 2003. As the occurrence of symptoms induced by PepMV was observed only rarely in the affected holdings the economic impact is considered to be low. In order to investigate further the possible economic effects of PepMV on tomato yield, a ring test was conducted in 2002, with the participation of Germany, Spain, Netherlands and United Kingdom. The preliminary results of this ring test indicate a moderate effect of this virus on the tomato crop. **Pest status: Present, only in one premise, under protected cultivation. Transient, actionable, under eradication**

Guernsey
All commercial tomato glasshouse crops have been checked in 2003 and there was no evidence of infection. PepMV has never been found on a growing crop in Guernsey. Monitoring of imported fruits for signs of the virus is continuing. Interceptions have been significantly less than last year. Infected fruits are destroyed. **Absent, confirmed by survey.**

Hungary
In 2002, a survey was conducted on tomato in the main area of glasshouse vegetables of the country. ELISA testing of randomly sampled tomato plants gave negative results. This survey was continued in 2003. **The declared pest status in Hungary is the following: PepMV is not listed on the Hungarian quarantine list. PepMV is considered to be absent in Hungary.**

Ireland
PepMV was found at one production site late in 2002. Symptoms were not noticed by the grower who also stated that he had not noticed any drop in yield or quality. The infected plants were disposed of by deep burial, the house disinfected and the house left idle for 3 weeks. **Absent, found once in 2002 at one production site and eliminated.**

Jersey
Not recorded on growing plants in Jersey, but identified on imported tomato fruits from Spain (including Islas Canarias). Consignments with positive identification were destroyed. All imported tomatoes are inspected at port of entry by Plant Health Inspectors. **Absent, no pest record.**

Latvia
Surveys started in 2003 and PepMV was not found. **Absent, no pest record.**

Lithuania
National surveys for the presence of PepMV have been conducted since 2001. In 2001, 180 samples of tomatoes (corresponding to 2.74 ha), 28 samples of capsicum (0.8 ha) and 2 samples of aubergine (0.2 ha) were tested and found free from the virus. In 2002, 685 samples of tomatoes (15.369 ha) and 140 samples of cucumber (1.04 ha) were tested and found free. PepMV was detected in 2002 on tomato plants imported from Spain and the Netherlands. In 2003, surveys continued. So far, PepMV has not been detected neither in national production nor on imported tomatoes. **Absent, confirmed by surveys.**

Malta
Over the past year, a survey for the presence of PepMV covering the whole Maltese archipelago was conducted and results clearly indicated the absence of this virus.
Absent, confirmed by survey.

Netherlands
Results of surveys and research done in the Netherlands are the following:
1. Survey of tomato fruit-producing companies
The survey was conducted at tomato production sites throughout the country. From June to September 2002, tomato crops (leaves and fruits) were inspected for symptoms and samples were collected. When symptoms were present, samples of shoots and, if applicable, fruits were taken from the plant. When no symptoms were found on the crop, leaf samples were taken from 10 plants in the glasshouse. All samples were sent to the Plant Protection Service in Wageningen and tested by ELISA.
For the survey, 101 randomly selected tomato production sites were visited. 35 of these were infested with PepMV. At 7 tomato production sites, symptoms were observed and the presence of PepMV was confirmed by testing. At the other 94 production sites, leaf samples were taken at random and in 28 of these production sites PepMV was detected by testing. The sources of infection remained unclear.
2. Inspection and testing of nurseries
All 27 nurseries of the Netherlands producing tomato plants were visually inspected every 2 weeks by the Naktuinbouw from October 2001 till September 2002. When suspected plants were observed, they were tested by ELISA. In addition, random leaf samples were taken at each nursery every 2 weeks and tested by ELISA. In total, 250 inspections were carried out in these nurseries and 75,000 plant samples were tested by ELISA. No symptoms of PepPV were observed during these inspections. All ELISA tests were negative. No nursery was found infected by PepMV.

3. Research
Research was done on symptom development and yield loss on different tomato cultivars inoculated with different virus isolates in a ring test by different EU Member States. Additional research was done on yield loss caused by PepMV in tomato. Preliminary results of the yield loss experiment in the Netherlands indicate that there is only a small yield loss.
Present, found at a few production sites of tomato fruits, never found in nurseries producing tomato plants for planting.

Norway
PepMV has been found in only one case in tomato production in Norway. This was in March 2001, in a glasshouse producing tomato fruits. Shortly after, eradication measures were carried out, involving destruction of all plant material and growing media, and disinfection of the glasshouses. The outbreak occurred near Stavanger, in the main tomato-producing area in Norway. Surveys were carried out in 19 other tomato production sites in the area, but the virus was not detected. Neither was the source of infection found. The outbreak was considered successfully eradicated in April 2001. PepMV has not been found since this outbreak. **Absent. Found once in 2001 and eradicated.**

Poland
PepMV was found in 2001 at the Research Centre for Cultivar Testing in Slupia Wielka on 2 plants of glasshouse tomato of Dutch cultivar which were subject to variety testing (DUS: distinctness, uniformity, stability). The circumstances of this occurrence may suggest that the source of the contamination was of foreign origin. The phytosanitary measures were taken and the infected plants were removed and destroyed. This was the first and only case of *Pepino mosaic virus* (PepMV) occurrence in Poland. **Absent, found once in 2001 on 2 tomato plants at a research station, eradicated.**

Portugal
A survey programme for PepMV has been implemented since 1999, in the main tomato-producing areas of the country. The programme includes phytosanitary inspection of plant nurseries, and tomato production fields. In the last three years 1.151 samples were taken and 1608 lab tests performed, the results were negative. **Absent, confirmed by survey.**

Slovenia
PepMV was surveyed in protected crops of tomato in 2002. The phytosanitary inspection service inspected 52 glasshouses for visual symptoms and took 18 samples of tomato showing leaf distortion, chlorosis or mosaic. Samples were tested by DAS-ELISA with a commercial antiserum obtained from Plant Research International, Wageningen, NL. All samples were negative. In 2001, similarly 51 tomato plants and some weed species had been tested for the presence of PepPV and found negative. **The declared PepMV status in Slovenia is the following: Absent, confirmed by survey.**

Spain
PepMV has been detected in Spain in 2000. Emergency measures have been adopted in the EU for tomato. According to Commission Decision 2001/536, surveys were carried in Spain. During 2001/2002, 5,070 samples were tested and 377 were found positive. Positive samples had been collected from Andalucía (135 samples from the province of Almería), Galicia (59 samples from the provinces of Coruña, Lugo y Pondevedra), Comunidad Valenciana (35 samples from the provinces of Alicante and Valencia), and Murcia (148 samples) [Not found in Baleares – but no data was given for Islas Canarias]. There is some incidence on the quality of the product. But the general economic impact in Spanish conditions is small. When figures of tomato production are compared before and

after the appearance of the virus, losses are not significant. **Present, found in Andalucía, Galicia, Comunidad Valenciana and Murcia.**

Turkey
PepMV has not been found in Turkey. **Absent, no pest records**.

United Kingdom
There have been three outbreaks in 2003, all in glasshouses producing tomatoes for consumption – one in the north west of England, one in the north-east and one in the south. Different cultivars are infected in each case. All outbreaks are subject to official control measures aimed at containing the outbreak. These measures include strict hygiene precautions and restrictions on marketing of fruit.
The NPPO continues to look for infected fruits in trade and restrict movement of such fruits to ensure that they do not go to tomato production or plant propagation premises. However, limited resources and the strong focus on *Phytophthora ramorum* mean that the level of inspection work on tomatoes is much lower than in previous years.
Research into the risks posed by this disease, including its economic impact, is continuing, with a commercial scale trial due to report late in the year. Whilst the impact on yield appears variable, with little impact on yield reported in some cases, the principal impact seems to be on quality, with a reduction in production of top quality fruit. The UK industry is dependent on production of top-quality tomato fruit and lacks alternative outlets; a reduction in quality therefore has a significant economic impact.
Present, found in 2002 at 3 production sites of tomato fruits (in England: north-west, north-east, south), under official control.

Ukraine
PepMV has never been found in Ukraine. **Absent, no pest record.**

Source: **NPPOs of EPPO member countries**
EPPO Secretariat, 2003-09.

EPPO *Reporting Service*

2003/133 Situation of *Phytophthora ramorum* in EPPO countries

Phytophthora ramorum (EPPO Alert List) causes a lethal disease on oak in North America (sudden oak death). The pathogen is also present in Europe on several species of ornamental shrubs but there is no evidence that European isolates can attack oaks. As more information was needed on its geographical distribution and host plants in Europe, the EPPO Secretariat has sent a questionnaire to all member countries and results were discussed by the EPPO Working Party on Phytosanitary Regulations. The EPPO Secretariat has summarized below the answers received. When countries have stated the pest status, it is indicated in bold. In other cases, the EPPO Secretariat has summarized the pest situation which is in also indicated in bold according to the terms of FAO ISPM no 8.

Algeria
Absent, no pest record.

Belgium
In Belgium, *P. ramorum* was first isolated in late spring of 2002 in the south part of Belgium from imported *Viburnum x bodnantense*. At about the same time it was diagnosed on *Rhododendron* in the north part of Belgium. Since then, several more positive diagnoses have been made on *Rhododendron* and *Viburnum* plants. **Present, found in a few nurseries on *Rhododendron* and *Viburnum,* under official control.**

Denmark
A survey was carried out in 2002 with findings of *P. ramorum* in plants of *Rhododendron* (originating from the Netherlands and Germany) and in *Viburnum* (originating from the Netherlands). Survey will continue in 2003. **Present, found on *Rhododendron* and *Viburnum* originating respectively from the Netherlands and Germany, and from the Netherlands, under official control.**

Estonia
Absent, no pest record.

France
As a result of a national survey carried out over the whole territory, 32 cases of *P. ramorum* were detected in 2002 (out of a total of 292 analyses made). All infected plants were *Rhododendron* and *Viburnum* originating from various nurseries. Official measures are taken. **The declared status of *P. ramorum* in France is: Present, under official control.**

Germany
In 2002, *P. ramorum* was found at 38 locations out of 672 surveyed, only in *Rhododendron* and *Viburnum*. **Pest status: Present, subject to official control.**

Guernsey
P. ramorum is present in a few sites (garden centres, gardens and parks) and subject to an eradication programme. **Present, found on *Rhododendron, Viburnum, Camellia, Leucothoe* and *Arbutus* in a few garden centres and parks, under eradication.**

Hungary
National surveys are being performed in 2003 and so far, *P. ramorum* has not been found in Hungary. **The declared pest status for *P. ramorum is* the following: *P. ramorum* is not listed on the Hungarian quarantine list. The pest is considered to be absent in Hungary.**

Ireland
P. ramorum was found on plants of *Rhododendron* at 6 locations and on plants of *Viburnum* at 3 locations (nurseries and garden centres) in the east of the country since November 2002. Phytosanitary measures are being applied. Present, found in a few nurseries and garden centres on imported *Rhododendron* and *Viburnum*, under official control.

Jersey
Not recorded in Jersey. **Absent, no pest record.**

Latvia
Absent, surveys started in 2003. **Absent, no pest record.**

Lithuania
Surveys and testing for *P. ramorum* will be carried out in 2003. So far, *P. ramorum* has never been found. **Absent, no pest record.**

Malta
P. ramorum has never been recorded. **Absent, no pest record.**

Netherlands
All 1083 nurseries producing plants for planting of *Rhododendron* and/or *Viburnum* were inspected during the 2002 growing season. Infections of *P. ramorum* have been found on 41 nurseries. On these 41 nurseries, infections have been found in 47 lots, 32 lots of *Viburnum bodnantense* 'Dawn', 4 lots of other *Viburnum* spp. (3 lots of *V. farreri* and 1 lot of *V. plicatum*) and 11 lots of *Rhododendron* spp. **Present, found in a few nurseries on *Rhododendron* and *Viburnum*, under official control.**

Norway
P. ramorum has been found on one occasion, on imported *Rhododendron* plants. Symptoms were found in late summer 2002 on a batch of plants imported in spring 2002. Some of the *Rhododendron* plants in the consignments had already been sold; the rest were destroyed. **Present, found only once on imported *Rhododendron* plants, under official control.**

Poland
P. ramorum has been found in one nursery in 2001 on plants of *Rhododendron* sp. imported from Germany which were grown in containers. All plants were destroyed. **Present, found only once on imported Rhododendron plants, under official control.**

Portugal
For *P. ramorum*, a survey programme was initiated in 2002, and so far no positive finds have been made. **Absent, confirmed by survey.**

Slovenia
So far, *P. ramorum* has not been found. An official detection survey for *P. ramorum* is planned for 2003. **The declared status for *Phytophtora ramorum* is: absent, no pest records.**

Spain
P. ramorum was first found in Spain in 2002 on *Rhododendron* plants coming from another EU Member State at a nursery in Mallorca (Baleares). The pathogen has been detected in Galicia on *Camellia* and *Rhododendron*. **Present, found in a few nurseries on *Rhododendron* at Mallorca (Baleares), on *Rhododendron* and *Camellia* in Galicia, under official control.**

Turkey
P. ramorum has not been found in Turkey. **Absent, no pest records.**

United Kingdom
Intensive surveys are being carried out and outbreaks have been found at more that 260 premises in the UK, although at around 50% of these sites the disease is now considered to be eradicated. Most findings have been in rhododendron and viburnum species, with some findings in *Pieris*, *Kalmia* and *Camellia* and single findings in *Syringa* and *Arbutus* [new host records]. Most findings have been in nurseries or garden centres although there is an increasing number of findings in private gardens and estates that are open to the public. Nearly all of these have circumstantial links to nearby plant propagation or sales areas, or to recent plantings of host species found to be infected. Official control measures are being applied. **Present, found mainly in nurseries (with some finding in private or public gardens), essentially on *Rhododendron* and *Viburnum* (but also on *Pieris*, *Kalmia*, *Camellia, Syringa, Arbutus),* under official control.**

Ukraine
P. ramorum has never been found in Ukraine. **Absent, no pest record.**

Source: **NPPOs of EPPO member countries.**
EPPO Secretariat, 2003-09.

2003/134 First reports of *Phytophthora ramorum* mating type A2 in Europe and type A1 in North America

In Europe, *Phytophthora ramorum* (EPPO Alert List) causes twig blight mainly on *Rhododendron, Viburnum* but also on various other ornamental shrubs grown in nurseries, parks and gardens. However, *P. ramorum* has never been observed in forest trees. So far, only mating type A1 had been detected in Europe. In USA (California and Oregon), *P. ramorum* is causing sudden oak death which is a lethal disease of oaks (*Quercus* spp.) and tanoaks (*Lithocarpus densiflorus*). *P. ramorum* has also been detected in a wide range of trees and shrubs. So far, only mating type A2 had been detected in North America. Two reports are now published simultaneously on the first findings of mating type A2 in Europe (isolate collected in Belgium from a *Viburnum bodnantense* nursery plant which had been imported but its origin is not given) and of mating type A1 in North America (isolates collected from nursery plants of *Viburnum* and *Pieris* in northern Oregon).

Source: Werres, S.; De Merlier, D. (2003) First detection of *Phytophthora ramorum* mating type A2 in Europe.
Plant Disease, 87(10), p 1266

Hansen, E.M.; Reeser, P.W.; Sutton, W.; Winton, L.M.; Osterbauer, N. (2003) First report of A1 mating type of *Phytophthora ramorum* in North America.
Plant Disease, 87(10), p 1267

Additional key words: detailed records **Computer codes:** PHYTRA

2003/135 Occurrence of *Phyllonorycter issikii* in trees of *Tilia cordata* in Germany

In September 2002, *Phyllonorycter issikii* (Lepidoptera: Gracillariidae – EPPO Alert list) was detected for the first time in trees of *Tilia cordata* in Germany (Sachsen). The pest was detected at various places during September/October 2002, especially in single young trees in the under-wood of forests. The responsible plant protection service did not take measures as the damage was not considered severe enough, and it was assumed that the infestation was due to natural spread. The pest status of *P. issikii* in Germany is declared as: **Present, only in some areas.**

Source: **NPPO of Germany, 2003-09.**

Additional key words: new record **Computer codes:** PRYCIS, DE

2003/136 Occurrence of *Phyllonorycter issikii* in Estonia

At the EPPO Working Party on Phytosanitary Regulations, the NPPO of Estonia informed the EPPO Secretariat that *Phyllonorycter issikii* (Lepidoptera: Gracillariidae – EPPO Alert list) occurs in Estonia, but that it did not cause serious damage to *Tilia*.

Source: **EPPO Secretariat, 2003-06.**

Additional key words: new record **Computer codes:** PRYCIS, EE

2003/137 Present situation of Coconut cadang-cadang cocadviroid in the Philippines

Coconut cadang-cadang cocadviroid (EPPO A1 list) causes serious economic losses to the coconut industry in the Philippines. Losses of 1.1 million EUR are expected in coconut farms located in the regions of Bicol, Aurora and Quezon (regions and provinces of Luzon island) and Eastern Samar (province of Samar island). It is recalled that the disease occurs in the central-eastern part of the Archipelago and affects approximately 500,000 ha of coconut trees. Coconut cadang-cadang cocadviroid occurs in: Polillo island, Luzon island (parts of the provinces of Aurora, Camarines Sur (area of Bicol), Quezon), Samar island (province of Eastern Samar), Masbate and Homohonhon islands.

Source: ProMed posting of 2003-08-11
Cadang-cadang disease, coconut – Philippines.
http://www.promedmail.org

Additional key words: detailed record **Computer codes:** CCCVD0, PH

2003/138 Occurrence of *Discula destructiva* in Germany

The NPPO of Germany informed the EPPO Secretariat of the occurrence of *Discula destructiva* in Germany (Bayern and Saarland). *D. destructiva* was detected for the first time on *Cornus florida* in Bayern (Stinzing & Lang, 2003). The plants showed necrotic symptoms on leaves and twigs. The plants had been imported privately from the USA in 1989. In June 2003, another occurrence of *D. destructiva* in a *C. nuttallii* plant was detected in a private garden in Saarland. The plant originated from the Netherlands. In both cases, infected plants were destroyed, and no new occurrence was detected in the neighbourhoods. However, according to the authors mentioned above, *Cornus* plants infected with *D. destructiva* have been detected several times in nurseries in various regions of Germany. This could suggest that the disease is more widespread than originally thought. The declared pest status of *D. destructiva* in Germany is: **Present, few outbreaks, to be determined by further monitoring.**

Source: **NPPO of Germany, 2003-09.**
Stinzing, A.; Lang, K.J.(2003) [Dogwood anthracnose. First detection of *Discula destructiva* on *Cornus florida* in Germany.]
Nachrichtenblatt des Deutschen Pflanzenschutdienstes, 55(1), p 1-5.

Additional key words: new record **Computer codes:** DISCDE, DE

2003/139 *Discula destructiva*: addition to the EPPO Alert List

Discula destructiva is causing serious problems in North America on *Cornus* species both in natural environments (including forests) and amenity lands. It has been hypothesized that *D. destructiva* is an introduced exotic species, although its possible area of origin remains unknown. In Europe, this pathogen has been intercepted on imported nursery plants and has been found in Germany (see EPPO RS 2003/138). Although, the host range of *D. destructiva* is apparently limited to American species of *Cornus* (in particular, *C. florida* and *C. nuttallii*) which are not widely grown in Europe, the EPPO Secretariat decided to add it to the EPPO Alert List because it may present a risk to the nursery industry.

Discula destructiva (dogwood anthracnose)

Why	*Discula destructiva* attracted out attention because it was recently found in Germany on *Cornus* species of American origin and is reported to cause serious problems in North America both in forests and amenity parks.
Where	Dogwood anthracnose was first reported in the USA in 1978 on flowering dogwoods (*Cornus florida*) in north-eastern States (New York and Connecticut). It was later realized that similar symptoms had also been observed on *C. nuttallii* on the west coast in 1976. In both cases, the causal agent was identified as *Discula destructiva* in 1991. The disease then spread rapidly and caused serious losses. Genetic studies have revealed a lack of diversity among isolates from both coasts. Considering the rapid spread around points of entry (New York and Seattle) and the severity of the disease, it is supposed that *D. destructiva* is a introduced pathogen. **North America:** Canada (British Columbia, Ontario), USA (Alabama, California, Delaware, Georgia, Idaho, Indiana, Kentucky, Maryland, Massachusetts, New Jersey, New York, North Carolina, Ohio, Oregon, Pennsylvania, South Carolina, Tennessee, Vermont, Virginia, Washington, West Virginia). **EPPO region:** first found in Germany in 2002. Intercepted in 1995 by United Kingdom on imported *C. florida* from USA.
On which plants	*Cornus florida* (flowering dogwood) and *C. nuttallii* (Pacific dogwood). *C. kousa* is reported as relatively resistant. In Europe, the main species present are *C. mas* and *C. sanguinea. C. mas* is considered as resistant and there is no data for *C. sanguinea*.
Damage	Initial symptoms are small leaf spots with purple margin which then develop into large necrotic blotches. In many cases, infected mature leaves die prematurely. Sometimes, they remain attached to the stems after normal leaf fall. Infection expands from leaves to small twigs and then branches. Twig and branch dieback start in the lower crown (hence the original name of the disease 'lower branch dieback'). Numerous epicormic shoots often form at the basis of the trunk or on branches. *D. destructiva* causes cankers which can kill the tree. The fungus can kill trees of all sizes, but is more severe on young seedlings and understory forest dogwoods. In USA, consecutive years of infection have killed high proportions of woodland and ornamental dogwood populations. In 1984, a survey in a national park in Maryland showed that only 3% of dogwoods were free of anthracnose and 33% were dead. In 1988, 89 % trees were dead and all remaining trees were infected. Infection is favoured by cool, wet spring and autumn, but can occur throughout the growing season.
Dissemination	Short distance dispersal of conidia probably occurs via rain splashes and field dispersal by coccinellids (*Hippodamia convergens*) has been observed. Trade of infected plants ensures long distance dispersal.
Pathway	Plants for planting of *C. florida* and *C. nuttallii* from North America. The British interceptions and the findings in Germany demonstrate that this pathway exists.

Possible risks

Control of the disease is difficult, particularly in forests. In parks and gardens, cultural control (adequate watering and fertilization, pruning, removal of fallen leaves) and chemical control can be used. Data on the susceptibility of European *Cornus* species is lacking (in particular on *C. sanguinea* ; *C. mas* appears as broadly resistant). In Europe, the main hosts *C. florida* and *C. nuttalii* are not naturally present in forests, but they are valuable amenity plants for parks and gardens. Therefore, *D. destructiva* could present a risk to the nursery industry.

Source(s)

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EPPO RS 2003/138, 2003/139

Panel review date - Entry date 2003-09

EPPO *Reporting Service*

2003/140 Introduction of *Phoracantha recurva* in the Mediterranean region: addition to the EPPO Alert List

Phoracantha recurva (Coleoptera: Cerambycidae) is a eucalyptus pest originating from Australia, which has recently been introduced into Spain. There are also unconfirmed reports from other Mediterranean countries, as well as fairly recent introduction records in different parts of the world. Considering past experience with a similar species *P. semipunctata* (formerly listed as a quarantine pest), the EPPO Secretariat felt that *P. recurva* should be added to the EPPO Alert List.

Phoracantha recurva (Coleoptera: Cerambycidae)

Why	*Phoracantha recurva*, a eucalyptus pest originating from Australia, has recently been introduced into Europe and other parts of the world. *P. recurva* is very similar to *P. semipunctata* which was previously listed as a quarantine pest.
Where	**EPPO region**: It was first reported in 1998 in Ceuta (Spain) and shortly after it was discovered in Andalucía (Sevilla, Cádiz) and in the province of Madrid. There is also one record of *P. recurva* in Greece (at least one specimen was collected on dying Eucalyptus in Preveza, west of mainland Greece). *P. recurva* is probably also present in Morocco (considering its presence in Ceuta, and the title of a publication from Haddan & Lieutier, 2002). More information is needed on the situation of the pest in Greece and Morocco. **Africa**: Malawi, South Africa, Zambia. **North America:** USA (California). It was first found in California in 1995, where it tends to displace *P. semipunctata*. **South America**: Argentina (first found in 1997), Brazil (in 2001, in the State of São Paulo), Chile (in 1997), Uruguay (in 1998). **Oceania**: Australia, New Zealand, Papua New Guinea.
On which plants	*Eucalyptus* species (e.g. *E. camaldulensis, E. cloeziana, E. citriodora, E. intermedia, E. maculata, E. melliodora, E. nova-anglica, E. ovata*).
Damage	Holes in the bark and stains or oozing liquid on limbs or trunks are common symptoms of infestation by *P. recurva*. The insect is mainly attracted to freshly cut wood, dying limbs, and trees suffering from water stress. Pale yellow eggs are laid in groups, under loose bark of eucalyptus trees. Larvae develops within the trunk and main branches, feeding under the bark and making irregular galleries (up to 1.5 m long). Galleries can girdle the tree which may then die. In some cases, tree death can occur within a few weeks time. Pupation takes place in a pupal chamber. Adults are very similar to *P. semipunctata* (14-30 mm long) but there are differences in elytra colour, hairs and spines on antennae. In *P. recurva*, elytra are mostly yellow. A picture of an adult can be viewed on Internet (http://www.uochb.cas.cz/~natur/cerambyx/phoracrecurva.htm). In California, it is estimated that *P. recurva* has killed approximately 30,000 eucalyptus trees in Los Angeles county.
Dissemination	Adults can fly. Over long distances, trade of infested eucalyptus plants and particularly wood can disseminate the pest. It is suspected that both *P. semipunctata* and *P. recurva* entered South Africa in freshly-cut railway sleepers imported from Australia.
Pathway	Plants for planting, wood of eucalyptus from countries where *P. recurva* occurs.

Possible risks

Eucalyptus are grown for forestry and amenity purposes in the EPPO region, particularly around the Mediterranean Basin (e.g. in Spain, about 400,000 ha are producing 3,600,000 m^3 of wood). Chemical control is not suitable for the management of eucalyptus borers. Control is essentially based on good cultural practices to avoid tree stress and on biological control. The establishment of *P. recurva* in some parts of the EPPO region and its similarity with *P. semipunctata* indicates that it has the potential to establish in most eucalyptus-growing areas in Europe and to cause serious damage. Past experience with *P. semipunctata* also demonstrated that this type of insect is very easily moved unnoticed via wood trade, and that precautions should be taken to prevent any further spread.

Source(s)

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