



ORGANISATION EUROPEENNE
ET MEDITERRANEENNE
POUR LA PROTECTION DES PLANTES

EUROPEAN AND MEDITERRANEAN
PLANT PROTECTION
ORGANIZATION

EPPO

Reporting

Service

Paris, 2003-03-01

Reporting Service 2003, No. 03

CONTENTS

- [2003/034](#) - New data on quarantine pests and pests of the EPPO Alert List
- [2003/035](#) - First report of *Candidatus Liberibacter asiaticus* in Bhutan
- [2003/036](#) - First report of *Xiphinema rivesi* in Slovenia
- [2003/037](#) - News from the Sudden Oak Death Science Symposium (Monterey, US, 2002-12-15/18)
- [2003/038](#) - Status of *Phytophthora ramorum* in Germany (2001/2002)
- [2003/039](#) - Situation of *Phytophthora ramorum* in United Kingdom
- [2003/040](#) - EU emergency measures to avoid introduction and spread of *Phytophthora ramorum*
- [2003/041](#) - News from the 8th International Congress of Plant Pathology
- [2003/042](#) - Details on the situation of Grapevine flavescence dorée phytoplasma in Friuli-Venezia Giulia, Italy
- [2003/043](#) - Isolated finding of *Pepino mosaic potexvirus* in Poland
- [2003/044](#) - Two new quarantine pests of avocado introduced to Israel
- [2003/045](#) - Declared pest status: *Xanthomonas axonopodis* pv. *malvacearum* is absent from Israel
- [2003/046](#) - New variant of *Little cherry closterovirus* found in British Columbia, Canada
- [2003/047](#) - *Cacopsylla picta* (*C. costalis*) is a vector of apple proliferation phytoplasma in Germany
- [2003/048](#) - EPPO report on notifications of non-compliance (detection of regulated pests)



EPPO *Reporting Service*

2003/034 New data on quarantine pests and pests of the EPPO Alert List

By browsing through the literature, the EPPO Secretariat has extracted the following new data concerning quarantine pests and pests included on the EPPO Alert List. The situation of the pest concerned is indicated in bold, using the terms of ISPM no. 8.

- **New geographical records**

Dacus frontalis and *Dacus longistylus* (Diptera: Tephritidae) are both reported for the first time from Libya. *D. frontalis* was observed for the first time in 1992 in Shaabia Marzak farms. It is now commonly present in the south, and is a serious pest of cucurbits. *D. longistylus* was first found in 1996 on *Calotropis procera* near Marzak city (Ramadan Abdallah, 2002). **Present, widespread in the south.**

- **Detailed records**

Diaphorina citri (Homoptera: Psyllidae – EPPO A1 quarantine pest), vector of citrus greening is reported in Texas, US. It was first found in September 2001 on nursery citrus seedlings and on *Murraya* plants (French *et al.*, 2001).

Liriomyza huidobrensis (Diptera: Agromyzidae - EPPO A2 quarantine pest) was first reported in Poland in 1998. Despite compulsory control measures, this pest is now present in many regions of the country on glasshouse crops (Dankowska & Baranowski, 2002).

In Israel, a survey showed that both B and Q biotypes of *Bemisia tabaci* (Homoptera: Aleyrodidae – EPPO A2 quarantine pest) are present. Field populations consist of a mixture of the two biotypes, with a predominance of B biotype (Horowitz *et al.*, 2003).

- **New host plants**

Arceuthobium abietinum f.sp. *concoloris* (EPPO A1 quarantine pest) is reported for the first time on *Tsuga mertensiana*, in Oregon, USA. These trees were growing among severely infected *Abies grandis* (Mathiasen, 2002).

Gibberella circinata (anamorph *Fusarium circinatum* – EPPO Alert List) was observed causing pitch canker on 2 spruce pine trees (*Pinus glabra*) in Alabama (US) in July 2002 (Enebak & Carey, 2003).

Buddleia davidii is reported as a new host plant for *Tomato ringspot nepovirus* (EPPO A2 quarantine pest). Affected plants show bright yellow or light green line pattern symptoms on the leaves (Hughes & Scott, 2003).



EPPO *Reporting Service*

Belamcanda chinensis (blackberry lily, Iridaceae) is reported a new host plant of *Tomato spotted wilt tospovirus* (EPPO A2 quarantine pest) in North America. The virus was observed on this ornamental plant species in Japan some 25 years ago (Adkins *et al.*, 2003).

The weed *Solanum americanum* is reported as a new host plant of *Tomato spotted wilt tospovirus* (EPPO A2 quarantine pest) in Florida, US (University of Florida Pest Alert).

- Source:**
- Adkins, S.; Baker, C.A.; (2003) *Tomato spotted wilt virus* detected in American black nightshade (*Solanum americanum*) in vegetable fields in southeast Florida. **University of Florida Pest Alert (2003-04-07)**. <http://extlab7.entnem.ufl.edu/PestAlert/sa-0408.htm>
 - Adkins, S.; Breman, L.; Baker, C.A.; Wilson, S. (2003) First report of *Tomato spotted wilt virus* in blackberry lily in North America. **Plant Disease**, **87(1)**, p 102.
 - Dankowska, E.G.; Baranowski, T. (2002) Studies on some diagnostic and bioecological characteristics of *Liriomyza huidobrensis* (Blanchard) in Poland. **Journal of Plant Protection Research**, **42(1)**, 11-16.
 - Enebak, S.A.; Carey, W.A. (2003) Pitch canker caused by *Fusarium circinatum* identified on spruce pine in Alabama. **Plant Disease**, **87(4)**, p 449.
 - French, J.V.; Kahlke, C.J.; da Graça, V. (2001) First record of the Asian Citrus Psylla *Diaphorina citri* Kuwayama (Homoptera: Psyllidae), in Texas. **Subtropical Plant Science**, **53**, 14-15. (also on Internet <http://primera.tamu.edu/kcchome/pubs/citrus%20psyllid.htm>)
 - Horowitz, A.R.; Denholm, I.; Gorman, K.; Cenis, J.L.; Kontsedalov, S.; Ishaaya, I. (2003) Biotype Q of *Bemisia tabaci* identified in Israel. **Phytoparasitica**, **31(1)**, 94-98.
 - Hughes, P.L.; Scott, S.W. (2003) First report of *Tomato ringspot virus* in butterfly bush (*Buddleia davidii*). **Plant Disease**, **87(1)**, p 102.
 - Mathiasen, R. (2002) First report of white fir dwarf mistletoe on mountain hemlock. **Plant Disease**, **86(11)**, p 1274.
 - Ramadan Abdallah, A. (2002) The first record of *Dacus frontalis* (Becker) and *Dacus longistylus* (Wiedemann) in Libya. **Arab and Near East Plant Protection Newsletter**, **34**, p 29-30.

Additional key words: new record, detailed record,
new host plant

Computer codes: AREAB, BEMITA, DACUSP,
DIAPCI, GIBBCI, LIRIHU, TORSV0, TSWV00, IL,
LY, PL, US



EPPO *Reporting Service*

2003/035 First report of *Candidatus Liberibacter asiaticus* in Bhutan

Mandarin (*Citrus reticulata*) is an important crop in Bhutan with approximately 1.8 million trees. Since the mid-1990s, symptoms of decline have been observed in the Punakha Valley and Wangdue districts (sparse yellow foliage, shoot die-back). Considering symptomatology and presence of *Diaphorina citri* (Homoptera: Psyllidae – EPPO A1 quarantine pest), the occurrence of citrus greening was suspected. In summer 2002, surveys were carried out in the Punakha Valley and Wandue districts. Symptoms were observed in most mandarin orchards (at altitudes ranging from 700 to 1450 m), and were most severe near Punakha (centre of the valley). They were also observed on *Citrus aurantifolia*, *C. medica* and tangelos. PCR tests revealed the presence of *Candidatus Liberibacter asiaticus*. It is suspected that the disease was introduced via infected planting material (although the source could not be identified) and that natural spread is occurring as *D. citri* is present. This is the first report of *Candidatus Liberibacter asiaticus* in Bhutan.

The situation of *Candidatus Liberibacter asiaticus* in Bhutan can be described as follows:
Present, found in Punakha Valley and Wangdue districts.

Notes

- 1) The EPPO Secretariat had previously no information on the presence of *Diaphorina citri* in Bhutan.
- 2) Citrus greening disease has two forms in Asia and Africa which were respectively characterized as *Candidatus Liberobacter asiaticum* and *Candidatus Liberobacter africanum*. The names of the two bacterial species have corrected as follows *Candidatus Liberibacter asiaticus* and *Candidatus Liberibacter africanus*.

Source: Ahlawat, Y.S.; Baranwal, V.K.; Thinlay, Doe Doe, Majumder, S. (2003) First report of citrus greening disease and associated bacterium ‘*Candidatus Liberibacter asiaticus*’ from Bhutan.

Plant Disease, 87(4), p 448.

Doe Doe, Namgay Om, Chencho Dorji, Thinlay, Garnier, M.; Jagoueix-Eveillard, S.; Bové, J.M. (2003) First report of ‘*Candidatus Liberibacter asiaticus*’, the agent of citrus Huanglongbing (ex-greening) in Bhutan.

Plant Disease, 87(4), p 448.

Additional key words: new record

Computer codes: LIBEAS, BT



EPPO *Reporting Service*

2003/036 First report of *Xiphinema rivesi* in Slovenia

Xiphinema rivesi (EPPO A2 quarantine pest) is a member of the *X. americanum* group, and is able to transmit at least four North American nepoviruses (Cherry rasp leaf, Tobacco ringspot, Tomato ringspot and Peach rosette mosaic nepoviruses). So far, its presence had been reported in Europe only from a few limited sites in France, Germany, Portugal and Spain. In spring 2002, *X. rivesi* was detected in soil samples taken near roots of peach trees, in an orchard at Bilje, near Nova Gorica, Slovenia. Resampling in June and September on the same site and its immediate vicinity confirmed the presence of the nematode in relatively high numbers (5 per 100 mL of soil). The identity of the nematode was confirmed by the Dutch NPPO in Wageningen. The origin of this infestation is unknown. As the nematode was found near the river Vipava, in an area of extensive stone and pome fruit production, it is thought that *X. rivesi* might also be present in other orchards in this region. This is the first report of *X. rivesi* in Slovenia.

The situation of *Xiphinema rivesi* in Slovenia can be described as follows: **Present, found in a limited area near Nova Gorica.**

Source: Urek, G.; Širca, S.; Kox, L.; Karssen, G. (2003) First report of the dagger nematode *Xiphinema rivesi*, a member of the *X. americanum* group, from Slovenia.
Plant Disease, 87(1), p 100.

Additional key words: new records

Computer codes: XIPHRI, SI

2003/037 News from the Sudden Oak Death Science Symposium (Monterey, US, 2002-12-15/18)

Last December, a symposium on Sudden Oak Death took place in Monterey, US, to present the state of art on this disease. Abstracts and posters presented are available on Internet and the EPPO Secretariat has tried to select new information among the vast amount of data presented:

Situation in USA

California

Sudden Oak Death occurs in 12 counties from Humboldt to Monterey, and is particularly severe in Marin, Santa Cruz and Monterey counties. It seems that the disease continues its progression, but it is not known whether the rate of spread is increasing or decreasing. For example, a study done in 2 plots in Marin county from 2000 to 2002, showed that the number of symptomatic trees and of dead trees has increased. In California, the Lauraceous plant *Umbellularia californica* (California bay laurel) is believed to play an important role in



EPPO *Reporting Service*

spreading the disease (as *P. ramorum* sporulates abundantly on it). In many sites, insects such as bark and ambrosia beetles are consistently associated with symptomatic trees. Studies showed that *P. ramorum* could be found in water streams crossing infected zones during rainy periods (winter/spring). It could also be retrieved from hiking trails and shoes during rainy periods but not during the dry summer period.

Oregon

Sudden oak death was discovered in July 2001, near Brookings (Curry county), killing *Lithocarpus densiflorus* (Fagaceae). Die-back was also observed on wild *Rhododendron pacificum* and *Vaccinium ovatum*. In contrast to the situation in California, *Umbellularia californica* was rarely infected by *P. ramorum*. Eradication measures are being applied in Oregon (destruction of infected plants). Ongoing surveys have showed that the disease is limited to an area of 23 km² of forests, and that it does not occur in nurseries, plantations or botanical gardens. In 2002, it was found at 10 new sites, but these remained small and close to previous ones.

Concerns are expressed by other States in America which are free from the disease and measures are being taken to avoid introduction. It is felt that movement of nursery plants (*Rhododendron*, *Vaccinium ovatum*), and of *Pseudotsuga menziesii* (grown in Christmas tree farms) could represent risky pathways.

Situation in some European countries

Situation in the Netherlands

Since 1993, a *Phytophthora* has been found associated with twig blight in *Rhododendron*, and sporadically on *Viburnum*. In 2001, it was identified as *P. ramorum*. From 1993 to 2000, 18 samples of *Rhododendron* (15 locations in nurseries and public gardens) and 1 sample of *Viburnum* were found infected. Surveys continued in 2001 and 214 sites with *Rhododendron* and *Viburnum* were inspected. As a result, 11 positive cases were found in nurseries and garden centres (out of 78 inspected) and 7 in public or private gardens (out of 136). Inspections were also carried out on the 15 locations where *P. ramorum* had previously been found. On 5 of them, no more host plants were grown. Infections were found at one nursery (out of 2), and at 3 public and private gardens (out of 8). No symptoms were ever seen on nearby *Quercus*, *Fagus* or *Castanea* trees. In the Netherlands, *P. ramorum* was only found on *Rhododendron* (particularly *R. ponticum* and *R. x catawbiense*) and on *V. x bodnantense*. No spread to other nursery plants was observed. Eradication measures were taken in nurseries: all infected plants (and neighbours within a radius of 1 m) were destroyed, remaining plants were treated and re-inspected within the following 3 months, where infection was found it was then prohibited to grow host plants for 3 years. Control measures were applied in public and private gardens: infected plant parts were pruned and destroyed, fallen leaves removed, and wound treatments were applied. In 2002/2003, inspections will be carried out on all 700



EPPO *Reporting Service*

nurseries growing *Rhododendron/Viburnum* with special attention given to nearby *Quercus*, and to 2000 locations on *Rhododendron* in public or private gardens.

First findings in France

In April 2002, symptoms caused by *P. ramorum* were observed in several garden centres on *Rhododendron*. Affected plants showed brown spots on the leaves, bud and twig necrosis. In 2002, a national survey was carried out in nurseries. About 300 samples were tested (isolation on selective medium, morphological characterization). *P. ramorum* was detected in 68 samples (63 from *Rhododendron* and 5 from *Viburnum*) originating from various locations in France. This is the first report of *P. ramorum* in France.

EU measures

Since November 2002, emergency measures have been taken by EU Member States to avoid introduction and spread of *P. ramorum* (see EPPO RS 2003/040).

Comparison of European and American populations of *P. ramorum*

The phytosanitary situations observed in Europe and USA are clearly very different. In California and Oregon, tree death is observed on North American oak species and symptoms are found on several understory plants. More information is needed on the situation in nurseries. In Europe, the disease has never been seen on oak trees or other Fagaceae, but *P. ramorum* is isolated from a few nursery plants (*Rhododendron*, *Viburnum*, and more recently on a few other species, see below). Many comparative studies are being conducted to try to understand why the situations are so different. Genetic studies have shown that USA and European populations belong to the same species *P. ramorum*. But, they are of different mating types (A2 in USA, A1 in Europe) and all attempts to cross European and American isolates have been unsuccessful. In addition, each population appears genetically rather homogeneous. Therefore, it is hypothesized that the pathogen was separately introduced into these two regions from a third area which remains unknown. Preliminary studies have also been initiated to compare the pathogenicity of European and American populations, but it is premature to give any conclusion.

Host plants

8 plant species have been reported as new host plants of *P. ramorum* (most of them in USA).

Quercus chrysolepis (canyon live oak) - Fagaceae

Toxicodendron diversilobatum (poison oak) - Anacardiaceae

Rubus spectabilis (salmonberry) - Rosaceae

Rhamnus purshiana (cascara) - Rhamnaceae

Corylus cornuta (California hazelnut) - Corylaceae

Pittosporum undulatum (Victorian box) - Pittosporaceae

Pieris (found in UK, since this Symposium, *P. ramorum* has been found in UK on other ornamental shrubs see EPPO RS 2003/039) - Ericaceae



EPPO *Reporting Service*

Trientalis latifolia (Western starflower) – Primulaceae, first herbaceous species confirmed as a host

Inoculation tests in the laboratory showed that a very wide range of nursery plants, European and Mediterranean shrubs or tree species are susceptible to *P. ramorum*, but this data is difficult to extrapolate in field conditions.

Detection methods

Several papers and posters were presented on assays to detect *P. ramorum* specifically in plant tissues (PCR tests, AFLP, isozyme profiles, gene sequences etc.).

Control methods

Chemical treatments against *P. ramorum* are being studied (e.g. tree injections, control of insects associated with sudden oak death), but they will probably be difficult to apply in natural environments. Studies were also done on washing techniques for vehicles to limit the spread of the disease in infected areas, and also on the efficacy of composting for the disposal of infected green waste.

Scientific discussions will soon continue on Internet, as an on-line Conference 'Sudden oak death – how concerned should you be ?' will take place from the 21st of April to the 4th of May 2003: <http://sod.apsnet.org/default.htm>

Source: Abstracts of papers and posters presented at the Sudden Oak Death Science Symposium – The state of our knowledge (Monterey, US, 2002-12-15/18)
<http://danr.ucop.edu/ihrmp/sodsymposium.html>

McCreary, D. (2002) Symposium Summary.
<http://danr.ucop.edu/ihrmp/sodsymp/summary.html>

Additional key words: new record, detailed record,
new host plants, epidemiology

Computer codes: PHYTRA, US, FR, NL



EPPO *Reporting Service*

2003/038 Status of *Phytophthora ramorum* in Germany (2001/2002)

In 2001, a survey on the occurrence of *Phytophthora ramorum* (EPPO Alert List) was carried out in several regions in Germany. The survey comprised a total of approximately 230 locations, mainly nurseries, and was performed from August to December. *P. ramorum* was detected in 11 samples of *Rhododendron* spp. and in 9 samples of *Viburnum* spp. out of a total of 53 suspect samples.

In 2002, a survey for *P. ramorum* was again carried out from July to the end of October. Companies (nurseries, garden centres, trade companies), and to a lesser extent, public parks and private gardens were inspected, focussing mainly on *Rhododendron* and *Viburnum*. Infected plants were found at 38 locations out of 672 places included in the survey. 36 cases were detected in companies (624 inspected), and 2 cases were detected in private gardens (10 inspected). *P. ramorum* was only detected in *Rhododendron* and *Viburnum*. In some areas, naturally growing oak trees near the infected companies were inspected with negative results. Since 2002-11-01, Commission Decision 2002/757 on provisional emergency phytosanitary measures to prevent the introduction into and the spread within the Community of *Phytophthora ramorum* has been applied.

Source: **NPPO of Germany, 2003-03**

Additional key words: detailed record

Computer codes: PHYTRA, DE



EPPO *Reporting Service*

2003/039 Situation of *Phytophthora ramorum* in United Kingdom

As now required by Commission Decision 2002/757, surveys are being conducted in all EU member states on *Phytophthora ramorum* (EPPO Alert List). So far, in United Kingdom, the presence of *P. ramorum* has been found at 196 sites in England, Wales, Scotland and Guernsey. A map of the 2002/2003 findings can be viewed on Internet (<http://www.defra.gov.uk/planth/graphics/sod.gif>). The majority of findings were made on *Rhododendron* and *Viburnum*, but recently the pathogen was observed on *Pieris formosa* var. *forrestii*, *P. japonica*, *Camellia japonica* and *Kalmia latifolia* which can be considered as new natural host plants. It is stressed that during these surveys, *P. ramorum* has never been found on oaks or any other trees. Eradication measures will continue in United Kingdom.

A Summary Pest Risk Analysis made by CSL is available on Internet (<http://www.defra.gov.uk/planth/pr.htm>) and provides much detailed information on *P. ramorum*.

Source: **DEFRA Web site (Plant & Seeds, Plant Health News)**
<http://www.defra.gov.uk/planth/what.htm>.

Additional key words: detailed record, new host plants

Computer codes: PHYTRA, GB, GS



EPPO *Reporting Service*

2003/040 EU emergency measures to avoid introduction and spread of *Phytophthora ramorum*

Since November 2002, emergency measures have been taken by the EU Member States to avoid introduction and spread of *Phytophthora ramorum* (EPPO Alert List).

- All Member States must carry surveys for the presence of *P. ramorum*.
- Within the EU: plant passports are required for the movement of plants and cut foliage of *Viburnum* and *Rhododendron* (except *R. simsii*) and the following requirements must be met:
 - Host plants should come from areas free from the disease, or no signs of *P. ramorum* must have been observed since the beginning of the last complete cycle of vegetation (inspections, including appropriate testing if necessary).
 - In cases where infections are found, plants can be moved only if the following conditions are fulfilled: all infected plants must be destroyed (as well as susceptible hosts within a radius of 2 m), additional inspections must be carried out twice within the following 3 months on all susceptible plants (within a radius of 10 m from the original findings) and these plants must be found free. All other susceptible plants at the place of production must be subject to intensive re-inspection and found free.
- For imports from USA: susceptible plants (*Acer macrophyllum*, *Aesculus californica*, *Arbutus menziesii*, *Arctostaphylos*, *Heteromeles arbutifolia*, *Lithocarpus densiflorus*, *Lonicera hispidula*, *Quercus* spp., *Rhamnus californica*, *Rhododendron* spp. (except *R. simsii*), *Umbellularia californica*, *Vaccinium ovatum*, *Viburnum* spp.) must originate from a pest-free area or from a place of production inspected and found free from *P. ramorum*.
Susceptible wood (*Acer macrophyllum*, *Aesculus californica*, *Lithocarpus densiflorus*, *Quercus*) must originate from a pest-free area or must have been debarked and treated (squared so as to remove completely the rounded surface, or water content is < 20%, or disinfected by a heat treatment). Sawn wood must have been kiln-dried.

Source: Commission Decision (2002/757/EC) of 19 September 2002 on provisional emergency phytosanitary measures to prevent the introduction into and the spread within the Community of *Phytophthora ramorum* Werres, De Cock & Man in 't Veld sp. nov.
Official Journal of the European Communities, 2002-09-20, L. 252, 3739.

Additional key words: phytosanitary measures

Computer codes: PHYTRA



EPPO *Reporting Service*

2003/041 News from the 8th International Congress of Plant Pathology

The 8th International Congress of Plant Pathology took place on the 2003-02-02/07, at Christchurch, New Zealand, where a very large number of presentations were made. The EPPO Secretariat has extracted the following information.

New records

In Iran, samples of ornamental and other crops were tested in 2000 for the presence of 5 tospoviruses: *Tomato spotted wilt tospovirus* (TSWV – EPPO A2 quarantine pest), *Tomato chlorotic spot tospovirus* (TCSV), *Impatiens necrotic spot tospovirus* (INSV – EPPO A2 quarantine pest), *Iris yellow spot tospovirus* (IYSV – EPPO Alert List), and a newly observed virus tentatively named *Tomato Varamin tospovirus* (ToVV). ToVV, TSWV and INSV were frequently detected from ornamentals. ToVV and TSWV were found in potato, tomato and soybeans; TCSV and ToVV in *Alstoemeria*; IYSV and ToVV in one sample of *Cycas*. The EPPO Secretariat had no data on the occurrence of IYSV in Iran (Shahraeen & Ghotbi, 2003).

Chrysanthemum stem necrosis tospovirus (EPPO Alert List) is reported for the first time from Slovenia. It was detected on chrysanthemum (Ravnikar *et al.*, 2003).

The strain of *Parietaria mottle ilarvirus* which infects tomato was detected in Spain in 2001 (Aramburu & Ariño, 2003). Since then, the virus has spread especially in outdoor tomato crops in the province of Barcelona. This virus had already been observed in France and Italy on tomato crops (see EPPO RS 2000/081).

Xanthomonas arboricola pv. *corylina* (EPPO A2 quarantine pest) is reported for the first time in New Zealand (Braithwaite & Eade, 2003).

Detailed records

In Australia, *Mycosphaerella fijiensis* (Black Sigatoka) is considered as a major threat to banana production. Since 1981, 8 incursions have been recorded in the Cape York area, Queensland. All outbreaks were eradicated by destruction of infected plants and use of resistant cultivars. In April 2001, the most serious incursion was observed at Tully (commercial production area). Molecular diagnostic techniques (PCR) are being developed to survey the disease and detect all future incursions (Henderson *et al.*, 2003).

In New Zealand, *Potato spindle tuber pospiviroid* (PSTVd - EPPO A2 quarantine pest) was detected in 3 commercial tomato glasshouses in the Auckland region (north Island) and at 1 site in Nelson (South Island) in May 2000 (see EPPO RS 2001/061). In April-June 2002, further surveys were carried out. 59 tomato and 41 capsicum glasshouses were inspected and random samples were collected. PSTVd was not found in tomato glasshouses (except in one



EPPO *Reporting Service*

already found in 2000) but was detected in 3 cultivars of capsicum growing in Warkworth (north of Auckland). This is the first report of PSTVd on capsicum (Lebas *et al.*, 2003).

Lime witches' broom, caused by *Candidatus Phytoplasma aurantifoliae* (EU Annexes) was first observed in Oman in the mid 1970s. The disease has now spread to almost 100% of the lime producing areas of the country. The disease has also recently spread to neighbouring countries including United Arab Emirates, Iran and India. Control methods including rotation, adequate nutrition, tree injections, use of resistant rootstocks are envisaged (Al Busaidi *et al.*, 2003).

Biology, epidemiology, detection

A PCR-based molecular diagnostic technique is being developed in New Zealand to enable rapid detection of fungal mycelium of *Endocronartium harknessii* (EPPO A1 quarantine pest) within non-sporulating galls (Ramsfield, 2003).

Lime witches' broom (*Candidatus Phytoplasma aurantifoliae* – EU Annexes) is graft-transmissible and insect vectors are suspected. In earlier studies, seed transmission had been suggested. Preliminary results of ongoing studies are also in favour of seed transmission (Khan *et al.*, 2003).

In 2001, a series of inoculation tests on fresh cut logs was initiated in UK to assess the risk presented by *Phytophthora ramorum* (EPPO Alert List) to European oaks and other trees and to compare European/US fungal populations. Preliminary results showed that bark of *Quercus robur* (European) may be more resistant than that of *Q. rubra* (American), and that bark of *Castanea sativa* was more resistant, but that bark of *Fagus sativa* was more susceptible (both European). On average, it appears that European and American isolates of *P. ramorum* differ in aggressiveness on both *Q. rubra* and *Q. robur* (Brasier *et al.*, 2003)

A PCR assay has been developed to detect *Puccinia psidii* (EPPO Alert List). The rust could be detected in eucalyptus seeds and pollen. In the laboratory, PCR-positive pollen material incited typical rust symptoms on young eucalyptus leaves. The fungus was also detected from washings from surfaces of footwear, wristwatches, spectacles, camera bags and non-porous clothing items of personnel following visits to infected plantation sites. Contaminated pollen, seed and personal items could ensure long distance dissemination of the fungus (Langrell *et al.*, 2003).

European wheat cultivars (15 winter, 15 spring and 11 durum) were tested in the laboratory for their susceptibility to *Tilletia indica* (EPPO A1 quarantine pest). Results showed that European wheat cultivars are as susceptible to *T. indica* as cultivars planted in countries where the disease occurs, thus indicating their potential to support establishment of the pathogen if introduced into Europe (Porta-Puglia *et al.*, 2003).



EPPO *Reporting Service*

New pests and new possible risks

In Vietnam (Lam Dong province), pine wilt symptoms and dead *Pinus kesiya* trees have been found in several locations and associated with a *Bursaphelenchus* species. A systematic survey was carried out. Disease incidence in 4 locations in Lam Dong province varied from 36% to 48%, and 38 symptomatic trees from these stands were sampled for the presence of the nematode. All were positive. The rate of pine mortality increased annually. Nematodes extracted from wood samples were identified as *Bursaphelenchus* sp. The species found in Vietnam is morphologically distinct from *B. xylophilus* (EPPO A1 quarantine pest) but shares the same vector *Monochamus alternatus*. Artificial inoculation of three-year old *P. kesiya* demonstrated the pathogenicity of this *Bursaphelenchus* species (Thu, 2003).

In Australia, a new tospovirus tentatively called *Capsicum chlorosis tospovirus* was found. It was first detected in 1999 and has been observed in all capsicum production areas in Queensland (except of high altitude summer-production area). The percentage of infected plants is commonly 1 to 5 %, but could reach up to 40% with unmarketable fruits. This virus is serologically related to *Watermelon silver mottle tospovirus* (Persley *et al.* 2003).

Citrus sudden death is a new disease of unknown aetiology which affects sweet orange grafted on Rangpur lime in Brazil. Spatial and temporal analyses of the disease suggest that a pathogen is associated with it, and that it might be a virus vectored by insects such as aphids (Bassanezi *et al.*, 2003).

Cylindrocladium buxicola is a newly described fungus which causes leaf and twig blight on *Buxus* species. It is widespread in the UK and has also been detected in other countries of Western Europe and New Zealand (Henricot, 2003)

In Japan, a new bacterial disease of strawberry was observed in Tochigi and Fukushima Prefectures (Honshu) in 2000. Symptoms appear as tiny white rusty spots on the underside of the leaves. They enlarged to form angular brown white spots, then becoming reddish brown. Lesions are not water-soaked. A bacterium was consistently isolated from diseased plants and tentatively identified as a new and distinct *Herbaspirillum* species. So far, *Herbaspirillum* species had only been found on Poaceae (Takikawa *et al.*, 2003)

As reported in EPPO RS 2002/174, mango decline is causing serious losses in Oman. Al Adawi *et al.* (2003) proposed different explanations on the possible causes of this new devastating disease. Two fungi were isolated and both fulfilled Koch's postulates when healthy trees were artificially inoculated: *Botryodiplodia theobromae* and *Ceratocystis fimbriata*. Damage caused by a bark beetle (*Cryphalus scabrecollis*, Coleoptera: Scolytidae) was usually associated with the disease, and *B. theobromae* was isolated from this insect.



EPPO Reporting Service

Pantoea ananatis has several host plants including pineapples, melons, sudangrass, sugarcane, maize and onions. It was recently found on *Eucalyptus* causing bacterial blight and die-back, and serious losses to the forest industry in South Africa. It is widespread in South Africa in all areas where eucalypts are planted commercially. It has recently been found in Uganda. Seed transmission is known in certain hosts (onions and sudangrass) and is suspected in eucalyptus. The authors felt that *P. ananatis* should be considered as a quarantine pest (Coutinho *et al.*, 2003).

Source: Abstracts of papers presented at the 8th International Congress of Plant Pathology, Christchurch, New Zealand (2003-02-02/07).

- Al Adawi, A.; Deadman, M.; Khan, A.; Al Rawahi, A.; Al Maqbali, Y. (2003) Mango decline in Oman: a devastating new disease in the Sultanate (abst. 19.7)
- Al Busaidi, R.; El Mardi, M.; Khan, I.; Al Maqbali, Y.; Deadman, M. (2003) Management of witches' broom disease of lime in the Sultanate of Oman (abst. 21.1)
- Aramburu, J.; Ariño, J. (2003) Epidemiological aspects of a tomato strain of parietaria mottle virus (PMoV-T) present in Spain (abst. 23.35).
- Bassanezi, R.B.; Bergamin Fihlo, A.; Amorim, L.; Gimenes-Fernandes, N.; Gottwald, T.R. (2003) Spacial and temporal analyses of citrus sudden death as a tool to elucidate its etiology (abst. 8.63).
- Brasier, C.; Rose, J.; Kirk, S.; Webber, J. (2003) Pathogenicity of *Phytophthora ramorum* isolates from USA and Europe to bark of European forest trees (abst. 11.23).
- Braithwaite, M.; Eade, K. (2003) Identification of *Xanthomonas arboricola* pv. *corylina* on hazel nut in New Zealand (abst. 7.52).
- Coutinho, T.A.; Venter, S.N.; Mergaert, J.; Sings, J.; Wingfield, M.J. (2003) Is *Pantoea ananatis* a high risk, quarantine pathogen ? (abst. 5.1).
- Henderson, J.; Porchun, S.; Pattermore, J.; Grice, K.; Peterson, R. (2003) Molecular diagnosis of Sigatoka leaf spot disease in Australian banana crops. (abst. 7.7).
- Henricot, B. (2003) *Cylindrocladium buxicola*, a new fungal species causing blight on *Buxus* spp. and its phylogenetic status (abst. 19.21).
- Khan, I.A.; Lee, R.F.; Hartung, J. (2003) Confirming seed transmission of witches' broom disease of lime (abst. 21.2).
- Langrell, S.R.H.; Tommerup, I.C.; Zauza, E.A.V.; Alfenas, A.C. (2003) PCR based detection of *Puccinia psidii* from contaminated *Eucalyptus* germplasm-implications for global biosecurity and safeguarding commercial resources (abst. 5.3).
- Lebas, B.S.M.; Elliott, D.R.; Ochoa-Corona, F.M.; Tang, J.; Alexander, B.J.R. (2003) Delimiting survey for Potato spindle tuber viroid on tomato and capsicum in New Zealand greenhouses (abst. 19.43).
- Persley, D.; Sharman, M.; McMichael, L.; Thomas, T. (2003) Tospoviruses infecting capsicums and tomatoes in Australia (abst. 23.13).
- Porta-Puglia, A.; Inman, A.; Riccioni, L.; Valvassori, M.; Hughes, K.; Bowyer, R.; Barnes, A.; Magnus, H.; Peterson, G. (2003) Physiological susceptibility of European wheat cultivars to infection and development of Karnal bunt. (abst. 5.11).
- Ramsfield, T.D. (2003) Molecular detection of *Endocronartium harknessii* (abst. 7.79).
- Ravnikar, M.; Vozelj, N.; Mavric, S.D.; Zupancic, M.; Petrovic, N. (2003) Detection of *Chrysanthemum stem necrosis virus* and *Tomato spotted wilt tospovirus* in chrysanthemum (abst. 23.21).
- Shahraeen, N.; Ghotbi, T. (2003) Natural occurrence of different Tospovirus species infecting ornamentals and other agricultural crops in Iran (abst. 23.26).
- Takikawa, Y.; Kusumoto, S.; Tairako, K.; Kijima, T. (2003) *Herbaspirillum* sp. causing brown spot on strawberry leaves (abst. 2.17).



EPPO *Reporting Service*

Thu, P.Q. (2003) The status of pine wilt nematode in Vietnam (abst. 11.27).

Additional key words: new records, detailed records,
new pests, biology, epidemiology

Computer codes: BURSSP, CSNV00, ENDCHA,
ERWIAN, INSV00, IYSV00, MYCOFI, NEOVIN,
PHYPAF, PHYTRA, PSTVD0, PUCCPS, TCSV00,
ToVV0, TSWV00, XANTCY, AU, BR, BR, IR, NZ,
OM, SI, VN, ZA.

2003/042 Details on the situation of Grapevine flavescence dorée phytoplasma in Friuli-Venezia Giulia, Italy

In the region of Friuli-Venezia Giulia, the presence of grapevine yellows has been observed since the 1980s. Bois noir phytoplasma (i.e. stolbur) occurs in this region and in 1996, the presence of Grapevine flavescence dorée phytoplasma (EPPO A2 quarantine pest) was confirmed in the Province of Pordenone, at the border of a larger focus located near Valdobbiadene in the Veneto region. As both the extent and incidence of flavescence dorée was low, eradication was considered to be feasible. Eradication measures include compulsory control of the vector *Scaphoideus titanus* and systematic destruction of all diseased grapevines (with compensation for the growers). In spring 2000, the disease was not observed in the Provinces of Gorizia, Trieste and Udine. Flavescence dorée was only found in some parts of the Province of Pordenone (Caneva, Sacile, Fontanafredda, Porcia, Brugnera, Prata di Pordenone). In 2001, the disease was found in a few new localities in the Province of Pordenone (Pasiano di Pordenone, Roveredo in Piano). However, its incidence in 2001 was lower than in 2000. Eradication measures and surveys will continue in this region.

Source: Frausin, C. (2002) Resoconto di due anni di attività per l'eradicazione della Flavescenza dorata della vite dal Friuli.
Notizario ERSA, no. 3, 35-42

Additional key words: detailed record

Computer codes: PHYP64, IT



EPPO *Reporting Service*

2003/043 Isolated finding of *Pepino mosaic potexvirus* in Poland

In 2001, *Pepino mosaic potexvirus* (EPPO Alert List) was observed in Poland. It was found at the Research Centre for Cultivar Testing in Slupia Wielka on 2 tomato plants grown under glasshouse. These plants belonged to a Dutch cultivar subject to variety testing (distinctness, uniformity, stability). It is suggested that the source of infection was of foreign origin. Phytosanitary measures were taken and the infected plants were destroyed. This finding was the first and only case of *Pepino mosaic potexvirus* in Poland.

The situation of *Pepino mosaic potexvirus* in Poland can be described as follows: **Absent, found once on 2 glasshouse tomato plants in 2001, eradicated.**

Source: Pospieszny, H.; Borodynko, N. (2002) *Pepino mosaic virus*.
Progress in Plant Protection, 42(1), 83-87.

NPPO of Poland, 2003-03.

Additional key words: phytosanitary incident

Computer codes: PEPMV0, PL

2003/044 Two new quarantine pests of avocado introduced to Israel

The NPPO of Israel (PPIS) hereby informs the EPPO Secretariat of the presence of two new arthropod pests of avocado (*Persea americana*) in the Western Galilee (north of the country). In October 2001, the perseia mite *Oligonychus perseae* Tuttle, Baker & Abbatiello (Acari: Tetranychidae) together with the red-banded whitefly *Tetraleurodes perseae* Nakahara (Homoptera: Aleyrodidae) were found in several avocado groves. These pests, known to cause damage on avocado in California where they apparently originated from Mexico, were most likely introduced to Israel simultaneously on contraband avocado budwood from an unknown source. Upon discovery of the pests, PPIS delimited the area of infestation and, by government Order, restricted movement of avocado plant material from the regulated area, contingent upon official inspection and treatment. The status of both pests in Israel can be described as: **Quarantine pests: distribution limited (to one region) and subject to official control.**

Source: **NPPO of Israel, 2003-03.**
Swirski E, Wysoki M & Izhar Y, 2002. Subtropical Fruits Pests in Israel, Fruit Board of Israel, 284 pp.

Additional key words: new record

Computer codes: OLIGSP, TETLSP, IL



EPPO *Reporting Service*

2003/045 Declared pest status: *Xanthomonas axonopodis* pv. *malvacearum* is absent from Israel

Following a query by Peru, the NPPO of Israel (PPIS) investigated the reported presence of *Xanthomonas axonopodis* pv. *malvacearum* (Smith) Vauterin *et al.* and found that it was based entirely on an abstract in the Review of Applied Mycology from 1962. The bacterium was found in Israel in 1961 on cotton (*Gossypium hirsutum*) plants growing in one commercial and a nearby experimental plot located in the Central Coastal Plain, most likely introduced via imported seed. Eradication was undertaken, and the infected plots were destroyed. Since that time, there exist no other records of disease occurrence. Surveillance confirms continued absence. Furthermore, *Xanthomonas axonopodis* pv. *malvacearum* appears on Israel's official list of quarantine pests annexed to the Plant Import Regulations. The status of *Xanthomonas axonopodis* pv. *malvacearum* can be summarized as "**Absent: pest eradicated.**"

Source: **NPPO of Israel, 2003-03.**
CABI Crop Protection Compendium, Wallingford, UK 2002
EPPO PQR 4.1
IMI 1996, Distribution Maps of Plant Diseases Map No. 57
Volcani Z, Nevo D & Cassel M, 1962. Bacterial leaf and stalk diseases of cotton. Hassadeh 42: 367-369 (Hebrew), English abstract in Review of Applied Mycology 41: 713.

Additional key words: eradication

Computer codes: XANTMA, IL

2003/046 New variant of *Little cherry closterovirus* found in British Columbia, Canada

So far, three viruses associated with little cherry disease (EU Annexes) have been described (see EPPO RS 2002/048): *Little cherry closterovirus*-1 (LChV-1) which was first found and described in Germany, LChV-2 which corresponds to an isolate from USA, and LChV-3 which was found and described in British Columbia, Canada. Despite similarities in symptom development in orchard trees and woody indicators, the three viruses have distinct molecular sequences. During regular surveys conducted in Okanagan and Kootenay valleys (British Columbia), a fourth type of isolate tentatively called LChV-4 was found. More studies are needed to compare this variant with other viruses associated with little cherry disease.

Source: Bernardy, M.G.; French, C.J.; Milks, M.; Jespersen, G. (2002) New variant of *Little cherry virus* associated with little cherry disease of sweet cherry in British Columbia, Canada.
Plant Disease, 86(12), p 1406.

Additional key words: aetiology

Computer codes: LCHV00, CA



EPPO *Reporting Service*

2003/047 *Cacopsylla picta* (*C. costalis*) is a vector of apple proliferation phytoplasma in Germany

Since 2000, a serious epidemic of apple proliferation phytoplasma (EPPO A2 quarantine pest) reappeared in south-western Germany. In earlier studies, it was shown that a psyllid, *Cacopsylla costalis* (Homoptera: Psyllidae), was a vector of the disease in northern Italy (see EPPO RS 2001/068). Recent studies showed that the same species *C. picta* (synonym *C. costalis*) is also a vector of apple proliferation phytoplasma in Germany.

Source: Jarausch, B.; Schwind, N.; Jarausch, W.; Krczal, G. (2003) First report of *Cacopsylla picta* as a vector of apple proliferation phytoplasma in Germany. **Plant Disease, 87(1), p 101.**

Additional key words: epidemiology

Computer codes: APPXXX, PSYLCO, DE

2003/048 EPPO report on notifications of non-compliance (detection of regulated pests)

The EPPO Secretariat has gathered the notifications of non-compliance for 2002 received since the previous report (EPPO RS 2003/013) from the following countries: Belgium, Czech Republic, France, Finland, Germany, Guernsey, Lithuania, Netherlands, Spain, United Kingdom. When a consignment has been re-exported and the country of origin is unknown, the re-exporting country is indicated in brackets. When the occurrence of a pest in a given country is not known to the EPPO Secretariat, this is indicated by an asterisk (*).

The EPPO Secretariat has selected notifications of non-compliance made because of the detection of regulated pests. Other notifications of non-compliance due to prohibited commodities, missing or invalid certificates are not indicated. It must be pointed out that the report is only partial, as many EPPO countries have not yet sent their notifications.

| Pest | Consignment | Type of commodity | Country of origin | C. of destination | nb |
|---------------------|--|--------------------------|--------------------------|--------------------------|-----------|
| Agromyzidae | <i>Bacopa monnieri</i> | Aquarium plants | Morocco | France | 1 |
| | <i>Ocimum basilicum</i> , <i>Mentha</i> , <i>Origanum</i> | Vegetables | Israel | France | 1 |
| Aleyrodidae | <i>Origanum</i> | Vegetables | Israel | France | 1 |
| Ambrosia | <i>Coriandrum sativum</i> | Stored products | Ukraine | Lithuania | 1 |
| Anthocoridae | <i>Protea</i> | Cut flowers | South Africa | United Kingdom | 1 |



EPPO Reporting Service

| Pest | Consignment | Type of commodity | Country of origin | C. of destination | nb |
|---|--|---------------------|-------------------|-------------------|----|
| <i>Bemisia tabaci</i> | <i>Abutilon</i> | Cuttings | Israel | United Kingdom | 1 |
| | <i>Abutilon</i> | Cuttings | Netherlands | United Kingdom | 1 |
| | <i>Abutilon, Hibiscus</i> | Plants for planting | Netherlands | United Kingdom | 1 |
| | <i>Ajuga</i> | Cuttings | Israel | United Kingdom | 3 |
| | <i>Ajuga pyramidallis, Ajuga reptans</i> | Cuttings | Israel | United Kingdom | 1 |
| | <i>Ajuga reptans</i> | Cuttings | Israel | United Kingdom | 1 |
| | <i>Alternanthera</i> | Aquarium plants | Singapore | United Kingdom | 1 |
| | <i>Aromatic herbs</i> | Vegetables | Israel | Belgium | 1 |
| | <i>Artemisia dracunculus</i> | Cut flowers | Morocco | France | 1 |
| | <i>Corchorus</i> | Vegetables | Gambia | United Kingdom | 1 |
| | <i>Corchorus olitorius</i> | Vegetables | Cyprus | United Kingdom | 1 |
| | <i>Crossandra</i> | Plants for planting | Netherlands | United Kingdom | 1 |
| | <i>Eruca</i> | Vegetables | Lebanon | France | 1 |
| | <i>Eryngium</i> | Vegetables | Thailand | France | 3 |
| | <i>Eryngium</i> | Vegetables | Vietnam | France | 1 |
| | <i>Eryngium foetidum</i> | Vegetables | Thailand | France | 1 |
| | <i>Euphorbia pulcherrima</i> | Plants for planting | (Netherlands) | United Kingdom | 1 |
| | <i>Euphorbia pulcherrima</i> | Plants for planting | Germany | United Kingdom | 1 |
| | <i>Euphorbia pulcherrima</i> | Cuttings | Germany | United Kingdom | 2 |
| | <i>Euphorbia pulcherrima</i> | Cuttings | Kenya | Finland | 1 |
| | <i>Euphorbia pulcherrima</i> | Cuttings | Netherlands | United Kingdom | 1 |
| | <i>Euphorbia pulcherrima</i> | Plants for planting | Netherlands | United Kingdom | 3 |
| | <i>Ficus benjamina</i> | Plants for planting | Netherlands | United Kingdom | 1 |
| | <i>Gypsophila paniculata</i> | Cut flowers | Israel | United Kingdom | 1 |
| | <i>Hemigraphis colorata, Hemigraphis</i> | Aquarium plants | Indonesia | France | 1 |
| | <i>Hibiscus</i> | Plants for planting | Netherlands | United Kingdom | 5 |
| | <i>Hibiscus rosa-sinensis</i> | Plants for planting | Italy | United Kingdom | 1 |
| | <i>Hibiscus syriacus</i> | Plants for planting | Netherlands | United Kingdom | 1 |
| | <i>Hygrophila salicifolia</i> | Aquarium plants | Indonesia | France | 1 |
| | <i>Hygrophila salicifolia</i> | Aquarium plants | Morocco | France | 1 |
| | <i>Hypericum</i> | Cut flowers | Ecuador* | United Kingdom | 1 |
| | <i>Hypericum</i> | Cut flowers | Israel | Belgium | 2 |
| | <i>Hypericum</i> | Cut flowers | Israel | Guernsey | 2 |
| | <i>Hypericum</i> | Cut flowers | Israel | United Kingdom | 1 |
| | <i>Hypericum</i> | Cut flowers | Netherlands | Guernsey | 2 |
| | <i>Hypericum</i> | Cut flowers | Zimbabwe | United Kingdom | 1 |
| | <i>Hypericum androsaemum</i> | Cut flowers | Israel | United Kingdom | 2 |
| | <i>Lisianthus</i> | Cut flowers | Israel | Belgium | 1 |
| | <i>Mandevilla</i> | Cuttings | Israel | Netherlands | 1 |
| | <i>Musa lasiocarpa</i> | Plants for planting | USA | United Kingdom | 1 |
| | <i>Ocimum</i> | Vegetables | Vietnam | France | 1 |
| | <i>Ocimum basilicum</i> | Vegetables | Israel | France | 2 |
| <i>Ocimum basilicum</i> | Vegetables | Thailand | France | 1 | |
| <i>Ocimum basilicum and various other herbs</i> | Vegetables | Israel | France | 1 | |
| <i>Ocimum basilicum, Artemisia dracunculus</i> | Vegetables | Israel | France | 1 | |
| <i>Ocimum basilicum, Origanum</i> | Vegetables | Israel | France | 1 | |
| <i>Origanum</i> | Vegetables | Israel | Guernsey | 1 | |
| <i>Origanum</i> | Vegetables | Morocco | France | 1 | |
| <i>Rosa</i> | Cut flowers | Spain (Canary Isl.) | United Kingdom | 2 | |
| <i>Salvia hybrida</i> | Cuttings | Israel | United Kingdom | 1 | |
| <i>Salvia officinalis 'icterina'</i> | Cuttings | Israel | United Kingdom | 1 | |
| <i>Solidago hybrida</i> | Cut flowers | Israel | Belgium | 16 | |
| <i>Solidago hybrida</i> | Cut flowers | Israel | Guernsey | 2 | |



EPPO Reporting Service

| Pest | Consignment | Type of commodity | Country of origin | C. of destination | nb |
|--|---------------------------------|---------------------|---------------------|-------------------|----|
| <i>B. tabaci</i> (cont.) | <i>Solidago hybrida</i> | Cut flowers | Israel | United Kingdom | 13 |
| | <i>Solidago hybrida</i> | Cut flowers | Spain | United Kingdom | 2 |
| | <i>Solidago hybrida</i> | Cut flowers | Spain (Canary Isl.) | United Kingdom | 3 |
| | <i>Solidago hybrida</i> | Cut flowers | Zimbabwe | United Kingdom | 2 |
| | <i>Solidaster</i> | Cut flowers | Israel | United Kingdom | 2 |
| | <i>Trachelium</i> | Cut flowers | Israel | Belgium | 1 |
| | <i>Trachelium</i> | Cut flowers | Netherlands | United Kingdom | 2 |
| <i>Bemisia tabaci, Liriomyza</i> | <i>Solidago hybrida</i> | Cut flowers | Israel | United Kingdom | 4 |
| | <i>Solidago hybrida</i> | Cut flowers | Spain | United Kingdom | 1 |
| <i>Chrysanthemum stunt pospiviroid</i> | <i>Chrysanthemum morifolium</i> | Plants for planting | Brazil | United Kingdom | 1 |
| <i>Clavibacter michiganensis subsp. michiganensis</i> | <i>Lycopersicon esculentum</i> | Seeds | China* | France | 2 |
| <i>Clavibacter michiganensis subsp. sepedonicus</i> | <i>Solanum tuberosum</i> | Ware potatoes | Germany | Czech Republic | 1 |
| <i>Elsinoe</i> | <i>Citrus sinensis</i> | Fruits | Argentina | Spain | 1 |
| <i>Ferrisia virgata</i> | <i>Codiaeum</i> | Plants for planting | Netherlands | United Kingdom | 1 |
| <i>Frankliniella</i> | <i>Dendrobium</i> | Cut flowers | Thailand | Germany | 1 |
| <i>Frankliniella schultzei</i> | <i>Veronica spicata</i> | Cut flowers | Kenya | United Kingdom | 1 |
| | <i>Begonia</i> | Plants for planting | Netherlands | United Kingdom | 2 |
| | <i>Begonia elatior</i> | Plants for planting | Netherlands | United Kingdom | 2 |
| <i>Globodera rostochiensis</i> | <i>Fragaria</i> | Plants for planting | Belarus | Netherlands | 2 |
| | <i>Solanum tuberosum</i> | Ware potatoes | Greece | Czech Republic | 3 |
| | <i>Solanum tuberosum</i> | Ware potatoes | Italy | Czech Republic | 1 |
| <i>Guignardia citricarpa</i> | <i>Citrus sinensis</i> | Fruits | Brazil | Spain | 26 |
| <i>Helicoverpa armigera</i> | <i>Capsicum annuum</i> | Vegetables | Morocco | Spain | 1 |
| | <i>Capsicum annuum</i> | Vegetables | Turkey | Netherlands | 1 |
| <i>Helicoverpa armigera</i> | <i>Dianthus</i> | Cut flowers | Kenya | Netherlands | 4 |
| | <i>Dianthus</i> | Cut flowers | Turkey | Netherlands | 1 |
| | <i>Dianthus chinensis</i> | Cut flowers | Spain | United Kingdom | 4 |
| | <i>Fragaria</i> | Fruits | Egypt | Netherlands | 2 |
| | <i>Pelargonium</i> | Cuttings | Morocco | France | 1 |
| | <i>Phaseolus</i> | Vegetables | Egypt | Netherlands | 2 |
| | <i>Pisum sativum</i> | Vegetables | Egypt | Netherlands | 1 |
| | <i>Pisum sativum</i> | Vegetables | Kenya | Netherlands | 9 |
| | <i>Pisum sativum</i> | Vegetables | South Africa | United Kingdom | 1 |
| <i>Pisum sativum</i> | Vegetables | Zambia | Netherlands | 2 | |
| <i>Helicoverpa armigera, Liriomyza huidobrensis</i> | <i>Pisum sativum</i> | Vegetables | Kenya | Netherlands | 2 |
| <i>Leptinotarsa decemlineata</i> | <i>Solanum melongena</i> | Vegetables | France | United Kingdom | 1 |
| | <i>Solanum tuberosum</i> | Ware potatoes | Austria | United Kingdom | 1 |



EPPO Reporting Service

| Pest | Consignment | Type of commodity | Country of origin | C. of destination | nb | |
|--|-------------------------------|----------------------|---------------------|-------------------|----------------|---|
| <i>Liriomyza</i> | <i>Allium fistulosum</i> | Vegetables | Egypt | United Kingdom | 1 | |
| | <i>Allium fistulosum</i> | Vegetables | Mexico | United Kingdom | 1 | |
| | <i>Aster</i> | Plants for planting | Netherlands | United Kingdom | 1 | |
| | <i>Cardamine</i> | Plants for planting | Singapore | United Kingdom | 1 | |
| | <i>Carthamus</i> | Cut flowers | Netherlands | United Kingdom | 1 | |
| | <i>Chrysanthemum</i> | Plants for planting | France | United Kingdom | 1 | |
| | <i>Chrysanthemum</i> | Cut flowers | Netherlands | United Kingdom | 1 | |
| | <i>Eruca</i> | Vegetables | Lebanon | France | 1 | |
| | <i>Gypsophila</i> | Cut flowers | Israel | Belgium | 4 | |
| | <i>Gypsophila</i> | Cut flowers | Israel | United Kingdom | 1 | |
| | <i>Gypsophila</i> | Cut flowers | Netherlands | Czech Republic | 5 | |
| | <i>Gypsophila paniculata</i> | Cut flowers | Israel | Czech Republic | 1 | |
| | <i>Gypsophila paniculata</i> | Cut flowers | Israel | United Kingdom | 2 | |
| | <i>Gypsophila perfecta</i> | Cut flowers | Israel | United Kingdom | 1 | |
| | <i>Ocimum basilicum</i> | Vegetables | Spain (Canary Isl.) | United Kingdom | 1 | |
| | <i>Ocimum basilicum</i> | Vegetables | Thailand | France | 1 | |
| | <i>Primula obconica</i> | Plants for planting | Netherlands | United Kingdom | 1 | |
| | <i>Spinacea oleracea</i> | Vegetables | Cyprus | United Kingdom | 1 | |
| | <i>Liriomyza huidobrensis</i> | <i>Carthamus</i> | Cut flowers | Netherlands | United Kingdom | 1 |
| | | <i>Chrysanthemum</i> | Plants for planting | Netherlands | United Kingdom | 3 |
| <i>Chrysanthemum morifolium</i> | | Cut flowers | South Africa | Netherlands | 1 | |
| <i>Eruca</i> | | Vegetables | Lebanon | France | 1 | |
| <i>Eruca vesicaria</i> | | Vegetables | Cyprus | United Kingdom | 1 | |
| <i>Gypsophila</i> | | Cut flowers | Netherlands | United Kingdom | 1 | |
| <i>Gypsophila</i> | | Cut flowers | Netherlands | United Kingdom | 1 | |
| <i>Gypsophila paniculata</i> | | Cut flowers | Israel | United Kingdom | 2 | |
| <i>Moluccella laevis</i> | | Cut flowers | Israel | United Kingdom | 1 | |
| <i>Pisum</i> | | Vegetables | Kenya* | United Kingdom | 1 | |
| <i>Pisum</i> | | Vegetables | Zambia* | United Kingdom | 1 | |
| <i>Pisum sativum</i> | | Vegetables | Kenya* | Netherlands | 4 | |
| <i>Pisum sativum</i> | | Vegetables | Kenya* | United Kingdom | 1 | |
| <i>Pisum sativum</i> | Vegetables | Zimbabwe* | United Kingdom | 3 | | |
| <i>Liriomyza huidobrensis</i> , <i>Helicoverpa armigera</i> | <i>Pisum sativum</i> | Vegetables | South Africa | United Kingdom | 1 | |
| | <i>Pisum sativum</i> | Vegetables | Zambia | United Kingdom | 1 | |
| <i>Liriomyza sativae</i> | <i>Amaranthus tricolor</i> | Cut flowers | Sri Lanka* | France | 1 | |
| | <i>Ocimum</i> | Vegetables | Israel | France | 1 | |
| <i>Liriomyza trifolii</i> | <i>Chrysanthemum</i> | Cut flowers | Netherlands | United Kingdom | 1 | |
| | <i>Gypsophila</i> | Cut flowers | Israel | United Kingdom | 1 | |
| | <i>Ocimum basilicum</i> | Vegetables | Israel | France | 1 | |
| <i>Maconellicoccus hirsutus</i> | <i>Annona</i> | Fruits | India | United Kingdom | 1 | |
| <i>Maruca vitrata</i> , <i>Helicoverpa armigera</i> | <i>Cajanus</i> | Vegetables | Pakistan | United Kingdom | 1 | |
| Noctuidae | <i>Dianthus caryophyllus</i> | Cut flowers | Kenya | France | 2 | |
| Noctuidae (suspect <i>Helicoverpa armigera</i>) | <i>Anemone nemorosa</i> | Cut flowers | Italy | United Kingdom | 1 | |



EPPO Reporting Service

| Pest | Consignment | Type of commodity | Country of origin | C. of destination | nb |
|---|---|---------------------|---------------------|-------------------|----|
| <i>Noctuidae</i> (suspect <i>Spodoptera littoralis</i>), <i>Herpetogramma bipunctalis</i> , <i>Spoladea recurvalis</i> | <i>Amaranthus</i> | Vegetables | Gambia | United Kingdom | 1 |
| <i>Nymphula</i> | <i>Vallisneria torta</i> | Aquarium plants | Singapore | United Kingdom | 1 |
| <i>Opogona</i> | <i>Cactaceae</i> | Plants for planting | USA | Germany | 1 |
| <i>Otiorynchus</i> | <i>Rhododendron hybrid</i> | Plants for planting | USA | France | 1 |
| <i>Pepino mosaic virus</i> | <i>Lycopersicon esculentum</i> | Vegetables | Netherlands | United Kingdom | 1 |
| | <i>Lycopersicon esculentum</i> | Vegetables | Spain (Canary Isl.) | Guernsey | 1 |
| | <i>Lycopersicon esculentum</i> | Vegetables | Spain (Canary Isl.) | United Kingdom | 2 |
| <i>Phytophthora ramorum</i> | <i>Rhododendron hybrid</i> | Plants for planting | Netherlands | United Kingdom | 2 |
| | <i>Viburnum</i> | Plants for planting | Netherlands | United Kingdom | 1 |
| <i>Pinnaspis strachani</i> | <i>Areca</i> | Plants for planting | Netherlands | United Kingdom | 1 |
| <i>Plum pox potyvirus</i> | <i>Prunus domestica</i> | Plants for planting | Yugoslavia | Netherlands | 1 |
| <i>Pseudococcidae</i> | <i>Erica sessiliflora</i> | Plants for planting | South Africa | United Kingdom | 1 |
| <i>Spodoptera littoralis</i> | <i>Corchorus olitorius</i> | Vegetables | Nigeria | United Kingdom | 1 |
| <i>Spoladea recurvalis</i> | Unspecified | Leaves | Nigeria | United Kingdom | 1 |
| <i>Spoladea recurvalis</i> , <i>Herpetogramma bipunctalis</i> | Unspecified | Leaves | Gambia | United Kingdom | 1 |
| <i>Thrips</i> | <i>Dendrobium</i> | Cut flowers | Thailand | Belgium | 1 |
| | <i>Momordica</i> , <i>Solanum melongena</i> | Vegetables | Dominican Republic | United Kingdom | 1 |
| <i>Thrips</i> (suspect <i>Thrips palmi</i>) | <i>Dendrobium</i> | Cut flowers | Thailand | United Kingdom | 1 |
| <i>Thrips palmi</i> | <i>Dendrobium</i> | Cut flowers | Thailand | Belgium | 4 |
| | <i>Dendrobium</i> | Cut flowers | Thailand | Netherlands | 4 |
| | <i>Dendrobium</i> , <i>Mokara hybrida</i> | Cut flowers | Thailand | Netherlands | 2 |
| | <i>Solanum melongena</i> | Vegetables | Ghana* | Netherlands | 2 |
| | <i>Solanum melongena</i> | Vegetables | Thailand | Netherlands | 1 |
| <i>Thysanoptera</i> | <i>Dendrobium</i> | Cut flowers | Thailand | France | 1 |
| | <i>Solanum melongena</i> | Vegetables | Thailand | France | 7 |
| <i>Tomato spotted wilt tospovirus</i> | <i>Pelargonium</i> | Plants for planting | (Germany) | Portugal | 1 |
| <i>Trialeurodes ricini</i> | <i>Myrtus</i> | Cut foliage | Turkey* | United Kingdom | 1 |
| <i>Trialeurodes ricini</i> , <i>Ceroplastes rusci</i> | <i>Myrtus</i> | Cut foliage | Turkey | United Kingdom | 1 |



EPPO Reporting Service

| Pest | Consignment | Type of commodity | Country of origin | C. of destination | nb |
|---|--------------------------------|---------------------|-------------------|-------------------|----|
| <i>Xanthomonas axonopodis</i> pv. <i>phaseoli</i> | <i>Phaseolus vulgaris</i> | Seeds | Netherlands | Germany | 1 |
| <i>Xanthomonas axonopodis</i> pv. <i>vesicatoria</i> | <i>Lycopersicon esculentum</i> | Seeds | USA | Germany | 1 |
| <i>Xanthomonas fragariae</i> | <i>Fragaria ananassa</i> | Plants for planting | Hungary | Germany | 21 |

• Fruit flies

| Pest | Consignment | Country of origin | C. of destination | nb |
|---------------------------------|---|------------------------|-------------------|----------------|
| <i>Anastrepha</i> | <i>Mangifera indica</i> | Peru | Spain | 4 |
| <i>Bactrocera cucurbitae</i> | <i>Momordica charantia</i> | Thailand | France | 1 |
| <i>Bactrocera dorsalis</i> | <i>Annona squamosa</i> | Thailand | Czech Republic | 2 |
| | <i>Annona squamosa</i> | Thailand | France | 2 |
| | <i>Averrhoa carambola</i> | Malaysia | France | 2 |
| | <i>Mangifera indica</i> | Thailand | France | 4 |
| | <i>Psidium guajava</i> | Indonesia | France | 4 |
| <i>Bactrocera zonata</i> | <i>Syzygium samarangense</i> | Thailand | France | 2 |
| | <i>Mangifera indica</i> | Pakistan | France | 3 |
| <i>Ceratitis capitata</i> | <i>Psidium guajava</i> | Pakistan | France | 1 |
| | <i>Capsicum</i> | Mauritius | France | 1 |
| <i>Ceratitis cosyra</i> | <i>Psidium guajava</i> | Lebanon | France | 2 |
| | <i>Mangifera indica</i> | Senegal | France | 3 |
| <i>Dacus frontalis</i> | <i>Cucumis melo</i> | Egypt | Netherlands | 1 |
| non-European Tephritidae | <i>Annona cherimola</i> | Peru | France | 1 |
| | <i>Annona squamosa</i> | Thailand | France | 1 |
| | <i>Averrhoa carambola</i> | Malaysia | France | 3 |
| | <i>Capsicum</i> | Thailand | France | 1 |
| | <i>Capsicum frutescens</i> | Thailand | France | 9 |
| | <i>Capsicum frutescens</i> | Vietnam | France | 1 |
| | <i>Citrus reticulata</i> | Morocco | Netherlands | 1 |
| | <i>Mangifera indica</i> | Burkina Faso | Germany | 1 |
| | <i>Mangifera indica</i> | Dominican Rep. | France | 1 |
| | <i>Mangifera indica</i> | Haiti | France | 1 |
| | <i>Mangifera indica</i> | Indonesia | France | 1 |
| | <i>Mangifera indica</i> | Thailand | France | 1 |
| | <i>Passiflora edulis</i> | Côte d'Ivoire | France | 1 |
| | <i>Passiflora edulis</i> , P. <i>quadrangularis</i> , <i>Psidium</i> <i>guajava</i> | Indonesia | France | 1 |
| | <i>Passiflora quadrangularis</i> | Indonesia | France | 1 |
| | <i>Prunus persica</i> var. <i>nectarina</i> | Australia | France | 1 |
| | <i>Psidium guajava</i> | Thailand | Czech Republic | 1 |
| | <i>Psidium guajava</i> | Thailand | France | 4 |
| | <i>Ziziphus</i> | Thailand | France | 2 |
| | Tephritidae (suspect <i>C. capitata</i> or <i>B. cucurbitae</i>) | <i>Cucumis sativus</i> | Gambia | United Kingdom |



EPPO Reporting Service

• Wood

| Pest | Consignment | Type of commodity | Country of origin | C. of destination | nb |
|---|-------------------------------|-------------------|-------------------|-------------------|----|
| <i>Anoplophora</i> , grub holes > 3 mm | Non coniferous | Wood | China | Germany | 1 |
| <i>Bursaphelenchus xylophilus</i> | <i>Pinus</i> | Packing material | USA | Germany | 1 |
| <i>Bursaphelenchus xylophilus</i> , grub holes > 3 mm | Coniferous | Wood | USA | Germany | 1 |
| Cerambycidae, grub holes > 3 mm | <i>Larix</i> | Wood and bark | Russia | Germany | 1 |
| | <i>Picea</i> | Wood and bark | Russia | Spain | 1 |
| <i>Chlorophorus</i> , grub holes > 3mm | Non coniferous | Packing material | China | Germany | 1 |
| <i>Coleoptera</i> | <i>Copernicia</i> | Wood and bark | Paraguay | France | 1 |
| Grub holes > 3 mm | Coniferous and non-coniferous | Wood | China | Germany | 1 |
| | <i>Copernicia</i> | Wood and bark | Paraguay | France | 2 |
| | Non coniferous | Packing material | China | Germany | 7 |
| | Non coniferous | Wood and bark | China | Germany | 1 |
| | Unspecified | Packing material | Sri Lanka | France | 1 |
| Grub holes > 3 mm, living insects | Unspecified | Packing material | Vietnam | France | 1 |
| <i>Monochamus</i> | Coniferous | Wood | China | Germany | 1 |
| <i>Platypus</i> | <i>Copernicia</i> | Wood and bark | Paraguay | France | 1 |
| <i>Tenebrio</i> , grub holes > 3 mm | Unspecified | Wood and bark | Singapore | France | 1 |
| <i>Xylotrechus</i> , grub holes > 3 mm | Non coniferous | Packing material | China | Germany | 1 |

• Bonsais

| Pest | Consignment | Country of origin | Country of destination | nb |
|---------------------------------|------------------------------------|-------------------|------------------------|----|
| <i>Anoplophora</i> | <i>Acer palmatum</i> | China | United Kingdom | 1 |
| <i>Anoplophora glabripennis</i> | <i>Acer palmatum</i> | Japan | Germany | 1 |
| <i>Cnidocampa flavescens</i> | <i>Acer buergerianum</i> | Japan | Netherlands | 1 |
| <i>Dialeurodes citri</i> | <i>Ligustrum</i> | China | United Kingdom | 3 |
| | <i>Ligustrum</i> | Netherlands | United Kingdom | 1 |
| <i>Helicotylenchus</i> | <i>Ligustrum</i> , <i>Crassula</i> | China | France | 1 |
| <i>Rhizoecus hibisci</i> | <i>Serissa</i> | China | United Kingdom | 1 |



EPPO *Reporting Service*

| Pest | Consignment | Country of origin | Country of destination | nb |
|-------------------------------|--------------------------------------|--------------------------|-------------------------------|-----------|
| <i>Rotylenchus reniformis</i> | <i>Ligustrum, Crassula</i> | China | France | 1 |
| <i>Tinocallis viridis</i> | <i>Zelkova</i> | China | United Kingdom | 2 |
| <i>Xiphinema americanum</i> | <i>Ilex crenata, Taxus cuspidata</i> | Japan | Netherlands | 1 |

Source: EPPO Secretariat, 2003-03.