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2002/018 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**

B and non-B biotypes of *Bemisia tabaci* (Homoptera: Aleyrodidae - EPPO A2 quarantine pest) occur in Korea Republic. **Present, no details.** Review of Agricultural Entomology, 89(6), p 644 (4762).

In 2000, *Colletotrichum acutatum* (Ascomycota: Phyllachorales - EU Annexes) was reported for the first time on strawberries in Denmark. **Present, no details.** Review of Plant Pathology, 80(8), p 765 (5443).

Xanthomonas fragariae (EPPO A2 quarantine pest) was introduced into Belgium in 1998 via imports of infected strawberry plants from the Netherlands and France. Phytosanitary action is being taken against *X. fragariae*. The EPPO Secretariat had previously no data on the occurrence of this pathogen in Belgium. **Present, under official control.** Review of Plant Pathology, 80(8), p 764 (5436).

- **Detailed records**

Alternaria gaisen (*A. kikuchiana* Ascomycota: Dothideales – EPPO A1 quarantine pest) occurs in pear orchards in Hubei, China. Review of Plant Pathology, 80(7), p 669 (4780).

Choristoneura rosaceana (Lepidoptera: Tortricidae - EPPO A2 quarantine pest) and *Platynota flavedana* (Lepidoptera: Tortricidae - EPPO Alert List) are present in orchards in Virginia (US). Review of Agricultural Entomology, 89(7), p 60 (6303).

Ips amitinus (Coleoptera: Scolytidae - EPPO A2 quarantine pest) occurs in Leningrad province in Russia. Review of Agricultural Entomology, 89(7), p 780 (5737).

Nacobbus aberrans (EPPO A1 quarantine pest) is present in Hidalgo and Mexico states, Mexico. Nematological Abstracts 70(3), p 180, (1254).

Plum pox potyvirus (EPPO A2 quarantine pest) has been found in 1999 and 2000 in plum and apricot orchards in the Provinces of Napoli, Caserta and Salerno (Campania, Italy). PPV was thought to be no longer present in these areas. Review of Plant Pathology, 80(6), p 577 (4127).



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Rhynchophorus ferrugineus (Coleoptera: Curculionidae - EPPO Alert List) is present in Miyazaki Prefecture, Kyushu, Japan. Review of Agricultural Entomology, 89(8), p 910 (6625).

Tomato ringspot nepovirus (EPPO A1 quarantine list) was detected in ornamentals plants in Lithuania (*Anemone hupehensis*, *Delphinium*, *Dicentra formosa*, *D. spectabilis*, *Digitalis purpurea*, *Echinacea purpurea*, *Eryngium alpinum*, *Gypsophila paniculata*, *Helenium autumnale*, *Hosta lancifolia*, *H. sieboldiana*, *Limonium*, *Oenothera tetragona*, *Penstemon murrayana*, *Tradescantia andersoniana*). Review of Plant Pathology, 80(7), p 687 (4912).

Trialeurodes ricini (Homoptera: Aleyrodidae - EPPO Alert List) is present in Qalyubia Governorate in Egypt. Review of Agricultural Entomology, 89(7), p 767 (5646).

Xiphinema americanum (EPPO A1 quarantine pest) occurs in vineyards in Missouri and Oregon (US). Nematological Abstracts 70(1), p 13 (90) and 70(4), p 196 (1354).

- **Taxonomy**

The teleomorph of *Colletotrichum acutatum* (EU Annexes) has been described as *Glomerella acutata*. Review of Plant Pathology, 80(7), p 650 (4649).

Source: EPPO Secretariat, 2002-01.

Nematological Abstracts, 70(1, 3, 4). March, September, December 2001.

Review of Agricultural Entomology, 89(6, 7, 8). June, July, August 2001.

Review of Plant Pathology, 80(6, 7, 8). June, July, August 2001

Additional key words: new record, detailed record,
taxonomy

Computer codes: ALTEKI, BEMITA, CHONRO,
COLLAC, IPXSAM, NACOB, PLAAFL, PPV000,
RHYCFR, TORSV0, TRIARI, XANTFR, XIPHAM,
BE, CN, DK, EG, IT, JP, KR, LT, MX, RU, US



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2002/019 13th USDA Interagency Research Forum on gypsy moth and other
invasive species

The EPPO Secretariat participated to the 13th USDA Interagency Research Forum on gypsy moth and other invasive species in Annapolis, Maryland, USA, 2002-01-15/18. Many papers were presented during this conference, interesting and new information has been summarized below:

***Anoplophora glabripennis* (Coleoptera: Cerambycidae – EPPO A1 quarantine pest)**

Situation in Austria

Dr H. Krehan presented the situation of *A. glabripennis* in Austria. The pest has recently been found in Branau-am-Inn, during summer 2001 (see EPPO RS 2001/135). The pest was probably introduced on wood packing material from Asia, as the outbreak was located near a market place where various imported products from China were sold. The first suspect symptoms were in fact already seen in November 2000, but the city gardeners could not identify the cause as no beetles were found at that time. In July 2001, symptoms were seen on trees (mainly *Acer platanoides*) growing along a small street, and on 2 other trees in a small forest (less than 1 km away from the street concerned). In December 2001, one infested tree was also found in the centre of Branau am Inn. All infested trees were destroyed and phytosanitary action is being taken to prevent any further spread. Surveys will continue, in the infested zone and its surroundings, but also in other places in Austria.

Situation in USA

Surveys on *A. glabripennis* are continuing in USA. So far, infestations remain limited to Chicago and New York. No new major findings were made, as all new findings were still made within quarantine areas. In addition, the number of findings is diminishing. Intense research activity is continuing both in the USA and in China, on biological and chemical control, host range, behaviour, models to predict potential damage and spread, impact of the pest on urban forests, etc.

***Anoplophora malasiaca/chinensis* (Coleoptera: Cerambycidae – EPPO A1 quarantine pest)**

Anoplophora chinensis in Washington state, US

Dr D. Lance explained that during summer 2001, *Anoplophora chinensis* was found in a nursery, at Tukwila, Washington state. One adult was found in a bonsai nursery importing plants from Korea. Following this first observation, 369 *Acer* bonsais were inspected, and 3 more adults were found (of which one flew away and was not found again). Based on examination of host material, 5 beetles are assumed to have escaped from the nursery. In another nursery in Tacoma, Washington state, 2 exit holes were observed. During an inspection of a nursery in Lacey, Washington state, one beetle was found and identified as *A. chinensis* (Washington state Department of Agriculture). Inspectors found 3 tunnels and 2 exit



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holes on 7 Acer bonsais imported from Korea. For these 2 nurseries, unlike the situation in Tukwila, it is not considered that *A. chinensis* could be present in the environment and multiply. All infested plant material has been destroyed. In the Tukwila area, quarantine has been imposed and surveys will be carried out for several years. It can also be recalled that *A. chinensis* had been found on bonsai *Lagerstroemia* from China, in 1999, in one glasshouse in Athens, Georgia, and that *A. malasiaca* had been found on *Acer* bonsais in a nursery in Wisconsin (USDA-APHIS Pest Alert); in both cases eradication measures were successful.

Anoplophora malasiaca in Italy

Dr Maspero presented the current situation of *A. malasiaca* in Italy. The pest was found in spring 2000 in Parabiago, near Milano, Lombardia (see EPPO RS 2001/101), in a nursery which imports large quantities of bonsais from Asia in containers. In June and July, 4 adults (2 males and 2 females) were found. In fact, *A. malasiaca* had been caught by a student in 1997 from the same area and put into a collection, without any further notice. Following the 2000 finding, traps were placed in 2 fields of the nursery where large trees were growing. *A. malasiaca* was found on *Acer* and *Fagus*. In the vicinity of the nursery, insects were also found on various trees (*Acer saccharinum*, *Carpinus betulus*, *Fagus*, etc.). Larvae, galleries and exit holes were found on infested trees and some trees had even been re-infested. This clearly shows that *A. malasiaca* is well established in the nursery and its surroundings. As a result, 18 trees have been destroyed and during the 2001/2002 winter more trees will be destroyed. Treatment and extensive survey programmes will be set up. Information for the public and the growers will be provided.

Ophiostoma ulmi and *O. novo-ulmi* (Dutch elm disease)

Dr C. Brasier presented research work which showed that exchange of genetic material took place between the two species *Ophiostoma ulmi* and *O. novo-ulmi*, and that they are fully hybridizing. Considering the *Phytophthora* disease of alder, it is also hypothesised that the causal agent is a hybrid between *P. cambivora* and *P. fragariae*. However, this remains to be demonstrated.

Phytophthora ramorum (sudden oak death – EPPO Alert List)

Dr D. Rizzo presented the latest information available on *P. ramorum*. It is now clear that the pathogen killing oaks in California and the pathogen found on *Rhododendron* and *Viburnum* in Europe are the same. Early comparisons between the American and European pathogens have showed that they belong to two separate populations, both probably introduced from a third unknown place. Studies on host plants showed that *Lithocarpus densiflorus* (tan oak) is the most susceptible species, as all plant parts (roots, trunk, branches, twigs and leaves) can be affected. On *Quercus agrifolia*, *Q. kelloggii*, *Q. parvula* var. *shrevei*, infection is only seen on trunk and main branches. On the other host plants (*Acer macrophyllum*, *Aesculus californica*, *Arbutus menziesii*, *Arctostaphylos manzanita*, *Heteromeles arbutifolia*, *Lonicera hispidula*, *Rhamnus californica*, *Umbellularia californica*, *Vaccinium ovatum*), *P. ramorum* is essentially affecting leaves, petioles and stems, and no mortality is observed. White oaks are



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not susceptible to *P. ramorum*. There has been recent concern that redwoods (*Sequoia sempervirens*) might be host plants of *P. ramorum*, because the pathogen was identified on redwood sprouts (but not killing trees). It was stressed that the host status of *S. sempervirens* has not been demonstrated neither in the laboratory nor in the field, but research is continuing in this field.

***Tetropium fuscum* (Coleoptera: Cerambycidae)**

Tetropium fuscum is a European species (secondary pest in European forests) which has recently been introduced into Canada. It was found in dying red spruce trees (*Picea rubens*) at Point Pleasant Park in Halifax, Nova Scotia. This amenity park of 75 ha, mainly planted with red spruce, is located near a container facility. The first beetles were in fact seen in 1990, but were misidentified until 1999. Eradication measures are being taken.

Source: Papers presented at the 13th USDA Interagency Research Forum on gypsy moth and other invasive species, Annapolis, Maryland, USA, 2002-01-15/18.

USDA – APHIS Pest Alert. Longhorned beetles in bonsai nursery stock
<http://www.aphis.usda.gov/oa/pestaler/palbbn.html>

Washington state Department of Agriculture – Citrus longhorned beetle found at a second site in Washington.
<http://www.wa.gov/agr/communications/2001/news0135.htm>

Additional key words: detailed records

Computer codes: ANOLCN, ANOLGL, ANOLMA, OPHSNU, PHYTRA, TETOFU, AT, IT, US



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2002/020 NAPPO Annual Meeting

The NAPPO Annual Meeting took place in Banff, Alberta (Canada) on the 2001-10-15/19. In addition to the NAPPO activities, the situation of several pests in North America was presented and is summarized below.

***Anthonomus grandis* (Coleoptera: Curculionidae – EPPO A1 quarantine pest)**

A. grandis was introduced into USA from Mexico in 1892. It is estimated that this pest has cost more than 14 billion USD to the cotton industry. An eradication programme started in 1983 in Virginia, North Carolina and South Carolina. The eradication programme takes 3-5 years in each zone, followed by post-eradication surveillance. In 2001, *A. grandis* has been eradicated from Alabama, Arizona, California, Florida, Georgia, North Carolina, South Carolina, Virginia, and portions of Texas and Tennessee. Eradication continues in Arkansas, Louisiana, Missouri, Mississippi, Oklahoma, Tennessee, Texas, and New Mexico (see also EPPO RS 2001/014). It is expected that nationwide eradication will be achieved by 2005.

***Anastrepha ludens* (Diptera: Tephritidae – EPPO A1 quarantine pest)**

A total of three *A. ludens* was found in California (San Diego and Orange counties). No *A. ludens* was detected in Florida. In Texas, 120 fruit flies were captured in the Lower Rio Grande Valley, throughout the 2000-2001 growing season. All infestations in this area were declared eradicated in September 2001. An area-wide management programme against *A. ludens* is being set up in Texas.

***Bactrocera correcta* (Diptera: Tephritidae)**

A total of 13 *B. correcta* was found in various locations in California (Los Angeles, Santa Clara and San Diego). 2 detections were made in Florida (Orange and Seminole counties).

***Bactrocera dorsalis* (Diptera: Tephritidae – EPPO A1 quarantine pest)**

In 2001, a total of 33 adults was found in various locations in California (Los Angeles, Orange, Santa Clara, San Diego, Contra costa and San Bernardino counties). However, the numbers of captures observed only triggered a single federal quarantine in San Bernardino county.

***Bactrocera zonata* (Diptera: Tephritidae – candidate A1 quarantine pest)**

A total of 4 adults was found in California (Santa Clara county). *B. zonata* was not detected in Florida.

***Ceratitis capitata* (Diptera: Tephritidae – EPPO A2 quarantine pest)**

A single outbreak occurred in Los Angeles county, California during 2001. No outbreaks were observed in Florida.



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***Glycaspis brimblecombei* (Homoptera: Psyllidae)**

The red gum lerp* psyllid is a serious pest of eucalyptus which has recently been introduced from Australia into California, USA, and also into several states in Mexico.

***Phytophthora ramorum* (EPPO Alert List)**

Sudden oak death has been reported for the first time in Oregon (Curry county), near the city of Brookings, on the 2001-08-09.

***Plum pox potyvirus* (EPPO A2 quarantine pest)**

Plum pox potyvirus was detected for the first time in USA, in Adams county, Pennsylvania in 1999. A national survey was completed in 2001, including intensive surveys in New York, Michigan and Pennsylvania. As a result, 8 new commercial orchards and 8 private gardens were found infected only in Pennsylvania. 8 of the infected properties were located within 1000 metres of the previously infected orchard. Newly infected orchards were confirmed outside the currently regulated area, in 3 adjacent counties. The regulated area has been enlarged and all infected trees were destroyed.

In Canada, *Plum pox potyvirus* was found in 3 places in Ontario and Nova Scotia (see also EPPO RS 2001/010).

***Tilletia indica* (EPPO A1 quarantine pest)**

For the first time since 1997, *T. indica* has been detected in several fields outside a regulated area. The initial discovery, made in late May 2001 at a grain elevator in Young county, Texas, led to a quarantine of the entire county, as well as adjacent Throckmorton county. Archer and Baylor counties, directly north of these, were also added to the regulated area after the fungus was found at several grain elevators (see also EPPO RS 2001/109). In USA, Federal regulations prohibit the entry into the US of seeds, plants, unprocessed straw, chaff, and products of the wheat milling process (not including flour) from counties where *T. indica* is known to occur.

* 'Lerp' is a term derived from an aboriginal Australian language describing the conical and waxy protective cover which is secreted by the nymphs.



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Xanthomonas axonopodis pv. citri

Eradication measures are being taken against citrus canker in Florida, as the disease has been found in 7 counties. The movement of citrus plant material from quarantine areas is prohibited, though citrus fruit may move under certain conditions when properly certified. All positive trees and exposed trees with 1900 feet (approximately 600 m) are destroyed. In February 2000, more funds were allocated to this eradication programme and for a survey on the whole territory of Florida. In December 2000 and June 2001, measures were taken to allow compensation for commercial citrus growers. Despite all these efforts, in December 2001, the disease was detected in the southern part of Martin county, Florida (see also EPPO RS 2002/005).

Source: **NAPPO Annual Meeting, Banff, Alberta (Canada), 2001-10-15/19**

Additional key words: detailed records

Computer codes: ANTHGR, ANSTLU, DACUCO,
DACUDO, DACUZO, CERTCA, NEOVIN, PPV000,
XANTCI, US



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2002/021 Outbreaks of a new *Oidium* disease on *Euphorbia pulcherrima* in Europe

Several countries in Europe have recently reported outbreaks of a new *Oidium* species on *Euphorbia pulcherrima* (poinsettia).

Germany

In September and October 2001, an outbreak of *Oidium* sp. was found on *Euphorbia pulcherrima* at three places in Germany. In Baden-Württemberg and in Bayern, infected plants were found in a display collection of an institute for horticulture. In Bayern, infected plants were also found in a private company which produces pot plants. The infected plants had been grown from rooted cuttings supplied by various companies. The origin of the disease has not yet been identified. It is suspected that the disease was introduced with latently infected cuttings. Action was taken at all places concerned, and further tests have indicated that the infection is no longer present. The situation of this new *Oidium* sp. on poinsettia in Germany can be described as follows: **Transient, action taken.**

Sweden

Recently, a powdery mildew has been found for the first time by the Swedish Plant Protection Service on Poinsettia.

United Kingdom

In UK, there has been a number of recent findings on production nurseries of a new powdery mildew (*Oidium* sp.) on poinsettia which has been considered as the 'American poinsettia powdery mildew'.

Note: Looking for data on *Oidium* of poinsettia, the EPPO Secretariat came across a German publication reporting in 1995 an outbreak of this disease in Denmark, in a variety trial of poinsettias of worldwide origin (Motte & Unger, 1995). All infected plants were destroyed. Apparently, no other outbreaks have been reported since.

Source: Motte, G.; Unger, J.G. (1995) [Appearance of powdery mildew (*Oidium* spp.) on poinsettias (*Euphorbia pulcherrima*) in Denmark].
Nachrichtenblatt des Deutschen Pflanzenschutzdienstes, 47(1) p 22.

DEFRA web site – A new Poinsettia powdery mildew
<http://www.defra.gov.uk/planth/poinset.htm>
NPPO of Germany, 2002-02.
NPPO of Sweden, 2001-11.

Additional key words: new pest

Computer codes: DE, DK, SE, UK



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2002/022 New *Oidium* sp. on *Euphorbia pulcherrima*: Addition to the EPPO Alert List

On poinsettias, powdery mildew can be caused by different fungi: *Oidium* sp. (whose identity remains unclear as only the anamorph is observed, present in America on poinsettia only), *Leveillula taurica* (present in Africa) and *Leveillula clavata* (present in the Mediterranean region on many different hosts). Since the 1990s, powdery mildew caused by *Oidium* sp. is causing problems in USA on poinsettias. It appears that recent outbreaks observed in different countries in Europe are caused by this *Oidium* sp. which is a new pathogen for the region. In addition, the NPPO of Sweden wrote to the EPPO Secretariat and ask for more information on this disease on poinsettias. Therefore, the EPPO Secretariat considered that it could be added to the EPPO Alert List.

Oidium sp. on *Euphorbia pulcherrima* (a new powdery mildew of poinsettias)

Why	The NPPO of Sweden asked the EPPO Secretariat for more information of <i>Oidium</i> sp. on <i>Euphorbia pulcherrima</i> , as several countries in Europe have recently reported new outbreaks, and in addition since the 1990s this disease is causing problems in USA.
Where	America: Mexico, Puerto Rico, USA (California, Georgia, Illinois, Kansas, Kentucky, Maine, Maryland, New Hampshire, North Carolina, Ohio, Pennsylvania, Tennessee). Europe: Denmark (one outbreak found in 1995 and eradicated), Germany (found in autumn 2001, measures are being taken), Sweden, United Kingdom.
On which plants	According to the American experience, <i>Euphorbia pulcherrima</i> is the only host of this <i>Oidium</i> sp.
Damage	White mycelium is observed on stems, petioles, mature and immature leaves, and bracts. Severely diseased leaves become twisted, and prematurely senescent. Powdery colonies are produced on both leaf surfaces. In USA, the disease often remains unnoticed until late in the season when bracts are beginning to colour. Earlier in the season, it may remain undetected because it mostly occurs on the under surface of the older, lower leaves. It is stated that in USA, <i>Oidium</i> sp. on poinsettia has become an economically significant problem for Poinsettia growers in the Midwest and northern USA.
Dissemination	The fungus produces large numbers of dry, powdery spores which are easily spread by air currents. They are also dispersed by man and tools within the glasshouse.
Pathway	Plants for planting, pot plants of <i>Euphorbia pulcherrima</i> from countries where it occurs
Possible risks	<i>Euphorbia pulcherrima</i> is an important glasshouse crop in Europe, with substantial movement of planting material between countries. This <i>Oidium</i> sp. has already shown its ability to move undetected in trade. Chemical control is possible but data is lacking on its efficacy. Data is also lacking on the identity of the pathogen and, despite its rather long presence in the USA, it has not been possible to make progress on this. So far, in Europe, poinsettia crops are not affected by powdery mildew, the introduction and establishment of this <i>Oidium</i> sp. would indeed cause problems to growers.
Source(s)	Celio, G.J.; Hausbeck, M.K. (1998) Conidial germination, infection structure formation, and early colony development of powdery mildew on Poinsettia. <i>Phytopathology</i> , 88(2), 105-113. Koike, S.T.; Saenz, G.S. (1998) First report of powdery mildew, caused by an <i>Oidium</i> sp., on poinsettia in California. <i>Plant Disease</i> , 82(1), p 128. Motte, G.; Unger, J.G. (1995) [Appearance of powdery mildew (<i>Oidium</i> spp.) on poinsettias (<i>Euphorbia pulcherrima</i>) in Denmark]. <i>Nachrichtenblatt des Deutschen Pflanzenschutzdienstes</i> , 47(1) p 22. NPPO of Germany, 2002-02. NPPO of Sweden, 2001-11. INTERNET ADAS Bedding and Pot Plant Technical Notes (UK) http://www.adas.co.uk/horticulture/HONSNOTES/Bpn1100.PDF



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Bureau of Plant Industry in Pennsylvania (US) Emerging Plant Diseases.
http://sites.state.pa.us/PA_Exec/Agriculture/bureaus/plant_industry/pests/disease/diseases/emerging.html#mildew

DEFRA web site – A new Poinsettia powdery mildew <http://www.defra.gov.uk/plant/poinset.htm>

North Carolina State University (US) New, emerging, and re-emerging plant disease in the United States.
<http://www.ces.ncsu.edu/depts/ent/clinic/Emerging/fpm2.htm>

EPPO RS 2002/021
Panel review date

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Entry date 2002-02

2002/023 Survey on tospoviruses in Bulgaria

In Bulgaria, *Tomato spotted wilt tospovirus* (EPPO A2 quarantine pest) was first reported in 1952 in tobacco crops in the south, and in 1954 in tomato fields in the north. At that time, only *Thrips tabaci* was known as a vector. Since then, TSWV outbreaks occurred frequently in the major tobacco-growing areas and in neighbouring tomato fields. In 1993, as a consequence of the introduction and rapid spread of *Frankliniella occidentalis* (EPPO A2 quarantine pest), outbreaks were observed in glasshouses all over the country. Surveys were done in Bulgaria during 3 consecutive years. As a result, 258 tospovirus isolates were obtained out of 348 samples from different regions (tomato, capsicum, tobacco, weeds and ornamentals). During this survey, *Impatiens necrotic spot tospovirus* (EPPO A2 quarantine pest) was not found. In thrips transmission studies, it was found that Bulgarian TSWV isolates are transmitted with high efficiency by *F. occidentalis* and that only arrhenotokous populations (unmated females lay eggs that become haploid males) and not thelytokous populations (parthenogenetic female populations) of *T. tabaci* could transmit the virus.

Source: Hristova, D.; Karadjova, O.; Yankulova, M.; Heinze, C.; Adam, G. (2001) A survey of tospoviruses in Bulgaria.

Journal of Phytopathology, 149(11-12), 745-749.

Additional key words: absence, detailed record

Computer codes: INSV00, TSWV00, BG



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2002/024 Survey on *Citrus tristeza closterovirus* in Cyprus

A programme to control *Citrus tristeza closterovirus* (CTV - EPPO A2 quarantine pest) in Cyprus was initiated in 1992. In particular, it includes a survey of all citrus groves to determine virus incidence in the 5 citrus-growing districts of Cyprus. In each citrus grove, 10-20 % of the trees were tested (ELISA). So far, a total of 601 citrus groves (212,200 trees) have been surveyed. CTV was detected in 152 groves (25.3%) and in 2,483 trees out of the 50,750 tested trees (4.9%). The highest proportion of infected trees (18.3%) and groves (71%) was found in the district of Ammochostos, where eradication of the disease is no longer considered feasible. In other districts (Nicosia, Limassol, Larnaca and Paphos), all infected trees, including seven entire groves, have been destroyed with compensation for the growers. The situation of CTV in Cyprus can be described as follows: **Present, eradication is no longer envisaged in Ammochostos district but continues in Nicosia, Limassol, Larnaca and Paphos districts.**

Source: Kyriakou, A.; Kapari-Isaia, T.; Ioannou, N. (2001) Programme to control *Citrus tristeza virus* in Cyprus. Abstract of a paper presented at the 10th Hellenic Phytopathological Congress, Kalamata, GR, 2000-10-03-05.
Phytopathologia Mediterranea, 40(2), p 205.

Additional key words: detailed record

Computer codes: CST000, CY



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2002/025 Survey on potato diseases in Lebanon

In Lebanon, potatoes are grown over 14,500 ha with a production of more than 265,000 tons per year. The two main production areas are located in the Bekaa plain (68% of total production) at altitudes of 900-1000 m, and in the Akkar coastal plain (19% of total production) in the north of the country. A survey was conducted in 1998-1999 in these 2 major potato-growing areas. A total of 789 samples was collected from 69 fields and tested, mainly for the presence of viruses but also for bacteria and fungi. Results showed that out of the 789 tested samples (ELISA), 372 samples were infected by one of more viruses. *Potato Y potyvirus* was the predominant virus, followed by *Potato A potyvirus*, *Potato X potexvirus*, *Potato M carlavirus*, *Potato S carlavirus* and *Potato leaf roll luteovirus*. During this study, all 109 samples tested (nucleic acid spot hybridization) for *Potato spindle tuber pospiviroid* (EPPO A2 quarantine pest) gave negative results. *Clavibacter michiganensis* subsp. *sepedonicus*, *Ralstonia solanacearum*, and *Synchytrium endobioticum* (all EPPO A2 quarantine pests) were not detected.

Source: Abou-Jawdah, Y.; Sobh, H.; Saad, A. (2001) Incidence of potato virus diseases and their significance for a seed certification program in Lebanon.
Phytopathologia Mediterranea, 40(2), 113-118.

Additional key words: absence

Computer codes: LB

2002/026 Diagnostic method for *Ceratitis capitata* and *Ceratitis rosa*

By using the AFLP technique (Amplified Fragment-Length Polymorphism), it was possible to identify and isolate specific genetic markers of *Ceratitis capitata* and *Ceratitis rosa* (Diptera: Tephritidae – A2 and A1 quarantine pests, respectively). A repetitive DNA sequence from the genome of *C. capitata* was isolated and used as a probe. This sequence rapidly and reliably identified *C. capitata* and *C. rosa* among a collection of other Tephritidae (including *Anastrepha*, *Bactrocera*, *Dacus*, *Rhagoletis*, *Toxotrypana*, *Trirhithromiya*) and other insects (*Bemisia tabaci*, *Liriomyza huidobrensis*, *Drosophila melanogaster*).

Source: Kakouli-Duarte, T.; Casey, D.G.; Burnell, A.M. (2001) Development of a diagnostic DNA probe for the fruit flies *Ceratitis capitata* and *Ceratitis rosa* (Diptera: Tephritidae) using Amplified Fragment-Length Polymorphism.
Journal of Economic Entomology, 94(4), 989-997.

Additional key words: diagnostic

Computer codes: CERTCA, CERTRO



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2002/027 PCR method to detect *Stenocarpella maydis* in maize seeds

A PCR method to detect *Stenocarpella maydis* (EPPO A2 quarantine pest) has been developed in South Africa. This method can specifically and reliably detect *Stenocarpella maydis* in maize seeds.

Source: Xia, Z.; Achar, P.N. (2001) Random Amplified Polymorphic DNA and Polymerase Chain Reaction markers for the differentiation and detection of *Stenocarpella maydis* in maize seeds.
Journal of Phytopathology, 149(1), 35-44

Additional key words: diagnostic

Computer codes: DIPMA

2002/028 Serological method to differentiate *Meloidogyne chitwoodi* and *M. fallax* from other *Meloidogyne* species

A serological method to differentiate the nematodes *Meloidogyne chitwoodi* and *M. fallax* (both EPPO A2 quarantine pests) from other *Meloidogyne* species has been developed in France. A further step in this research, will be to develop an antiserum which will allow to differentiate between *M. chitwoodi* and *M. fallax*.

Source: Tastet, C.; Val, F.; Lesage, M.; Renault, L. ; Marché, L. ; Bossis, M. ; Mugniéry, D. (2001) Application of a putative fatty-acid binding protein to discriminate serologically the two European quarantine root-knot nematodes, *Meloidogyne chitwoodi* and *M. fallax*, from other *Meloidogyne* species.
European Journal of Plant Pathology, 107(8), 821-832.

Additional key words: diagnostic

Computer codes: MELGFR, MELGCH



EPPO *Reporting Service*

2002/029 Phytosanitary treatment of packed table grapes against insects and mites

The effect of a treatment for packed table grapes, using a combination of low temperature storage and slow release of sulfur dioxide pads against *Platynota stultana* (Lepidoptera: Tortricidae - EPPO Alert List), was studied in the laboratory and in a large-scale commercial test. The effect of this treatment against other pests such as *Frankliniella occidentalis* (Thysanoptera: Thripidae - EPPO A2 quarantine pest), *Pseudococcus maritimus* (Homoptera: Pseudococcidae), *Tetranychus pacificus* and *T. urticae* (Acari: Tetranychidae) was assessed. Temperatures within foam containers (50 cm wide x 50 cm long x 17 cm high) decreased from ambient to 2°C in one day, and then ranged from 0.4 to 1.7°C in both tests. Sulfur dioxide concentrations in the foam containers ranged from 0.2 to 1.6 ppm during the 1 to 6 weeks storage period in the laboratory test, and from 0.5 to 1.1 ppm in the 1 to 8 weeks storage period of the large scale tests. Laboratory tests showed that *F. occidentalis* was completely killed within one week, that *P. maritimus* was completely killed after 6 weeks, and that 98% and 99.6% mortality was obtained for *T. pacificus* and *T. urticae*, respectively. In the large scale test, after 8 weeks of exposure, mortality reached 100% for *P. stultana*, *F. occidentalis* and *T. urticae*. Less than 8% survival was obtained for *P. maritimus* and less than 1% for *T. pacificus*. The authors concluded that this combined treatment could be very useful as a quarantine treatment against several insects and mites. In particular, it could be applied during ocean transport of commodities.

Source: Yokoyama, V.Y.; Miller, G.T.; Crisosto, C.H. (2001) Pest response in packed table grapes to low temperatures storage combined with slow-release sulfur dioxide pads in basic and large-scale tests.
Journal of Economic Entomology, 94(4), 984-988.

Additional key words: quarantine treatment

Computer codes: FRANOC, PLAAST



EPPO Reporting Service

2002/030 New data on *Phakopsora* rusts of grapevine and soybean

Phakopsora rusts are serious diseases of major crops such as cotton, soybean and grapevine in the tropics. Recently, new data has been made available on grapevine and soybean *Phakopsora* rusts:

- 1) the taxonomy of the fungus involved in grapevine and other vitaceous hosts has been clarified;
- 2) soybean rust is currently spreading in African countries.

Grapevine rust

The taxonomy of *Phakopsora* rusts occurring on grapevine and other vitaceous hosts in Asia has been clarified by Ono (2000), and three distinct species are now proposed:

- *P. ampelopsidis* which is restricted to *Ampelopsis*, *Cayratia* and *Cissus*. This fungus occurs in Asia (China, Japan, Korea and Philippines)
- *P. vitis* which is restricted to *Parthenocissus tricuspidata*. It occurs in Asia (China, Japan, Korea, Nepal).
- *P. euvitis* which is restricted to *Vitis* (mainly *V. labrusca*, *V. vinifera*, but also *V. amurensis*, *V. coignetiae*, *V. ficifolia*, *V. flexuosa*). *P. euvitis* is a heteroecious rust. Pycnidia and aecia have only been observed in Japan on *Meliosma myriantha* (in the small family Sabiaceae). In most other areas, only uredia and telia are produced on grapevine. *P. euvitis* occurs in Asia (Bangladesh, China, India, Indonesia, Japan, Korea, Democratic People's Republic of Korea, Myanmar, Philippines, Sri Lanka, Thailand). There are many records of grapevine leaf rust in the Americas (Colombia, Guatemala, Honduras, Jamaica, Mexico, USA). However, the distribution of *P. euvitis* needs further work, as in particular another species *P. uva* has been described from diseased grapevines in Colombia and Mexico. There is also one record from the Russian Far East. Finally, *P. euvitis* has been reported in 2001 in Australia, in the Darwin area which is not a major grapevine-growing area. It is thought that the disease came via air-borne spores from South East Asia.

Soybean rust

Two distinct *Phakopsora* species are involved in soybean rust: *P. pachyrhizi* which occurs in Asia and Oceania, and *P. meibomia* which occurs in the Americas. Infected soybean plants show foliar lesions, premature defoliation and yield reduction. In recent years, reports on outbreaks of soybean rust in several African countries have been made. In 1998, soybean rust was reported in Rwanda and Uganda, in 1999 in Mozambique, Nigeria and Zambia. In 2000 and 2001, *P. pachyrhizi* was identified in Nigeria (Oniyo region Oyo state) and in South Africa (KwaZulu-Natal). *P. pachyrhizi* also occurs in Ghana, Sierra Leone, and Tanzania.

Note: The *Phakopsora* pathogens on soybean are tropical, requiring in particular long periods of high humidity for their development. They therefore do not present any particular risk to the EPPO region. Concerning *Phakopsora euvitis*, although it is reported to be more severe in



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tropical and subtropical regions than in temperate areas, the EPPO Secretariat felt that *P. euvitidis* could be added to the EPPO Alert List to draw countries' attention to this potentially dangerous pathogen.

Source: CABI draft datasheets on *Phakopsora ampelopsidis*, *P. euvitidis*, *P. meibomiaea*, *P. pachyrhizi*, *P. vitis*.

Leu, L.S. (1988) Rust. In: Compendium of grapevine diseases (ed. by Pearson, C.R.; Goheen, A.C.) pp 28-30. APS, St Paul, Minnesota, USA.

Ono, Y. (2000) Taxonomy of the *Phakopsora ampelopsidis* species complex on vitaceous hosts in Asia including a new species, *P. euvitidis*.

Mycologia, **92(1)**, 154-173 (abst.).

Sinclair, J.B.; Hartman, G.L. (1999) Soybean rust. In: Compendium of soybean diseases. 4th edition (ed. by Hartman, G.L.; Sinclair, J.B.; Rupe, J.C.) pp 25-26. APS, St Paul, Minnesota, USA.

ProMed postings. [http:// www.promedmail.org](http://www.promedmail.org)

Phakopsora sp. Soybean rust – Nigeria (2001-03-09)

Phakopsora sp. Soybean rust – Africa (2001-03-09)

Phakopsora sp. Soybean rust – Africa (02) (2001-03-10)

Phakopsora sp. Soybean rust – South Africa (2001-03-13)

Phakopsora sp. Soybean rust – South Africa (confirmed) (2001-03-22)

Phakopsora sp. Soybean rust – South Africa (02) (2001-04-05)

Phakopsora euvitidis, leaf rust, grapes - Australia (NT) (2001-08-03)

Phakopsora sp. Soybean rust – South Africa (03) (2001-12-13)

Phakopsora sp. Soybean rust – South Africa (2002-02-07)

Additional key words: new records, taxonomy

Computer codes: PHAKME, PHAKPA, PHAKSP, PHLLAM, PHLLAM

2002/031 *Phakopsora euvitidis*: Addition to the EPPO Alert List

Considering new data on the taxonomy of grapevine rust and the importance of the disease, the EPPO Secretariat adds *Phakopsora euvitidis* to the EPPO Alert List (see EPPO RS 2002/030).

Phakopsora euvitidis – grapevine rust

Why

Recent taxonomic studies partly clarified the situation of *Phakopsora* species causing grapevine rust. It now appears that the pathogen which is responsible for grapevine rust in Asia is *Phakopsora euvitidis* (and not *P. ampelopsidis* nor *P. vitis* which are restricted to other host plants). As *P. euvitidis* can cause a serious grapevine disease, the EPPO Secretariat adds it to the Alert List.



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Where	<p>Asia: Bangladesh, China (Anhui, Fujian, Gansu, Guangdong, Guangxi, Guizhou, Hong Kong, Hunan, Jiangsu, Jiangxi, Shaanxi, Shandong, Sichuan), India (Maharashtra, Tamil Nadu, Uttar Pradesh), Indonesia (Java), Japan (Hokkaido, Honshu, Kyushu, Ryukyu islands, Shikoku), Korea, Democratic People's Republic of Korea, Myanmar, Philippines, Sri Lanka, Taiwan, Thailand). There is one record in the Russian Far East. In 2001, <i>P. euvitis</i> was reported in Australia in the Darwin area (Northern Territory). There are many records of grapevine leaf rusts in the Americas but they were either described under other names or the pathogen could not be definitely identified, but none appeared to be <i>P. vitis</i>.</p>
On which plants	<p><i>Vitis</i> (mainly <i>V. labrusca</i>, <i>V. vinifera</i>, but also <i>V. amurensis</i>, <i>V. coignetiae</i>, <i>V. ficifolia</i>, <i>V. flexuosa</i>). <i>P. euvitis</i> is a heteroecious rust. Pycnidia and aecia have only been observed in Japan on <i>Meliosma myriantha</i>. In most other areas, only uredia and telia are produced on grapevine.</p>
Damage	<p>On grapevine, yellowish to brownish lesions of various shapes and sizes appear of the leaves. Yellowish orange masses of urediniospores are produced on the lower leaf side, with dark necrotic spots on the upper surface. Heavy infection causes early senescence of the leaves and premature leaf fall. The disease can cause poor shoot growth, reduction of fruit quality and yield loss. On <i>Meliosma myriantha</i>, pale yellowish, circular or orbicular lesions appear of the leaves. Small orange-brown dots appear on the underside of the leaf with black lesions on the upper surface.</p>
Transmission	<p>Spores of <i>P. euvitis</i> can easily be transported by wind and air-currents. Mycelium may persist in grapevine shoots during winter and then urediniospores formed on these shoots become the primary infection source.</p>
Pathway	<p>Plants for planting of <i>Vitis</i> from countries where <i>P. euvitis</i> occurs. However, in many European countries, the import of <i>Vitis</i> material from outside the region is prohibited.</p>
Possible risks	<p>Grapevine is an important crop in many European countries, and the possible introduction of a new disease requiring additional treatments should be avoided. <i>P. euvitis</i> occurs mainly in tropical and subtropical areas and it is reported that it is more serious in these areas than in temperate areas. More data is needed on the situation of this disease in temperate areas (e.g. in USA). More data is also needed on its distribution in the Americas, as it has not yet been clarified yet what was the fungus species present there due to previous taxonomic confusions. Control methods are apparently available (use of tolerant or resistant cultivars) and application of fungicides.</p>
Source(s)	<p>CABI draft datasheets on <i>Phakopsora ampelopsidis</i>, <i>P. euvitis</i>, and <i>P. vitis</i>. Leu, L.S. (1988) Rust. In: Compendium of grapevine diseases (ed. by Pearson, C.R.; Goheen, A.C.) pp 28-30. APS, St Paul, Minnesota, USA. ProMed postings. http://www.promedmail.org. <i>Phakopsora euvitis</i>, leaf rust, grapes - Australia (NT) (2001-08-03) Department of Business, Industry and Resource Development of Australia Web site .Grapevine leaf rust. http://www.nt.gov.au/dpif/plants/plant_health/litchfield.shtml</p>

EPPO RS 2002/030
Panel review date

-

Entry date 2002-02



EPPO *Reporting Service*

2002/032 Description of a new subspecies of *Dendroctonus pseudotsugae* from Mexico

A new subspecies of *Dendroctonus pseudotsugae* (EPPO A1 quarantine pest) has been described from Mexico, and called *Dendroctonus pseudotsugae barragani*. It differs from *D. pseudotsugae* by 10 anatomical features, in the manner in which groups of eggs are laid, and in the species of entomophagous and scolytid insects which are associated with it. Insects were collected from the Sierra Madre Occidental Mountains in Chihuahua, on *Pseudotsuga menziesii* var. *glauca*.

Source: Furniss, M.M. (2001) A new subspecies of *Dendroctonus* (Coleoptera: Scolytidae) from Mexico.
Annals of the Entomological Society of America, 94(1), 21-25.

Additional key words: taxonomy

Computer codes: DENCPS, MX



EPPO *Reporting Service*

2002/033 Workshop on the detection of strawberry viruses: recent advances in molecular diagnostics

A Workshop on the detection of strawberry viruses: recent advances in molecular diagnostics will be organized by the Institute of Plant molecular Biology of the Czech Academy of Sciences on the 2002-09-06/08, in České Budejovice, Czech Republic (it will take place immediately before the 6th Conference of European Foundation for Plant Pathology, 2002-09-09/14, Prague, Czech Republic).

The Workshop will focus on economically important strawberry viruses and their detection by molecular methods. It will include a practical course on virus detection by NASBA and PCR, and their comparison with the current methods used (e.g. biological indexing, symptomatology etc.). The workshop is intended for plant protection services, institutions involved in certification of healthy planting material and control of quarantine pests, and producers.

Contact: Dr Josef Spak (Director)
Institute of Plant Molecular Biology
Academy of Sciences of the Czech Republic
Branisovska 31
37005 Ceske Budejovice
Czech Republic
Tel: +420 38 5300357
Fax: +420 38 5300356
E-mail: spak@umbr.cas.cz
<http://www.umbr.cas.cz/strawberry>

Source: **EPPO Secretariat, 2002-03.**

Additional key words: conference



EPPO Reporting Service

2002/034 EPPO report on notifications of non-compliance (detection of regulated pests)

The EPPO Secretariat has gathered the notifications of non-compliance (as they are now called by FAO ISPM no. 13) received since the previous report (EPPO RS 2001/170) for 2001 from the following countries: Belgium, Germany, Greece, Italy, Netherlands, Spain; and for 2002 from the following countries Algeria, Austria, Belgium, Denmark, Estonia, Finland, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Malta, Netherlands, Norway, Poland, Portugal, Slovenia, Spain, Sweden, Switzerland, 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.

2001 interceptions

Pest	Consignment	Type of commodity	Country of origin	C. of destination	nb
<i>Fusarium</i>	<i>Polyscias</i>	Plants for planting	Costa Rica	Italy	1
<i>Guignardia citricarpa</i>	<i>Citrus reticulata</i>	Fruits	Brazil	Netherlands	1
	<i>Citrus sinensis</i>	Fruits	Brazil	Netherlands	1
	<i>Citrus sinensis</i>	Fruits	South Africa	Netherlands	15
	<i>Citrus sinensis</i>	Fruits	Swaziland	Netherlands	1
	<i>Citrus sinensis</i>	Fruits	Zimbabwe	Netherlands	1
<i>Helicoverpa armigera</i>	<i>Dianthus</i>	Cut flowers	Israel	Germany	1
<i>Liriomyza</i>	Compositae	Cut flowers	Israel	Belgium	1
Thysanoptera	<i>Dendrobium</i>	Cut flowers	Thailand	Germany	2

• Fruit flies

Pest	Consignment	Country of origin	C. of destination	nb
<i>Bactrocera</i> (non-European species)	<i>Psidium guajava</i>	Egypt	Germany	1
<i>Ceratitis capitata</i>	<i>Citrus reticulata</i>	Argentina	Netherlands	1
Non-European Tephritidae	<i>Citrus sinensis</i>	Uruguay	Netherlands	1
	<i>Pyrus communis</i>	South Africa	Netherlands	1



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- Wood

Pest	Consignment	Type of commodity	Country of origin	C. of destination	nb
<i>Bursaphelenchus xylophilus</i> , grub holes > 3mm	Coniferae	Wood packing material	China	Germany	1
<i>Coleoptera (larvae)</i>	<i>Quercus</i>	Wood and bark	USA	Spain	1
Grub holes > 3mm	Unspecified	Wood packing material	China	Germany	4

2002 interceptions

Pest	Consignment	Type of commodity	Country of origin	C. of destination	nb
<i>Ambrosia</i>	<i>Glycine max</i>	Stored products	Germany	Poland	1
	<i>Glycine max</i>	Stored products	Netherlands	Poland	1
	<i>Helianthus annuus</i>	Stored products	Hungary	Poland	4
	<i>Helianthus annuus</i>	Stored products	Ukraine	Poland	3
	<i>Sinapis alba, Helianthus annuus</i>	Stored products	Slovakia	Poland	1
<i>Ambrosia</i>	<i>Zea mays</i>	Stored products	Hungary	Poland	2
<i>Ambrosia artemisiifolia</i>	<i>Zea mays</i>	Stored products	Hungary	Lithuania	7
	<i>Zea mays</i>	Stored products	Ukraine	Lithuania	8
<i>Aphelenchoides fragariae</i>	<i>Astilbe</i>	Plants for planting	Netherlands	Poland	2
	<i>Peonia</i>	Plants for planting	Netherlands	Poland	2
<i>Bemisia (suspect tabaci)</i>	<i>Verbena</i>	Cuttings	Israel	United Kingdom	1
<i>Bemisia tabaci</i>	<i>Dendranthema morifolium</i>	Cut flowers	Spain	United Kingdom	1
	<i>Euphorbia pulcherrima</i>	Pot plants	(Spain)	Portugal	2
	<i>Euphorbia pulcherrima</i>	Pot plants	Unknown	Portugal	2
	<i>Hypericum</i>	Cut flowers	Israel	United Kingdom	1
	<i>Lantana</i>	Plants for planting	Egypt	Netherlands	1
	<i>Lisianthus</i>	Cut flowers	Israel	Belgium	1
	<i>Manihot esculenta</i>	Vegetables	Cameroon	Ireland	1
	<i>Manihot esculenta</i>	Vegetables	Nigeria	United Kingdom	1
	<i>Ocimum basilicum</i>	Vegetables	Thailand	Ireland	1
	<i>Syngonium podophyllum</i>	Plants for planting	Belgium	United Kingdom	1
	<i>Trachelium</i>	Cut flowers	Netherlands	United Kingdom	1
	<i>Euphorbia pulcherrima</i>	Plants for planting	Netherlands	United Kingdom	1
<i>Solidago hybrida</i>	Cut flowers	Israel	United Kingdom	2	
<i>Clavibacter michiganensis</i> subsp. <i>sepedonicus</i>	<i>Solanum tuberosum</i>	Ware potatoes	Poland	Latvia	2
	<i>Solanum tuberosum</i>	Ware potatoes	Poland	Lithuania	3
<i>Clavibacter michiganensis</i> subsp. <i>sepedonicus</i> , <i>Ditylenchus destructor</i>	<i>Solanum tuberosum</i>	Ware potatoes	Belarus	Lithuania	1
	<i>Solanum tuberosum</i>	Ware potatoes	Poland	Lithuania	2
<i>Cuscuta</i>	<i>Medicago sativa</i>	Seeds	Italy	Poland	1
	<i>Trifolium</i>	Seeds	Italy	Poland	1
Pest	Consignment	Type of commodity	Country of origin	C. of destination	nb
<i>Ditylenchus destructor</i>	<i>Solanum tuberosum</i>	Ware potatoes	Belarus	Lithuania	1
	<i>Solanum tuberosum</i>	Ware potatoes	Moldova	Lithuania	1



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<i>Frankliniella occidentalis</i>	<i>Dendranthema</i>	Cut flowers	Italy	Malta	2
<i>Fusarium</i>	<i>Polyscias</i>	Plants for planting	Costa Rica	Italy	1
<i>Globodera rostochiensis</i>	<i>Solanum tuberosum</i>	Ware potatoes	Croatia	Slovenia	6
<i>Helicoverpa armigera</i>	<i>Dianthus</i>	Cut flowers	Kenya	Netherlands	1
	<i>Dianthus</i>	Cut flowers	South Africa	Netherlands	1
	<i>Phaseolus</i>	Vegetables	Kenya	United Kingdom	1
	<i>Pisum sativum</i>	Vegetables	Kenya	Netherlands	1
<i>Iva</i>	<i>Fagopyrum esculentum</i>	Stored products	Ukraine	Poland	1
<i>Iva, Ambrosia</i>	<i>Panicum miliaceum</i>	Stored products	Ukraine	Poland	1
<i>Leptinotarsa decemlineata</i>	<i>Petroselinum crispum</i>	Vegetables	Italy	United Kingdom	1
<i>Liriomyza</i>	<i>Ocimum basilicum</i>	Vegetables	Thailand	Denmark	19
<i>Liriomyza huidobrensis</i>	<i>Beta vulgaris, Trigonella foenum-graecum</i>	Vegetables	Cyprus	United Kingdom	1
	<i>Coriandrum sativum</i>	Vegetables	Cyprus	United Kingdom	1
	<i>Coriandrum sativum</i>	Vegetables	Thailand	Ireland	1
	<i>Dendranthema</i>	Cut flowers	Netherlands	Estonia	1
	<i>Dendranthema</i>	Cut flowers	South Africa	Netherlands	1
	<i>Pisum sativum</i>	Vegetables	Kenya	United Kingdom	1
	<i>Pisum sativum</i>	Vegetables	Zimbabwe	United Kingdom	1
	<i>Trigonella foenum-graecum</i>	Vegetables	Cyprus	United Kingdom	1
<i>Liriomyza huidobrensis, Helicoverpa armigera</i>	<i>Pisum sativum</i>	Vegetables	Kenya	United Kingdom	1
<i>Maconellicoccus hirsutus, Ferrisia virgata</i>	<i>Annona</i>	Fruits	India	United Kingdom	1
<i>Meloidogyne</i>	<i>Livistona rotundifolia</i>	Plants for planting	Sri Lanka	Germany	1
	<i>Rosa</i>	Plants for planting	Denmark	Norway	1
<i>Monilia fructicola</i>	<i>Mangifera indica</i>	Fruits	Ecuador	Italy	1
<i>Mycosphaerella linicola</i>	<i>Linum usitatissimum</i>	Stored products	Ukraine	Poland	2
<i>Opogona sacchari</i>	<i>Dracaena</i>	Plants for planting	Honduras	Netherlands	1
	<i>Ravena rivularis</i>	Plants for planting	Netherlands	United Kingdom	1
<i>Phoma exigua</i> var. <i>foveata</i>	<i>Solanum tuberosum</i>	Ware potatoes	Belgium	Lithuania	1
	<i>Solanum tuberosum</i>	Ware potatoes	Denmark	Lithuania	1
<i>Phyllocnistis</i> (suspected)	<i>Leucadendron</i>	Cut flowers	South Africa	United Kingdom	1
<i>Pineus boernerii</i>	<i>Pinus nigra</i>	Plants for planting	Netherlands	United Kingdom	1



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Pest	Consignment	Type of commodity	Country of origin	C. of destination	nb
<i>Pseudaulacaspis cockerelli</i> , <i>Opogona sacchari</i> (suspected)	<i>Thrinax radiata</i>	Plants for planting	Netherlands	United Kingdom	1
<i>Puccinia horiana</i>	<i>Dendranthema</i>	Cut flowers	Italy	Malta	2
<i>Ralstonia solanacearum</i>	<i>Solanum tuberosum</i>	Ware potatoes	Turkey	Greece	1
<i>Sitophilus oryzae</i>	<i>Triticum aestivum</i>	Stored products	Hungary	Poland	1
<i>Spoladea recurvalis</i>	<i>Amaranthus</i>	Vegetables	Nigeria	United Kingdom	1
<i>Tetranychus</i>	<i>Dianthus</i>	Cut flowers	Unknown	Greece	1
	<i>Dianthus, Aster</i>	Cut flowers	Israel	Greece	1
	<i>Rosa</i>	Cut flowers	(Ecuador)	Greece	1
	<i>Rosa</i>	Cut flowers	Israel	Greece	1
	<i>Rosa</i>	Cut flowers	South Africa	Greece	2
	<i>Rosa</i>	Cut flowers	Zimbabwe	Greece	4
<i>Thrips</i>	<i>Rosa</i>	Cut flowers	(Brazil)	Portugal	1
<i>Thrips palmi</i>	<i>Dendrobium</i>	Cut flowers	Thailand	Belgium	1
	<i>Dendrobium</i>	Cut flowers	Thailand	Netherlands	3
	<i>Dendrobium</i>	Cut flowers	Thailand	United Kingdom	1
	<i>Orchidaceae</i>	Cut flowers	Thailand	Belgium	1
<i>Tribolium</i>	<i>Zea mays</i>	Stored products	Hungary	Poland	1
<i>Tribolium, Rhizopertha dominica</i>	<i>Triticum aestivum</i>	Stored products	Slovakia	Poland	1
<i>Xanthomonas vesicatoria</i>	<i>Capsicum annuum</i>	Seeds	USA	Austria	1

• Fruit flies

Pest	Consignment	Country of origin	C. of destination	nb
Non-European Tephritidae	<i>Prunus persica</i>	South Africa	Netherlands	1

• Wood

Pest	Consignment	Type of commodity	Country of origin	C. of destination	nb
<i>Aphelenchoides</i>	Coniferous	Wood packing material	USA	Germany	1
<i>Cryphonectria parasitica</i>	<i>Castanea sativa</i>	Wood and bark	Georgia	Italy	1
	<i>Castanea sativa</i>	Wood and bark	Russia	Italy	1
Grub holes > 3mm	Coniferous	Wood packing material	China	Austria	1
	Coniferous	Wood packing material	China	Germany	4
	Coniferous	Wood packing material	USA	Austria	1
	Coniferous	Wood packing material	USA	Germany	2
	Coniferous and non-coniferous	Wood packing material	China	Ireland	1
	<i>Larix sibirica</i>	Wood and bark	Russia	Austria	5
Pest	Consignment	Type of commodity	Country of origin	C. of destination	nb



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Grub holes > 3mm	<i>Larix sibirica</i>	Dunnage	Russia	Austria	1
	Non-coniferous	Wood packing material	USA	Austria	4
	Unspecified	Wood packing material	China	Denmark	1
	Unspecified	Wood packing material	China	Denmark	2
<i>Pyrrhactia isabella</i>	<i>Quercus</i>	Wood and bark	USA	Spain	2
<i>Rotylenchus, grub holes > 3mm</i>	Coniferous	Wood packing material	USA	Germany	1

- **Bonsais**

Pest	Consignment	Country of origin	C. of destination	nb
<i>Dialeurodes citri</i>	<i>Ligustrum</i>	China	United Kingdom	2
<i>Dialeurodes citri,</i> <i>Aleuroclava jasmini</i>	<i>Gardenia</i>	China	United Kingdom	1
<i>Pratylenchus</i>	<i>Juniperus chinensis</i>	Japan	Germany	1

Source: EPPO Secretariat, 2002-02.