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2010/095 *Diabrotica virgifera virgifera* eradicated from Belgium

On 2010-04-30, the NPPO of Belgium officially declared the eradication of *Diabrotica virgifera virgifera* (Coleoptera: Chrysomelidae - EPPO A2 List), after 3 consecutive years of negative survey results. Control measures applied in Belgium were taken in accordance with the EU Commission Decision 2003/766/EC of 24 October 2003 on emergency measures to prevent the spread within the Community of *Diabrotica virgifera* Le Conte.

D. virgifera virgifera was found for the first time in Belgium in 2003 (EPPO RS 2003/143) near the Brussels airport 'Zaventem' and the military airport 'Melsbroek'. In total 69 beetles were captured in 2003 in 23 traps on 17 maize plots. Three focus zones and one surrounding safety zone were delimited in 2003. In 2004, two additional focus zones were demarcated and the safety zone had to be enlarged. In total 7 beetles were captured in 2004 on 5 maize plots. These 5 fields were situated in the demarcated safety zone of 2003 and 4 of them were cultivated in monoculture. No captures were made in 2005. Because several beetles were captured in 2005 in the Netherlands next to the border with Belgium, a part of the safety zone related to this outbreak in the Netherlands was demarcated in Belgium (an area of intensive maize monoculture). In 2006, a total of 691 pheromone traps (PALs) with floral bait were deployed (361 for the national survey, 289 in demarcated areas and 41 in buffer zones). The national survey was carried out from the 1st of July until the 1st of October. The traps were inspected once a fortnight and pheromone was replaced once every 4 weeks. No beetles were captured in 2006 and the NPPO of Belgium considered that the 2004 outbreaks were eradicated.

In 2007, only one demarcated area remained at the border with the Netherlands. A total of 512 pheromone traps with floral bait were deployed from 1st July to 1st October (416 for the national survey and 96 in the demarcated area). There were no findings in 2007.

In 2008, a total of 467 pheromone traps were deployed from 1st July to 1st October in areas at risk. Since the last outbreak of *D. virgifera virgifera* dated from 2004 in Belgium and from 2005 in the Netherlands close to the border, there were no demarcated focus and safety zones left. Nevertheless, a reinforced monitoring of the former demarcated zones in Zaventem and Limburg was included in the national survey. Traps of the type PALs with floral bait and of the type PAL with sex pheromones were used. As in the previous monitoring campaigns, the traps were inspected once a fortnight, and pheromone was replaced once every 4 weeks. For the third consecutive year, there were no findings in 2008.

In 2009, monitoring continued and a total of 423 pheromone traps were deployed in the areas at risk as well as in the former demarcated zones. No beetles were captured. A similar monitoring programme is planned in 2010. In case new findings occur in the future, an emergency plan was drawn up to ensure a quick and adequate reaction to achieve total eradication again.

The pest status of *Diabrotica virgifera virgifera* in Belgium is officially declared as: Absent: pest eradicated.

Source: NPPO of Belgium, 2010-04.

Agence fédérale pour la sécurité de la chaîne alimentaire (AFSCA)
http://www.afsca.be/sp/pv_phyto/chry-mais_fr.asp (only in French/Dutch)

Additional key words: absence, eradication

Computer codes: DIABVI, BE

2010/096 Eradication of *Xanthomonas fragariae* in the United Kingdom

Xanthomonas fragariae (EPPO A2 List) was detected for the first time in the United Kingdom in 2004. A grower in the South-East of England had contacted the NPPO in October 2004 after observing suspect symptoms in a strawberry crop (*Fragaria ananassa* cv. 'Elsanta') some weeks after harvest had finished. Plant samples were collected and were found to be infected by *X. fragariae*. Following this initial identification, further inspections of other crops at the infected farm were undertaken. These revealed infection in two additional fields on either side of the original Elsanta crop. Tracing-back studies showed that the infected plants had been imported from the Netherlands in May 2004. On arrival the infected lot of Elsanta had been split between 4 farms. The other 3 farms were located in the South-East of England, in South-West England and in Scotland. Crops on these farms were inspected for symptoms and samples were taken for testing. Symptoms of *X. fragariae* were observed at the second site in South-East England. No visual symptoms were observed in South-West England or Scotland, but following testing the presence of *X. fragariae* was suspected at the site in Scotland. The infected plants in Scotland were all destroyed voluntarily by the grower prior to completion of testing. There was no evidence of infection at the site in South-West England, further inspections and testing were carried out throughout 2005 but infection was not confirmed and the crop was destroyed at the end of its fruit bearing season in 2005. At both infected sites in South-East England, official control measures were taken. Growers did not destroy all plants immediately but chose to maintain their crops until harvest with strict hygiene measures to prevent any further spread. Strawberry crops grown on these farms continued to be monitored during the following growing seasons and *X. fragariae* was no longer found. It is considered that *X. fragariae* has been eradicated from the United Kingdom.

The situation of *Xanthomonas fragariae* in the United Kingdom can be described as follows: Absent, detected for the first time in 2004 in 3 production sites (2 in South-East England and 1 in Scotland), eradicated.

Source: Matthews-Berry SS, Reed PJ (2009) Eradication of the first outbreak of *Xanthomonas fragariae* in the United Kingdom. *Bulletin OEPP/EPPO Bulletin* 39(2), 171-174.

Additional key words: new record, eradication

Computer codes: XANTFR, GB

2010/097 *Rhynchophorus ferrugineus* found again in Liguria, Italy

As reported in EPPO RS 2008/093, *Rhynchophorus ferrugineus* (Coleoptera: Curculionidae - EPPO A2 List) was found in August 2007 in Liguria, Northern Italy. The pest was caught in the municipality of Bordighera, in the province of Imperia. Another finding was reported in 2009 in the municipality of Albenga, in the province of Savona (RS 2009/209). During a recent survey, the regional PPO of Liguria found the pest in 2 palm trees in the municipality of Ligueglia (province of Savona) and Sanremo (province of Imperia), respectively.

Source: NPPO of Italy, 2010-03.

Additional key words: detailed record

Computer codes: RHYCFE, IT

2010/098 *Paysandisia archon* found in Lazio region (IT)

In 2010, *Paysandisia archon* (Lepidoptera: Castniidae - EPPO A2 List) was found in the region of Lazio, Italy. The pest was discovered in a garden centre in the municipality of Albano Laziale (Roma province) on several plants of *Chamaerops* sp. showing symptoms of infestation. Surveys will be carried out by the regional PPO of Lazio to determine the extent of the infestation in order to decide on appropriate containment measures.

Source: NPPPO of Italy, 2010-04.

Additional key words: detailed record

Computer codes: PAYSAR, IT

2010/099 *Ralstonia solanacearum* detected in Sweden

The NPPPO of Sweden recently informed the EPPO Secretariat that *Ralstonia solanacearum* (EPPO A2 List) was detected in 2 lots of ware potatoes (*Solanum tuberosum* cv. 'Lanorma') produced in Sweden in 2009. Samples taken from all other potato lots from the 2 places of production concerned were not infected by *R. solanacearum*. The identity of the bacterium was confirmed by using the test scheme of the EU Directive 2006/63/EC. These findings followed a notification from the Dutch NPPPO which indicated a clonal link between seed potatoes delivered to Sweden and contaminations found in the Netherlands. It can be recalled that a few cases of *R. solanacearum* were reported more than 30 years ago in Sweden but were subsequently eradicated. Phytosanitary measures have been taken in accordance with the EU directive 98/57/EC to eradicate the disease. The situation of *Ralstonia solanacearum* in Sweden can be described as follows: Transient, detected in 2 production sites, under eradication.

Source: NPPPO of Sweden, 2010-03.

Additional key words: new record

Computer codes: PSDMSO, SE

2010/100 *Ralstonia solanacearum* detected in the United Kingdom

In the United Kingdom, *Ralstonia solanacearum* (EPPO A2 List) was detected on ware potatoes (*Solanum tuberosum* cv. 'Lanorma') grown in 2009 in 1 production site in Cornwall (South-West of England). This finding followed a notification from the Dutch NPPPO which indicated a clonal link between seed potatoes delivered to the United Kingdom and contaminations found in the Netherlands. Phytosanitary measures have been taken to eradicate the disease in the United Kingdom.

The pest status of *Ralstonia solanacearum* in the United Kingdom is officially declared as: Transient, actionable, under eradication.

Source: IPPC website, FAO. Official Pest Reports from the United Kingdom (2010-02-09) Potato brown rot outbreak.
[https://www.ippc.int/index.php?id=122&tx_pestreport_pi1\[showUid\]=216919](https://www.ippc.int/index.php?id=122&tx_pestreport_pi1[showUid]=216919)

Additional key words: detailed record

Computer codes: PSDMSO, GB

2010/101 *Ralstonia solanacearum* found on glasshouse tomatoes in Sardegna (IT)

A new outbreak of *Ralstonia solanacearum* (EPPO A2 List) was detected in 2009 in a glasshouse tomato crop (*Lycopersicon esculentum* cv. 'Cuore di bue' grafted on Beaufort) in Sardegna, Italy. Surveys were conducted in 4 glasshouses (called As-1, As-2, As-3 and As-4 in this study) where plants showing bacterial wilt symptoms were observed. The percentage of symptomatic plants ranged from 10% to 50%. In one of these glasshouses (As-1), *R. solanacearum* had been detected in 2007 (Loreti *et al.*, 2008) and subsequently eradicated by uprooting and burning tomato plants, methyl bromide treatment and decontamination of stored water with a sodium chloride solution. Samples from plants, soil and water were collected from As-1 and As-2, whereas only plant samples were collected from As-3 and As-4. Results of the analysis (isolation on semi-selective media, biochemical and IF tests, inoculation of tobacco leaves) showed that *R. solanacearum* was only found in plant and soil samples collected from glasshouse As-2 (neighbouring glasshouse As-1), and phylotype characterization showed that all recovered isolates belonged to phylotype II. The authors considered that this new outbreak raised serious concerns because the causes underlying the introduction and dissemination of *R. solanacearum* in Sardegna are still unknown.

Source: Fiori M, Gallelli A, Fiori V, Ligios V, Loreti S (2009) A new outbreak of *Ralstonia solanacearum* on tomato in Sardinia. *Plant Pathology* 91(4 suppl.), S4.103.

Loreti S, Fiori M, De Simone D, Falchi G, Gallelli A, Schiaffino A, Ena S (2008) Bacterial wilt, caused by *Ralstonia solanacearum*, on tomato in Italy. *Plant Pathology* 57(2), p. 368.

Additional key words: detailed record

Computer codes: PSDMSO, IT

2010/102 Detection of *Ralstonia solanacearum* biovar 1 in Portugal

In Portugal, potato brown rot caused by *Ralstonia solanacearum* (EPPO A2 List) was considered to be rather widespread at the beginning of the 20th century but eradication measures subsequently lead to its disappearance. In the late 1990s, *R. solanacearum* race 3 biovar 2 reappeared in potato and tomato fields (including solanaceous weeds), and it was also detected in surface water used for irrigation. In late May 2007, potato plants showing symptoms of brown rot were observed in several irrigated fields in the Baixo Mondego region (Central Portugal). Laboratory analysis (isolation on semi-selective medium, IF, PCR, sequencing, bioassays) confirmed the presence of *R. solanacearum* biovar 1 in potato samples. However, the bacterium was not detected in water samples collected from infected fields and their vicinity. This is the first time that *R. solanacearum* biovar 1 is reported from Portugal.

The origin of this outbreak is not known, although it is suspected that the bacterium may have been introduced with imports of latently infected potato seeds from abroad. The use of the same agricultural machinery by different farmers may then have played an important role in disseminating the bacterium to neighbouring potato fields. It was also noted that infected potato fields were located near ornamental and forest nurseries which might have been possible sources of contamination. Specific phytosanitary measures were taken to eradicate the disease.

The situation of *Ralstonia solanacearum* in Portugal can be described as follows: Transient, biovar 1 strains detected in some potato fields (Baixo Mondego region), under eradication.

Source: Cruz L, Eloy M, Quirino F, Carrinho H (2008) *Ralstonia solanacearum* biovar 1 associated with a new outbreak of potato brown rot in Portugal. *Phytopathologia Mediterranea* 47(2), 87-91.

Additional key words: detailed record

Computer codes: PSDMSO, PT

2010/103 Studies on *Ralstonia solanacearum* in Cameroon

Studies were conducted on *Ralstonia solanacearum* (EPPO A2 List) in Cameroon in 2005. 110 strains of *R. solanacearum* were recovered from wilted tomato (*Lycopersicon esculentum*), sweet and hot pepper (*Capsicum annuum* and *C. chinense*), potato (*Solanum tuberosum*), huckleberry (*Solanum scabrum*), *Amaranthus* spp. and sesame (*Sesamum* spp.) plants. Bacterial wilt is widely distributed in Cameroon, but results showed that disease incidence and severity were higher in the lowlands near Yaoundé and in the highlands near Bafoussam which are the main vegetable cropping areas of Cameroon. Out of these 110 strains, 44 representative strains were characterized according to the new phylotype classification system*. Strains isolated from Cameroon clustered into phylotypes I (Asian), II (American) and III (African). Lowland tomato strains (regions with humid forests) belonged to phylotype I and were quite homogeneous. Strains belonging to phylotype II were more diverse but included race 3/biovar 2 strains (associated with potato brown rot and tomato wilt). Strains from potatoes growing in the highlands of West Cameroon (areas with a temperate climate) fell into both phylotype II (race 3/biovar 2) and phylotype III. It is felt that these strains attacking potato and tomato crops in temperate highlands could pose an economic threat throughout Central Africa. The EPPO Secretariat previously had no information on the situation of *R. solanacearum* in Cameroon.

The situation of *Ralstonia solanacearum* in Cameroon can be described as follows: Present, widespread.

* New hierarchical classification scheme proposed by Fegan and Prior (2005) based on molecular characteristics (sequence analysis of ITS region, endoglucanase (*egl*) gene, and *hrpB* gene).

- Phylotype I: strains from Asia belonging to biovars 3, 4 and 5.
- Phylotype II: strains from America belonging to biovar 1/race 1, biovar 1/race 2 (Moko disease), biovar 2/race 3 (that includes potato and tomato strains found in temperate areas), biovar 2T.
- Phylotype III: strains from Africa and the Indian Ocean belonging to biovars 1 and 2T.
- Phylotype IV: strains from Indonesia, some strains from Japan and Australia belonging to biovars 1, 2, and 2T.

Fegan M, Prior P (2005) How complex is the *Ralstonia solanacearum* species complex? In C Allen, P Prior and AC Hayward (Ed.) *Bacterial wilt disease and the *Ralstonia solanacearum* species complex*. APS Press (US), pp 449-461.

Source: Mahbou Somo Toukam G, Cellier G, Wicker E, Guilbaud C, Kahane R, Allen C, Prior P (2009) Broad diversity of *Ralstonia solanacearum* strains in Cameroon. *Plant Disease* 93(11), 1123-1130.

Additional key words: new record

Computer codes: PSDMSO, CM

2010/104 Situation of *Ralstonia solanacearum* in Guatemala

The diversity and distribution of *Ralstonia solanacearum* (EPPO A2 List) strains was studied in Guatemala. In 2004 and 2005, 59 strains were isolated from different regions and from different crops: banana (*Musa* spp.), solanaceous plants (*Lycopersicon esculentum*, *Solanum americanum*, *S. melongena*, *S. tuberosum*), and *Pelargonium*. These isolates were characterized using physiological and molecular tests to place the strains within the biovar and the phylotype/sequevar classification systems. Results showed that three distinct types of *R. solanacearum* were present in Guatemala:

- 1) phylotype I, sequevar 14, strains infecting *S. americanum*, tomatoes and aubergines in areas located at moderate elevations (100-1000 m altitude);
- 2) phylotype II, sequevar 6 (race 2), strains causing Moko disease in lowland banana plantations (departments of Escuintla, Izabal, Quetzaltenango, and San Marcos);
- 3) phylotype II, sequevar 1 (race 3 biovar 2), strains causing brown rot of potatoes, Southern wilt of *Pelargonium* (1 sample from Guatemala province) and bacterial wilt of glasshouse tomatoes at high elevations. On tomatoes, *R. solanacearum* was detected in samples from Chiquimula, and Guatemala provinces. It is noted that tomato growers had noticed that tomato wilt was becoming a problem during the last decade in the highlands. On potatoes, *R. solanacearum* was found in the provinces of Baja Verapaz, Chimaltenango, Jalapa, Quetzaltenango, and Sololá.

This study confirms that *R. solanacearum* occurs in Guatemala and is causing problems in banana, tomato and potato cultivation.

Another aspect of this study was to determine if tomato fruits from naturally infected plants contained detectable bacteria and could disseminate *R. solanacearum*. So far, the bacterium has been isolated only from roots, stems, tubers and leaves of infected plants. A sensitive enrichment method (using CIPEB medium) did not detect the pathogen in fruits from naturally infected commercial tomato plants but could detect *R. solanacearum* in 6% of fruits from a wilt-resistant experimental hybrid. Despite the rareness of fruits containing the bacterium, it is noted that these results indicate that the pathogen is able to move from the vascular system of the plant to the fruit under some circumstances which remain to be explained.

Source: Sanchez Perez A, Mejia L, Fegan M, Allen C (2008) Diversity and distribution of *Ralstonia solanacearum* strains in Guatemala and rare occurrence of tomato fruit infection. *Plant Pathology* 57(2), 320-331.

Additional key words: detailed record

Computer codes: PSDMSO, GT

2010/105 *Clavibacter michiganensis* subsp. *sepedonicus* found in Turkey

During the 2007 survey on seed potatoes in Turkey, 336 tuber samples from the Kayseri province (Central Anatolian region) were tested for the presence of ring rot (*Clavibacter michiganensis* subsp. *sepedonicus*) and brown rot (*Ralstonia solanacearum* - both EPPO A2 List). As a result, 3 samples were found to be infected by *C. michiganensis* subsp. *sepedonicus*. It is recalled that during an intensive survey carried out in 1988-1989, potato-growing areas of Turkey were found free from ring rot. According to the authors, this is the first record of *C. michiganensis* subsp. *sepedonicus* in Turkey. Strict control measures have been taken in contaminated and potentially contaminated fields.

The situation of *Clavibacter michiganensis* subsp. *sepedonicus* in Turkey can be described as follows: Present, first detected in 2007 in a small number of potato samples collected from the Kayseri province (Central Anatolia), under official control.

Source: Altundağ Ş, Karahan A, Kılıç AO, Özakman M (2009) First report of *Clavibacter michiganensis* subsp. *sepedonicus* causing bacterial ring rot in Turkey. *Plant Pathology* 58(4), p 794.

Additional key words: new record

Computer codes: CORBSE, TR

2010/106 *Diaphania perspectalis* continues to spread in Europe

Diaphania perspectalis (Lepidoptera: Pyralidae - EPPO Alert List) is a pest of *Buxus* originating from Asia which was reported for the first time in Europe in 2007. It was discovered in Baden-Württemberg, Germany (EPPO RS 2007/215). Since this initial record, *D. perspectalis* has been observed in other European countries, sometimes causing severe defoliation to *Buxus* plants in urban environments (parks, gardens, cemeteries). So far, it has not been found in natural stands of *Buxus*. The origin of this introduction into Europe remains unknown but it is hypothesized that a possible entry point was the Rhine port in Weil-am-Rhein (Germany) and nearby Basel (Switzerland) where large shipments of Chinese imports are arriving regularly.

Germany

D. perspectalis was first noticed on *Buxus* shrubs and hedges in the urban area of Weil-am-Rhein. The widespread occurrence in Weil-am-Rhein already observed in 2007 suggested that the species has been present there probably 2-3 years before its detection. *D. perspectalis* was then found in the city of Kehl and its surroundings. In 2008 and 2009, further reports were made in Nordrhein-Westphalen, Niedersachsen, Hessen (south) and Sachsen. A small infestation was also detected in Bayern in 2008 but data is lacking on the current situation in this area.

Switzerland

D. perspectalis was first found in summer 2007 at several locations near Basel. Since then, it has rapidly spread to other cantons. Several reports from Aargau, Graubünden, Jura, Solothurn, Thurgau, Vaud, Zürich and Zug have been sent to an Internet forum (Lepiforum) and some of them may require further confirmation. It is considered that such a rapid spread surpasses the flight ability of the insect and can only be explained by trade or movements of infested plants.

France

D. perspectalis was observed for the first time in France in August 2008. Adults were observed, attracted by street lights, in the city of Saint-Louis (department of Haut-Rhin, Alsace), approximately 4 km away from the area (Weil-am-Rhein) where it was discovered in Germany. At that time, damage to *Buxus* plants could also be observed. In October 2008, the pest was found in Strasbourg (Bas-Rhin, close to the outbreak of Kehl in Germany), first in the 'Parc de l'Orangerie' and shortly after in the Strasbourg Botanical Garden on *Buxus sempervirens* and *B. colchica* (new host record). Since then, several other findings have been made in Alsace. In August 2009, the pest was observed in private gardens in Orsay (Essonne department, Ile-de-France region).

Netherlands

In September 2008, the NPPO of the Netherlands reported the presence of *D. perspectalis* at 4 different locations (RS 2008/197). So far, no serious damage has been reported from the Netherlands.

United Kingdom

In September 2008, 3 adult moths were found in 2 separate locations in the south of England. Insects were caught in light traps at Icklesham (East Sussex) and Weybridge (Surrey). In 2009, a nursery in Surrey found larvae causing severe damage to *Buxus* plants. The origin of the introduction of *D. perspectalis* into the United Kingdom is not known.

Austria

The presence of the pest in Austria was reported in 2009 to Lepiforum and again in 2010. *D. perspectalis* has been observed in different localities in Vorarlberg, Steiermark, and in Vienna. These records may require further confirmation (as no other source of information could be found to confirm the pest presence) but they strongly suggest that *D. perspectalis* occurs in Austria.

Source: Billen W (2007) [*Diaphania perspectalis* (Lepidoptera: Pyralidae) - a new moth in Europe]. *Mitteilungen der Entomologischen Gesellschaft Basel* 57(2/4), 135-137 (abst.).

INTERNET (last accessed in 2010-05)

Fera. Plant pest fact sheet. Box tree caterpillar *Diaphania perspectalis*.

<http://www.fera.defra.gov.uk/plants/plantHealth/pestsDiseases/documents/boxTreeCaterpillar.pdf>

Lepiforum. *Neoglyphodes perspectalis* (Walker, 1859) - Buchsbaum-Zünsler.

http://www.lepiforum.de/cgi-bin/lepiwiki.pl?Neoglyphodes_Perspectalis

Société Alsacienne d'Entomologie. Société Entomologique de Mulhouse. Brua C. (undated) La pyrale du buis *Diaphania perspectalis* présence d'une nouvelle espèce envahissante en France.

http://sites.estvideo.net/sae/pyrale_du_buis.html

University of Basel. Department of Environmental Sciences. Conservation Biology. Media Release (2009-10-14) Wiederholte Einführung des Buchsbaumzünslers beschleunigt seine Ausbreitung.

<http://www.conservation.unibas.ch/news/buchsbaum/medien2.php?lang=de>

Additional key words: new record, detailed record

Computer codes: DPHNPE, AT, CH, DE, FR, GB, NL

2010/107 Chrysophtharta bimaculata: addition to the EPPO Alert List

The addition of *Chrysophtharta bimaculata* (Coleoptera: Chrysomelidae) to the EPPO Alert List has been suggested by the EPPO Panel on Phytosanitary Measures.

Chrysophtharta bimaculata (Coleoptera: Chrysomelidae) - Tasmanian eucalyptus leaf beetle**Why**

The EPPO Panel on Phytosanitary Measures suggested that *Chrysophtharta bimaculata* could be added to the EPPO Alert List. This insect is a serious defoliator of eucalyptus plantations in Tasmania (Australia). In particular, it was noted that this pest was intercepted 4 times in 2004 by the United Kingdom on tree ferns (*Dicksonia antarctica*) imported from Australia, these plants are not hosts but could transport the pest (hitchhiking).

Where	<p>EPPO region: Absent.</p> <p>Oceania: Australia (Tasmania, Victoria). <i>C. bimaculata</i> is considered as a major pest in Tasmania but apparently, no economic damage has been reported from Victoria.</p>
On which plants	<p><i>Eucalyptus</i> spp., mainly <i>E. regnans</i>, <i>E. obliqua</i>, <i>E. delegatensis</i>, <i>E. nitens</i> but the pest has also been recorded on <i>E. dalrympleana</i> and <i>E. globulus</i>.</p>
Damage	<p><i>C. bimaculata</i> is a defoliator of eucalyptus, both adults and larvae feed on foliage and heavy defoliation results in a characteristic ‘broom-topped’ appearance of the trees. Although mature eucalyptus can be attacked by <i>C. bimaculata</i>, young trees are particularly vulnerable to defoliation. Damage results in poor tree development, slow growth, and ultimately in a reduction of timber quantity and quality. Repetition of defoliation over several growing seasons can lead to tree dieback and even mortality in severe cases. It has been estimated that insect attacks reduced wood volume of <i>E. regnans</i> by almost 30% after 8 years of repeated defoliation. In Tasmania, it has become necessary to develop integrated pest management programmes against <i>C. bimaculata</i> in eucalyptus plantations. The main strategy is to allow natural enemies to act against the pest and only apply insecticides (e.g. synthetic pyrethroids or <i>Bacillus thuringiensis</i> var. <i>tenebrionis</i>) when necessary. Natural enemies, such as <i>Cleobora mellyi</i> and <i>Harmonia conformis</i> (Coleoptera: Coccinellidae), <i>Chauliognathus lugubris</i> (Coleoptera: Cantharidae), <i>Anagonia rufifacies</i> and <i>Paropsivora</i> sp. (Diptera: Tachinidae) have been reported to limit populations of <i>C. bimaculata</i> in Tasmania.</p> <p>Adults of <i>C. bimaculata</i> are dome-shaped beetles of approximately 9 x 7 mm in size, with two black markings on the pronotum. The body colour is variable from dark red brown when they first emerge to pale green (in summer). <i>C. bimaculata</i> overwinters as diapausing adults in various shelters (e.g. under the bark of dead eucalyptus, bark crevices, clumps of herbaceous plants such as <i>Gahnia grandis</i> (Cyperaceae)). Egg-laying occur in 2 to 3 peaks: usually, one in late spring (end of November/December in Tasmania) and another in late summer (end of January/February). Eggs are laid in batches (rows of approximately 25 eggs) on the upper surface of the leaf. Larvae are dark green to black, and highly gregarious. There are 4 larval instars, the last stage reaching a length of 12-14 mm. Most damage is caused by older larvae (approximately 90% of food intake occurs during the 3rd and 4th instars). Approximately 1 month after egg laying, larvae fall to the ground and form pre-pupal cells in leaf litter. Pupation occurs after 5 to 9 days, and adults emerge 12 to 15 days later.</p> <p>Pictures can be viewed on the Internet: http://www.ento.csiro.au/aicn/name_s/b_1026.htm http://eprints.utas.edu.au/224/2/02chapters1to3.pdf (page 8)</p>
Transmission	<p>Adults can fly but no data is available on the insect potential for natural spread. <i>Eucalyptus</i> plant material can disseminate the pest over long distances. The UK interceptions of <i>C. maculata</i> on <i>Dicksonia antartica</i> (non-host plant) imported from Australia show that hitchhiking is indeed a possible pathway.</p>
Pathway	<p>Plants for planting, cut foliage, wood of eucalyptus from Australia. The insect can also be transported as a hitchhiker on other plant species from Australia.</p>
Possible risks	<p>Eucalyptus are grown in the EPPO region for forestry, the paper industry and ornamental purposes (amenity trees and cut foliage). There are large plantations of eucalyptus (in particular <i>E. globulus</i> and <i>E. camaldulensis</i>) in Spain, Portugal and North Africa. <i>C. bimaculata</i> is a serious defoliator of eucalyptus plantations which can impact tree development and wood production. It could probably survive outdoors in parts of the EPPO region where eucalyptus are grown. A UK PRA has shown that <i>C. bimaculata</i> could establish outdoors in areas having a similar climate to Tasmania (e.g. temperate oceanic areas such as North-Western Spain, Western France). Interestingly, another defoliator <i>Chrysophtharta agricola</i> (formerly placed in the genus <i>Paropsis</i>) has recently emerged as a significant pest of eucalyptus in Tasmania and Victoria, coincident with an increase in <i>E. nitens</i></p>

and *E. globulus* plantations. It seems desirable to avoid the introduction of such defoliators in the EPPO region.

Source(s) Baker SC, Elek JA, Bashford R, Paterson SC, Madden J, Battaglia M (2003) Inundative release of coccinellid beetles into eucalypt plantations for biological control of chrysomelid leaf beetles. *Agricultural and Forest Entomology* 5(2), 97-106 (abst.).

Bashford R (1999) Predation by ladybird beetles (coccinellids) on immature stages of the *Eucalyptus* leaf beetle *Chrysophtharta bimaculata* (Olivier). *Tasforests*, 77-86.

Candy SG (2000) Predictive models for integrated pest management of the leaf beetle *Chrysophtharta bimaculata* in *Eucalyptus nitens* plantations in Tasmania. PhD thesis, University of Tasmania, 472 pp. <http://eprints.utas.edu.au/224/>

Clarke AR, Shohet D, Patel VS, Madden JL (1998) Overwintering sites of *Chrysophtharta bimaculata* (Olivier) (Coleoptera: Chrysomelidae) in commercially managed *Eucalyptus obliqua* forests. *Australian Journal of Entomology* 37(2), 149-154 (abst.).

Elek JA (1997) Assessing the impact of leaf beetles in eucalypt plantations and exploring options for their management. *Tasforests* 9, 139-154 (abst.).

Elliott HJ, Bashford R, Greener A (1993) Effects of defoliation by the leaf beetle, *Chrysophtharta bimaculata*, on growth of *Eucalyptus regnans* plantations in Tasmania. *Australian Forestry* 56(1), 22-26 (abst.).

FERA (2005) Pest Risk Analysis for *Chrysophtharta bimaculata* (Oliver). <http://www.fera.defra.gov.uk/plants/plantHealth/pestsDiseases/documents/Chrysoph.pdf>

Leon A (1989) The Tasmanian eucalyptus leaf beetle, *Chrysophtharta bimaculata*: an overview of the problem and current control methods. *Tasforests*, 33-37

Nahrung HF (2004) Biology of *Chrysophtharta agricola* (Coleoptera, Chrysomelidae), a pest of *Eucalyptus* plantations in south-eastern Australia. *Australian Forestry* 67(1), 59-66.

EPPO RS 2010/107
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2010/108 American plum line pattern virus detected again in Italy

The NPPO of Italy recently informed the EPPO Secretariat that the *American plum line pattern virus* (*Ilarvirus*, APLPV - EPPO A1 List) has been detected in the Piemonte region. During indexing studies carried out in spring 2009 on flowering cherry trees (*Prunus serrulata*), 2 symptomatic plants were noticed in the municipality of Verbania (province of Verbano-Cusio-Ossola). Laboratory analysis (ELISA and RT-PCR) confirmed the presence of APLPV. It can be recalled that APLPV had been detected on a small number of *Prunus* samples collected from Puglia and Sicilia, as well as from other Mediterranean countries (EPPO RS 2003/118).

EPPO note: more studies are needed to understand better the current situation of this North American virus in Europe and in particular to assess its impact on *Prunus* crops.

Source: NPPO of Italy, 2010-03.

Myrta A, Sanchez-Navarro, Potere O, Boscia D, Pallás V (2009) First report of *American plum line pattern virus* in flowering cherry in Italy. *Journal of Plant Pathology* 91(4 suppl.), S4.75.

Additional key words: detailed record

Computer codes: APLPV0, IT

2010/109 EPPO report on notifications of non-compliance

The EPPO Secretariat has gathered below the notifications of non-compliance for 2009 received since the previous report (EPPO RS 2010/088). Notifications have been sent to EPPO via Europhyt for the EU countries and Switzerland. The EPPO Secretariat has selected notifications of non-compliance made because of the detection of 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. 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 (*).

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
<i>Anoplophora chinensis</i>	<i>Acer palmatum</i>	Plants for planting	China	Netherlands	1
	<i>Cercis</i>	Plants for planting	China	Cyprus	1
<i>Bemisia tabaci</i>	<i>Acanthaceae</i>	Plants for planting	Singapore	United Kingdom	1
	<i>Artemisia dracunculus</i>	Plants for planting	Israel	United Kingdom	1
	<i>Artemisia dracunculus</i>	Vegetables	Israel	United Kingdom	3
	<i>Dipladenia</i>	Plants for planting	Israel	United Kingdom	1
	<i>Echinodorus</i>	Plants for planting	Singapore	United Kingdom	1
	<i>Eryngium foetidum</i>	Vegetables	Thailand	France	22
	<i>Eryngium foetidum</i>	Vegetables	Vietnam	France	4
	<i>Eryngium foetidum,</i>	Vegetables	Thailand	France	3
	<i>Ocimum sanctum</i>				
	<i>Euphorbia pulcherrima</i>	Plants for planting	Denmark	United Kingdom	1
	<i>Euphorbia pulcherrima</i>	Cuttings	Ethiopia	Netherlands	1
	<i>Euphorbia pulcherrima</i>	Plants for planting	Ethiopia	Sweden	1
	<i>Euphorbia pulcherrima</i>	Plants for planting	Germany	Ireland	3
	<i>Euphorbia pulcherrima</i>	Plants for planting	Germany	United Kingdom	5
	<i>Euphorbia pulcherrima</i>	Cuttings	Kenya	Sweden	1
	<i>Euphorbia pulcherrima</i>	Plants for planting	Kenya	Sweden	4
	<i>Euphorbia pulcherrima</i>	Plants for planting	Netherlands	Ireland	1
	<i>Euphorbia pulcherrima</i>	Plants for planting	Netherlands	United Kingdom	3
	<i>Gypsophila</i>	Cut flowers	Israel	France	1
	<i>Hygrophila angustifolia</i>	Plants for planting	Singapore	United Kingdom	2
	<i>Hygrophila salicifolia</i>	Plants for planting	Singapore	France	1
	<i>Hypericum</i>	Cut flowers	Netherlands	United Kingdom	1
	<i>Hypericum</i>	Cut flowers	Zimbabwe	Sweden	1
	<i>Limnophila</i>	Vegetables	Sri Lanka	France	2
	<i>Manihot esculenta</i>	Vegetables	Congo	France	4
	<i>Ocimum basilicum</i>	Vegetables (leaves)	Ethiopia	United Kingdom	1
	<i>Ocimum basilicum</i>	Vegetables (leaves)	Israel	France	1
	<i>Ocimum basilicum</i>	Vegetables (leaves)	Israel	Ireland	4
	<i>Ocimum basilicum</i>	Vegetables (leaves)	Israel	Switzerland	5
	<i>Ocimum sanctum</i>	Vegetables (leaves)	Thailand	France	5
	<i>Ocimum sanctum</i>	Vegetables (leaves)	Thailand	United Kingdom	1
	<i>Pelargonium</i>	Cuttings	Israel	United Kingdom	2
	<i>Solidago</i>	Cut flowers	Egypt	Netherlands	1
<i>Solidago</i>	Cut flowers	Israel	Belgium	1	
<i>Thymus vulgaris</i>	Plants for planting	Israel	United Kingdom	1	
<i>Trachelium</i>	Cut flowers	Israel	France	2	
<i>Bemisia tabaci, Thripidae</i>	<i>Ocimum sanctum</i>	Vegetables (leaves)	Ethiopia	United Kingdom	1
<i>Botrytis</i>	<i>Cucumis melo</i>	Fruits	Brazil	Spain	2

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
Bruchidae	<i>Cassia</i>	Seeds	Ecuador	Germany	1
<i>Clavibacter michiganensis</i> subsp. <i>michiganensis</i>	<i>Lycopersicon esculentum</i>	Seeds	China*	France	1
Coccidae	<i>Annona</i>	Fruits	Pakistan	Italy	1
Coleoptera	<i>Allium sativum</i>	Vegetables	China	Spain	3
	<i>Triticum durum</i>	Seeds	Moldova	Italy	4
<i>Cryptophlebia leucotreta</i>	<i>Citrus paradisi</i>	Fruits	South Africa	Spain	7
	<i>Citrus sinensis</i>	Fruits	South Africa	Spain	17
<i>Diaphania indica</i>	<i>Momordica</i>	Vegetables	Bangladesh	Italy	1
<i>Elsinoe australis</i>	<i>Citrus unshiu</i>	Fruits	Uruguay	Spain	1
<i>Elsinoe, Parlatoria ziziphi</i>	<i>Citrus latifolia</i>	Fruits	Brazil	Spain	1
Entomobryidae	<i>Ananas comosus</i>	Fruits	Brazil	Spain	5
<i>Ephestia</i>	<i>Coffea</i>	Stored products	India	Spain	1
	<i>Cyperus esculentus</i>	Stored products	Burkina Faso	Spain	1
	<i>Glycine max</i>	Stored products	Brazil	Spain	1
	<i>Pistacia vera</i>	Stored products	USA	Spain	1
	<i>Prunus dulcis</i>	Stored products	USA	Spain	1
<i>Erwinia amylovora</i>	<i>Cotoneaster</i>	Plants for planting	Netherlands	United Kingdom	1
<i>Guignardia citricarpa</i>	<i>Citrus limon</i>	Fruits	Argentina	Spain	3
	<i>Citrus reticulata</i>	Fruits	South Africa	United Kingdom	1
	<i>Citrus reticulata</i>	Fruits	Uruguay	Spain	1
	<i>Citrus sinensis</i>	Fruits	Argentina	Spain	11
	<i>Citrus sinensis</i>	Fruits	Brazil	Netherlands	12
	<i>Citrus sinensis</i>	Fruits	Brazil	Portugal	4
	<i>Citrus sinensis</i>	Fruits	Brazil	Spain	12
	<i>Citrus sinensis</i>	Fruits	South Africa	Netherlands	2
	<i>Citrus sinensis</i>	Fruits	South Africa	Spain	6
	<i>Citrus sinensis</i>	Fruits	South Africa	United Kingdom	1
	<i>Citrus sinensis</i>	Fruits	Zimbabwe	Netherlands	1
<i>Guignardia citricarpa</i> , <i>Ecdytolopha aurantianum</i>	<i>Citrus sinensis</i>	Fruits	Brazil	Spain	1
<i>Helminthosporium solani</i>	<i>Solanum tuberosum</i>	Ware potatoes	Bangladesh	United Kingdom	1
<i>Hirschmanniella</i>	<i>Vallisneria americana</i>	Plants for planting	Singapore	France	1
Lepidoptera	<i>Momordica</i>	Vegetables	Bangladesh	Italy	1
	<i>Piper sarmentosum</i>	Vegetables (leaves)	Vietnam	Czech Republic	1
<i>Leucinodes orbonalis</i>	<i>Solanum aethiopicum</i>	Vegetables	Ghana	Germany	10
	<i>Solanum melongena</i>	Vegetables	Bangladesh	Germany	1
	<i>Solanum melongena</i>	Vegetables	Ghana	Germany	1
	<i>Solanum melongena</i>	Vegetables	Thailand	Czech Republic	1
	<i>Solanum melongena</i>	Vegetables	Thailand	Sweden	2

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
<i>Liriomyza</i>	<i>Ocimum americanum</i>	Vegetables (leaves)	Thailand	France	4
	<i>Ocimum americanum</i> ,	Vegetables (leaves)	Thailand	France	1
	<i>Ocimum basilicum</i>				
	<i>Ocimum basilicum</i>	Vegetables (leaves)	Israel	France	1
	<i>Ocimum basilicum</i>	Vegetables (leaves)	Israel	Ireland	2
	<i>Ocimum basilicum</i>	Vegetables (leaves)	Thailand	Czech Republic	1
	<i>Ocimum basilicum</i>	Vegetables (leaves)	Thailand	France	19
	<i>Ocimum sanctum</i>	Vegetables (leaves)	Thailand	France	1
	<i>Perilla frutescens</i>	Vegetables (leaves)	Vietnam	Czech Republic	1
	<i>Spinacia</i>	Vegetables (leaves)	Congo	France	2
<i>Liriomyza huidobrensis</i>	<i>Bupleurum</i>	Cut flowers	Netherlands	Ireland	1
	<i>Eryngium</i>	Cut flowers	Zimbabwe*	Netherlands	1
	<i>Gypsophila</i>	Cut flowers	Kenya*	Netherlands	2
	<i>Gypsophila paniculata</i>	Cut flowers	Kenya*	Netherlands	1
<i>Liriomyza sativae</i>	<i>Gypsophila</i>	Cut flowers	Israel	Belgium	2
	<i>Ocimum americanum</i>	Vegetables (leaves)	Thailand	France	1
	<i>Ocimum americanum</i>	Vegetables (leaves)	Thailand	Sweden	2
	<i>Ocimum americanum</i> ,	Vegetables (leaves)	Thailand	France	1
	<i>Ocimum basilicum</i>				
	<i>Ocimum basilicum</i>	Vegetables (leaves)	Kenya	France	1
	<i>Ocimum basilicum</i>	Vegetables (leaves)	Thailand	France	5
	<i>Spinacia</i>	Vegetables (leaves)	Congo	France	1
<i>Trigonella</i>	Vegetables (leaves)	India	France	1	
<i>Liriomyza trifolii</i>	<i>Apium graveolens</i>	Vegetables	Thailand	Sweden	2
	<i>Solidago</i>	Cut flowers	Israel	Belgium	1
<i>Meloidogyne</i>	<i>Adonidia</i>	Plants for planting	USA	Belgium	1
<i>Parasaissetia nigra</i>	<i>Citrus</i>	Leaves	Thailand	Netherlands	1
	<i>Mangifera</i>	Fruits	Surinam*	Netherlands	1
<i>Parasaissetia nigra</i> , <i>Bemisia tabaci</i>	<i>Manihot esculenta</i>	Vegetables	Nigeria	United Kingdom	1
<i>Pepino mosaic virus</i>	<i>Lycopersicon esculentum</i>	Seeds	China*	France	2
	<i>Lycopersicon esculentum</i>	Fruits	Morocco*	United Kingdom	1
	<i>Lycopersicon esculentum</i>	Fruits	Netherlands	Austria	1
	<i>Lycopersicon esculentum</i>	Fruits	Poland	Latvia	1
	<i>Lycopersicon esculentum</i>	Fruits	Spain (Canary Isl.)	United Kingdom	1
<i>Phytophthora ramorum</i>	<i>Rhododendron</i>	Plants for planting	Netherlands	Sweden	1
<i>Plum pox virus</i>	<i>Prunus domestica</i>	Plants for planting	Germany	Netherlands	1
<i>Potato spindle tuber viroid</i>	<i>Datura</i>	Plants for planting	Italy	Greece	1
<i>Ralstonia solanacearum</i>	<i>Solanum tuberosum</i>	Ware potatoes	Bangladesh	United Kingdom	1
<i>Rhynchophorus ferrugineus</i>	<i>Phoenix dactylifera</i>	Plants for planting	Egypt	Spain	1
<i>Scirtothrips dorsalis</i>	<i>Momordica charantia</i>	Vegetables	India	United Kingdom	1
<i>Spodoptera littoralis</i>	<i>Rosa</i>	Cut flowers	India	Netherlands	1
	<i>Rosa</i>	Cut flowers	Uganda	Netherlands	1

Pest	Consignment	Type of commodity	Country of origin	Destination	nb	
<i>S. littoralis</i> (cont.)	<i>Rosa</i>	Cut flowers	Zambia	Netherlands	1	
	<i>Rosa</i>	Cut flowers	Zimbabwe	Netherlands	4	
<i>Spodoptera litura</i>	<i>Aranda, Dendrobium, Vanda</i>	Cut flowers	Thailand	Netherlands	1	
	<i>Asparagus</i>	Vegetables	Thailand	Netherlands	1	
	<i>Rosa</i>	Cut flowers	India	Netherlands	1	
	<i>Rosa</i>	Cut flowers	India	Netherlands	1	
Thripidae	<i>Ocimum</i>	Vegetables (leaves)	Thailand	United Kingdom	1	
	<i>Solanum melongena</i>	Vegetables	Dominican Rep.	United Kingdom	2	
	<i>Solanum melongena</i>	Vegetables	Ghana	United Kingdom	1	
<i>Thrips</i>	<i>Dendrobium</i>	Cut flowers	Thailand	Italy	1	
	<i>Voacanga africana</i>	Stored products	Ghana	Spain	1	
<i>Thrips palmi</i>	<i>Citrus</i>	Leaves	Thailand	Netherlands	1	
	<i>Dendrobium</i>	Cut flowers	Thailand	Belgium	1	
	<i>Dendrobium</i>	Cut flowers	Thailand	Italy	6	
	<i>Dendrobium</i>	Cut flowers	Thailand	Netherlands	2	
	<i>Dendrobium</i>	Cut flowers	Thailand	Sweden	1	
	<i>Mangifera, Solanum melongena</i>	Fruits and vegetables	Surinam	Netherlands	1	
	<i>Momordica</i>	Vegetables	Dominican Rep.	United Kingdom	5	
	<i>Momordica, Solanum melongena</i>	Vegetables	Dominican Rep.	United Kingdom	1	
	<i>Orchidaceae</i>	Cut flowers	Singapore	Austria	1	
	<i>Orchidaceae</i>	Cut flowers	Thailand	Austria	5	
	<i>Solanum melongena</i>	Vegetables	Dominican Rep.	Netherlands	1	
	<i>Solanum melongena</i>	Vegetables	Dominican Rep.	United Kingdom	1	
	<i>Solanum melongena</i>	Vegetables	Thailand	Netherlands	2	
	<i>Vigna</i>	Vegetables (leaves)	Dominican Rep.	Spain	1	
	<i>Thrips palmi, Bemisia tabaci</i>	<i>Ocimum basilicum</i>	Vegetables (leaves)	Thailand	United Kingdom	1
	<i>Thrips, Acari</i>	<i>Dianthus</i>	Cut flowers	Ecuador	Spain	1
Thysanoptera	<i>Apium graveolens, Momordica charantia</i>	Vegetables	Thailand	Switzerland	1	
	<i>Dendrobium</i>	Cut flowers	Thailand	France	1	
	<i>Dendrobium</i>	Cut flowers	Thailand	Switzerland	6	
	<i>Dracaena, Orchidaceae</i>	Plants and cut flowers	Thailand	Switzerland	1	
	<i>Mangifera indica, Momordica charantia</i>	Fruits and vegetables	Dominican Rep.	Switzerland	1	
	<i>Momordica charantia</i>	Vegetables	Dominican Rep.	France	1	
	<i>Momordica charantia</i>	Vegetables	Thailand	France	11	
	<i>Momordica charantia</i>	Vegetables	Thailand	Switzerland	4	
	<i>Momordica charantia, Orchidaceae</i>	Vegetables	Thailand	Switzerland	1	
	<i>Momordica charantia, Solanum melongena</i>	Vegetables	Thailand	France	1	
	<i>Momordica charantia, Solanum melongena</i>	Vegetables	Thailand	Switzerland	1	
	<i>Ocimum sanctum</i>	Vegetables (leaves)	Thailand	France	1	
	<i>Orchidaceae</i>	Cut flowers	Thailand	Switzerland	1	
	<i>Solanum melongena</i>	Vegetables	Dominican Rep.	Switzerland	1	

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
Thysanoptera (cont.)	<i>Solanum melongena</i>	Vegetables	Mauritius	France	1
	<i>Solanum melongena</i>	Vegetables	Thailand	France	8
<i>Tomato apical stunt viroid</i>	<i>Solanum jasminoides</i>	Cuttings	Netherlands	Belgium	1
Tortricidae	<i>Pyrus communis</i>	Fruits	Argentina	Spain	1
<i>Tribolium</i>	<i>Cyperus esculentus</i>	Vegetables	Mali	Spain	1
	<i>Cyperus esculentus</i>	Stored products	Niger	Spain	1
	<i>Cyperus esculentus</i>	Vegetables	Senegal	Spain	1
<i>Tuta absoluta</i>	<i>Lycopersicon esculentum</i>	Fruits	Morocco	Spain	7
	<i>Lycopersicon esculentum</i>	Fruits	Spain	United Kingdom	2
<i>Xanthomonas</i>	<i>Citrus, Momordica</i>	Fruits and vegetables	Bangladesh	United Kingdom	1
<i>Xanthomonas axonopodis</i> pv. <i>citri</i>	<i>Citrus</i>	Fruits	Bangladesh	United Kingdom	4
	<i>Citrus</i>	Leaves	Thailand	Netherlands	2
	<i>Citrus aurantifolia</i>	Fruits	Bangladesh	United Kingdom	2
	<i>Citrus limon</i>	Fruits	Argentina	France	1
	<i>Citrus sinensis</i>	Fruits	Argentina	Spain	2
<i>Xanthomonas axonopodis</i> pv. <i>vesicatoria</i>	<i>Capsicum annuum</i>	Seeds	Chile	Denmark	1
	<i>Lycopersicon esculentum</i>	Seeds	China	Italy	1
<i>Xiphinema</i>	<i>Ficus carica</i>	Plants for planting	Iran	Germany	1

• Fruit flies

Pest	Consignment	Country of origin	Destination	nb
<i>Anastrepha</i>	<i>Mangifera indica</i>	Brazil	Spain	1
	<i>Mangifera indica</i>	Dominican Rep.	Netherlands	1
	<i>Mangifera indica</i>	Dominican Rep.	Spain	2
<i>Bactrocera</i>	<i>Mangifera</i>	Surinam	Netherlands	1
	<i>Momordica</i>	Bangladesh	Italy	1
	<i>Psidium</i>	Thailand	United Kingdom	1
<i>Bactrocera correcta</i>	<i>Psidium guajava</i>	Thailand	France	2
	<i>Syzygium samarangense</i>	Thailand	France	4
	<i>Ziziphus mauritiana</i>	Thailand	France	1
<i>Bactrocera cucurbitae</i>	<i>Momordica</i>	Pakistan	Italy	1
	<i>Momordica charantia</i>	Thailand	France	1
	<i>Trichosanthes cucumerina</i>	Mauritius	France	1
<i>Bactrocera dorsalis</i>	<i>Annona muricata</i>	Vietnam	France	5
	<i>Annona muricata, Annona squamosa</i>	Vietnam	France	1
	<i>Annona squamosa</i>	Thailand	France	3
	<i>Annona squamosa</i>	Vietnam	France	2
	<i>Mangifera indica</i>	Thailand	France	1

Pest	Consignment	Country of origin	Destination	nb
<i>B. dorsalis</i> (cont.)	<i>Mangifera indica</i>	Vietnam	France	1
	<i>Psidium guajava</i>	India	France	1
<i>Bactrocera invadens</i>	<i>Mangifera indica</i>	Cameroon	France	1
<i>Bactrocera latifrons</i>	<i>Capsicum annuum</i>	Thailand	France	2
	<i>Capsicum frutescens</i>	Thailand	France	3
<i>Ceratitis capitata</i>	<i>Cucurbita</i>	Argentina	Spain	2
	<i>Mangifera indica</i>	Brazil	France	2
Tephritidae (non-European)	<i>Annona squamosa</i>	Thailand	France	1
	<i>Annona squamosa</i>	Vietnam	France	1
	<i>Annona, Citrus, Mangifera, Momordica</i>	Vietnam	United Kingdom	1
	<i>Capsicum annuum</i>	Thailand	France	12
	<i>Capsicum frutescens</i>	Thailand	France	6
	<i>Citrus reticulata</i>	Uruguay	Spain	1
	<i>Mangifera</i>	Dominican Rep.	United Kingdom	1
	<i>Mangifera indica</i>	Dominican Rep.	United Kingdom	1
	<i>Mangifera indica</i>	Egypt	Netherlands	1
	<i>Mangifera indica</i>	Pakistan	France	2
	<i>Mangifera indica</i>	Pakistan	United Kingdom	1
	<i>Mangifera indica</i>	Vietnam	France	1
	<i>Momordica charantia</i>	Vietnam	France	1
	<i>Passiflora edulis</i>	Cameroon	Belgium	1
	<i>Solanum torvum</i>	Thailand	France	1
	<i>Syzygium samarangense</i>	Thailand	France	2
	<i>Syzygium samarangense</i>	Thailand	Germany	1
	<i>Voacanga africana</i>	Ghana	Spain	1
<i>Ziziphus mauritiana</i>	Thailand	France	1	

• Wood

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
Anobiidae	<i>Quercus</i>	Wood and bark	USA	Spain	2
<i>Anoplophora glabripennis</i>	Unspecified	Wood packing material (pallets)	China	Sweden	1
<i>Apriona germarii</i>	Unspecified	Wood packing material (crates)	China	Netherlands	1
Bostrichidae	Unspecified	Wood packing material	India	Germany	1
	Unspecified	Wood packing material (crates)	India	Germany	1
	Unspecified	Wood packing material (pallets)	India	Germany	2
	Unspecified	Wood packing material (crates)	Vietnam	Germany	1
Bostrichidae, Platypodidae, Scolytidae	<i>Copaifera religiosa</i>	Wood and bark	Gabon	Spain	1
<i>Bursaphelenchus</i>	<i>Pinus pinea</i>	Wood and bark	Portugal	Germany	1
	Unspecified	Wood packing material (pallets)	Belarus	Latvia	1

Pest	Consignment	Type of commodity	Country of origin	Destination	nb	
<i>Bursaphelenchus mucronatus</i>	Unspecified	Wood packing material (pallets)	Russia	Latvia	1	
<i>Bursaphelenchus xylophilus</i>	Unspecified	Wood packing material (crates)	Portugal	Sweden	1	
<i>Bursaphelenchus, Monochamus alternatus</i>	Unspecified	Wooden tables	China	Germany	1	
Cerambycidae	<i>Entandrophragma cylindricum</i>	Wood and bark	Cameroon	Spain	1	
	Unspecified	Dunnage	Brazil	Germany	1	
	Unspecified	Wood packing material (pallets)	Vietnam	Germany	1	
Coleoptera	<i>Liriodendron</i>	Wood and bark	USA	Spain	1	
	<i>Picea abies</i>	Wood and bark	Ukraine	Cyprus	1	
	<i>Pinus radiata</i>	Wood and bark	New Zealand	Spain	1	
	Unspecified	Wood packing material	India	Germany	1	
	Unspecified	Wood packing material (crates)	India	Germany	1	
<i>Crioceraphalus rusticus</i>	Unspecified	Wood packing material (pallets)	South Africa	Germany	1	
<i>Lyctus</i>	Unspecified	Wood packing material	India	Germany	1	
Nematoda	Unspecified	Wood packing material	Portugal	Finland	1	
Platypodidae, Scolytidae	Unspecified	Wood and bark	Gabon	Spain	1	
Scolytidae	<i>Chlorophora excelsa</i>	Wood and bark	Congo	Spain	2	
	<i>Copaifera salikounda, Chlorophora excelsa, Entandrophragma candollei</i>	Wood and bark	Congo	Spain	1	
	<i>Copaifera salikounda, Guarea cedrata</i>	Wood and bark	Congo	Spain	1	
	<i>Entandrophragma cylindricum</i>	Wood and bark	Central African Republic	Spain	1	
	<i>Entandrophragma cylindricum</i>	Wood and bark	Congo	Spain	1	
	<i>Entandrophragma cylindricum, Entandrophragma utile</i>	Wood and bark	Congo	Spain	2	
	<i>Populus</i>	Wood and bark	USA	Spain	1	
	Unspecified	Wood packing material	India	Germany	1	
	<i>Sinoxylon</i>	Unspecified	Wood packing material	India	Germany	1
		Unspecified	Wood packing material (crates)	India	Germany	4
Unspecified		Wood packing material (pallets)	India	Germany	2	
Unspecified		Wood packing material (pallets)	Indonesia	Germany	1	
Unspecified		Wood packing material (pallets)	Malaysia	Germany	1	
Unspecified		Wood packing material (pallets)	Vietnam	Belgium	1	
Unspecified		Wood packing material (pallets)	Vietnam	Germany	2	
Unspecified		Wood packing material (crates)	India	Germany	1	

- **Bonsais**

Pest	Consignment	Country of origin	Destination	nb
<i>Helicotylenchus</i>	<i>Ficus</i>	China	Netherlands	1
<i>Helicotylenchus dihystra</i> , <i>Pratylenchus brachyurus</i> , <i>Scutellonema</i>	<i>Serissa</i> , <i>Zanthoxylum</i> , <i>Zelkova</i>	China	United Kingdom	1
<i>Helicotylenchus dihystra</i> , <i>Trichodorus</i> , <i>Tylenchorhynchus</i>	<i>Zelkova</i>	China	United Kingdom	1

Source: EPPO Secretariat, 2010-04.