ORGANISATION EUROPEENNE
ET MEDITERRANEENNE
POUR LA PROTECTION DES PLANTES

EUROPEAN AND MEDITERRANEAN
PLANT PROTECTION
ORGANIZATION

EPPO

Reporting

Service

Paris, 2002-06-01 **Reporting Service 2002, No. 6**

CONTENTS

1, rue Le Nôtre
75016 Paris

Tel. : 33 1 45 20 77 94
Fax : 33 1 42 24 89 43

E-mail : hq@eppo.fr
Web : www.eppo.org

2002/090 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**

In a review on Pierce' disease (*Xylella fastidiosa* – EPPO A1 quarantine pest), it is noted that its efficient vector *Homolodisca coagulata* (Homoptera: Cicadellidae – EPPO Alert List) has been introduced into Tahiti, Polynésie française (Sforza & Purcell, 2002). **Present, no detail**.

In a review paper by Oliveira *et al*. (2001), the presence of *Bemisia tabaci* (EPPO A2 quarantine pest) is mentioned in Bolivia and Montserrat. The EPPO Secretariat had previously no data on the occurrence of *B. tabaci* in these two countries. **Present, no detail**.

- **Detailed records**

The 'B' biotype of *Bemisia tabaci* (EPPO quarantine pest) was first identified in Turkey in the autumn 2000. It was found in the eastern Mediterranean region near Adana and Içel on field vegetable crops. In this region, it is now a major pest of squash, bean, aubergine, *Euphorbia pulcherrima, Hibiscus rosa-sinensis*. By spring 2001, lower populations of *B. tabaci* biotype B were found on squash, melon, watermelon and cucumber but the pest has spread to all the eastern Mediterranean region (Ulusoy *et al*., 2002).

The 'B' biotype of *Bemisia tabaci* (EPPO quarantine pest) was found on samples of *Lantana camara* from Qalyubiya Governorate, Egypt (Abd-Rabou *et al*., 2001).

Clavibacter michiganensis subsp. *michiganensis* (EPPO A2 quarantine pest) was found in 2001, in six commercial fields (*Lycopersicon esculentum* cv. Target) in the eastern Anatolia region of Turkey. Although, it has been reported previously in Aegean and Mediterranean regions, this is the first report of the disease in the eastern Anatolia region. As only one cultivar was affected, it is suspected that contaminated seeds or transplants were the source of infection (Şahin, et al., 2002).

Severe outbreaks of *Tomato spotted wilt tospovirus* (EPPO A2 quarantine pest) are currently reported from Massachusetts, North Carolina and Virginia, US (Promed, 2002).

During winter 2000, *Tomato yellow leaf curl begomovirus* (EPPO A2 quarantine pest) was found for the first time in Islas Baleares, Spain. Both TYLCV-Is and TYLCV-Sar were detected in diseased tomatoes (Font *et al*., 2002).

- **New host plants**

Arabis mosaic nepovirus (EU Annexes) was isolated for the first time on *Choisya ternata* (Rutaceae). Affected plants showed abnormal stunting, apical die-back of young shoots (Mumford *et al*., 2002).

Source:

Abd-Rabou, S. ; Banks, G.K.; Markham, P.G. (2001) Silver leafing; esterase and RAPD-PCR analysis of a field population of *Bemisia tabaci* (Homoptera: Aleyrodidae) from Egypt.
Egyptian Journal of Agricultural Research, 79(1), 117-212.

Anonymous (2002) Tomato spotted wilt, tomato – USA (North Carolina), (Virginia) and (Massachusetts). ProMed postings of 2002-06- 21, 2002-06-24, 2002-06-26.
http://www.promedmail.org

Font, I.; Martínez-Culebras, P.; Gomila, J.; Jordá, C. (2002) First report of *Tomato yellow leaf curl virus* (TYLCV) in the Balearic Islands.
Journal of Plant Pathology, 84(1), p 69.

Mumford, R.A.; Blockley, A.L.; Jarvis, B.; Wright, D.M. (2002) Isolation of *Arabis mosaic virus* from Mexican orange blossom (*Choisya ternata*) in the UK.
Plant Pathology, 51(3), p 395.

Oliveira, M.R.V.; Henneberry, T.J.; Anderson, P. (2001) History, current status, and collaborative research projects for *Bemisia tabaci*.
Crop Protection 20(9), 709-723.

Şahin, F.; Uslu, H.; Kotan, R.; Donmes, M.F. (2002) Bacterial canker, caused by *Clavibacter michiganensis* ssp. *michiganensis*, on tomatoes in eastern Anatolia region of Turkey.
Plant Pathology, 51(3), p 399.

Sforza, R.; Purcell, A.H. (2002) La maladie de Pierce: quelle menace pour la vigne en Europe ?
Phytoma – La Défense des Végétaux, no. 550, 12-16.

Ulusoy, R.M.; Brown, J.K.; Bayhan, E. (2002) The 'B' biotype of *Bemisia tabaci* now established in Turkey.
EWSN Newsletter, no. 13, May 2002, p 4.

Additional key words: new records, detailed records, new host plants

Computer codes: ARMV00, BEMIAR, CORBMI, HOMLTR, TSWV00, TYLCV0, XYLEFA, EG, ES, PF, TR, US

EPPO *Reporting Service*

2002/091 Addition of *Heterodera glycines* to the EPPO Alert List

As reported in EPPO RS 2001/039 *Heterodera glycines* was found for the first time in Europe, in Italy. Although *H. glycines* is already listed as an A1 quarantine pest, the EPPO Working Party on Phytosanitary Regulations decided that this pest should specifically be added to the Alert List. The purpose is to warn all EPPO member countries about the potential threat that *H. glycines* represents to European soybean production.

Heterodera glycines – an A1 nematode introduced into the EPPO region

Why	*Heterodera glycines* has been found in Italy in 2000. The EPPO Working Party on phytosanitary regulations considered that this introduction represented a serious threat to European soybean production and that *H. glycines*, although already listed as an A1 quarantine pest, should be added to the EPPO Alert List to warn all EPPO member countries.
Where	**EPPO region**: Italy (found in 2000, in 3 soybean fields in Lombardia near Pavia), Egypt, Russia (Amur District in the Far East only). **Asia**: China (Hebei, Hubei, Heilongjiang, Henan, Jiangsu, Liaoning), Indonesia (Java only), Japan, Korea Democratic People's Republic, Korea Republic, Russia (Far East). **Africa**: Egypt. **North America**: Canada (Ontario), USA (Alabama, Arizona, Arkansas, Delaware, Florida, Georgia, Indiana, Illinois, Iowa, Kansas, Kentucky, Louisiana, Maryland, Michigan, Minnesota, Missouri, Mississippi, Nebraska, North Carolina, Ohio, Oklahoma, South Carolina, South Dakota, Tennessee, Texas, Virginia, Wisconsin). **South America**: Argentina, Brazil (Goias, Matto Grosso do Sul, Matto Grosso, Minas Gerais, Parana, Rio Grande do Sul, Sao Paulo), Colombia, Ecuador, Puerto Rico.
On which plants	Soybean (*Glycine max*) is the major economic host of *H. glycines*. Other cultivated hosts, mainly Fabaceae, are *Lespedeza* spp., *Lupinus albus*, *Penstemon* spp., *Phaseolus vulgaris*, *Vicia villosa*, *Vigna angularis* and *V. radiata*. Many weeds can be hosts of *H. glycines* (e.g. *Cerastium holosteoides*, *Lamium amplexicaule* and *Stellaria media)*.
Damage	*H. glycines* is a bisexual cyst-forming species which feeds on roots. Affected plants show stunting and discoloration (yellow dwarf disease). At low to moderate infestation levels, there is over-production of lateral roots. A low rate of nodulation may also be observed. In the field, there are three to five generations per year. Optimum development occurs at 23-28°C; development stops below 14°C and above 34°C. In the absence of a host, contents of cysts may remain viable in soil for 6-8 years. *H. glycines* is a major pest of soybean in Asia, Brazil and USA, causing significant crop losses and economic damage. In Japan, it interacts with the fungus *Phialophora gregata* on *Vigna angularis*, and in USA with *Fusarium solani* causing sudden death syndrome of soybean.
Pathway	Soil, plants for planting of host plants from countries where *H. glycines* occurs.
Possible risks	Considering the existing distribution of *H. glycines* in Asia and the Americas, and its recent introduction in Italy, it seems most likely that it can survive in the EPPO region. Soybean is an expanding crop in the EPPO region, and this may continue as there is an increasing need for plant proteins, in particular for animal feed. Therefore, it is necessary to prevent any further spread of this pest and if possible to achieve eradication in Italy.
Source(s)	EPPO/CABI (1996) *Heterodera glycines*. In Quarantine Pests for Europe. 2nd edition (Ed. by Smith, I.M.; McNamara, D.G.; Scott, P., P.R.; Holderness, M.), CABI, Wallingford, UK, 607-611. EPPO Reporting Service nos: 95/029, 96/157 96/158, 96/197, 97/005, 97/084, 99/126, 2000/022, 2001/039.

EPPO RS 2002/091
Panel review date - Entry date 2002-06

EPPO *Reporting Service*

2002/092 Update on the situation of *Pepino mosaic potexvirus* in the EPPO region

In order to better understand the present situation of *Pepino mosaic potexvirus* in the EPPO region, a questionnaire has been sent to all EPPO member countries on the possible occurrence of this virus in their tomato crops and on intercepted consignments. Answers received at the EPPO Secretariat are presented below.

Algeria
Pepino mosaic potexvirus has never been found in Algeria.
Pest status: *Absent, confirmed by surveys.*
The virus has not been found on imported consignments.

Austria
A survey was carried out and 40 samples from different regions were tested. *Pepino mosaic potexvirus* was not found in Austria. It was not detected on imported consignments.

Cyprus
Pepino mosaic potexvirus has never been found in Cyprus.

Denmark
In autumn 2001, the virus was found in a glasshouse producing tomato fruits. It is not known how the virus was introduced into the glasshouse. No findings of *Pepino mosaic potexvirus* have been made during surveys carried out in 2002.

Estonia
No infections of *Pepino mosaic potexvirus* have been found in Estonia, nor on imported consignments. However, this conclusion is made only on the basis of visual inspections for symptoms, the first laboratory tests will be carried out in summer 2002.

France
Pepino mosaic potexvirus was detected in one tomato glasshouse in Bretagne, in February 2000; and in another tomato glasshouse in Pays de Loire, in February 2001. The origin of these outbreaks could not be traced. An eradication programme was set up. During surveys carried out in 2001/2002, the virus was not found again, and is considered as eradicated in France. In 2001, France intercepted 7 consignments infected by the virus from Spain (including Canary islands) and from Morocco (see below). In 2002, no interceptions were made.
Pest status*: Absent, pest eradicated.*

Germany

Three outbreaks of the virus have been recorded in Germany, exclusively at production sites of tomato fruits.

1. Hessen, 1999. Few symptoms on fruits, no symptoms on leaves. The measures taken (uprooting of infected plants, composting with calcium cyanamid, under official control) resulted in eradication. The propagating material (young plants) was purchased from a Dutch company.
2. Thüringen, 2000. Few symptoms on fruits and on leaves. Hygenic measures were taken during the growing season. At the end of the production period, the infected material was destroyed, and extensive disinfection measures were applied. However, eradication was not achieved, as outbreaks occurred again during the 2001 and 2002 growing seasons. In 2000 and 2001, young plants were purchased from a Dutch company, whereas in 2002 half of the plants were supplied by a German company. There is no clear indication whether the new outbreaks are due to lack of effectiveness of the eradication measures, or to new introductions on young plants.
3. Hamburg 2001. Few symptoms on fruits and leaves. Some of the infected varieties were grown from certified seeds, others were produced from farm-saved seeds. The infected plants were destroyed, and hygienic measures were taken. So far, it is not known whether these measures have been effective. In this case again, the origin of the infection is not known, it may however not be excluded that the virus was introduced with tomato fruits that the company had bought from other origin for trading at the local market.

On imports, *Pepino mosaic potexvirus* was found on tomato fruits from the Netherlands, Spain, Canary Islands, Belgium, Italy and Morocco. It has not been found on consignments of young tomato plants.

***Pest status**: Present only in two premises, under protected cultivation. Transient: Actionable, under eradication.*

Greece

Pepino mosaic potexvirus does not occur in Greece. It has not been found on imported consignments.

Hungary

Pepino mosaic potexvirus does not occur in Hungary. It has not been found on imported consignments.

Jersey

The virus has not been confirmed on growing plants in Jersey. However, it has been confirmed on imported consignments between 8th and 12th February 2001, and on 20th March 2002.

Latvia
Pepino mosaic potexvirus does not occur in Latvia and has never been intercepted on imported consignments.

Malta
From random serological tests carried out in Malta, no positive results were found. However, an intensive survey for *Pepino mosaic potexvirus* will start later this year.

Morocco
In 2001, *Pepino mosaic potexvirus* had been detected on tomato fruit in packing material belonging to a Moroccan export company, at a supermarket in France. After being notified of this finding, the Moroccan Plant Protection Service made a survey on the 175 ha of tomato belonging to the export company concerned. The presence of the virus was not detected. Since then, regular surveys for this virus have been carried out in fields of vegetable growers and gave negative results.

Norway
The virus has been found in only one case in domestic production in Norway. It was found in March 2001, in a glasshouse producing tomato fruits. Shortly after, eradication measures were carried out, involving destruction of all plant material and growing media and disinfection of the glasshouses of the firm. The outbreak occurred near Stavanger, in the main tomato-producing area in Norway. Surveys were carried out in 19 other firms in the area, but the virus was not detected. Neither was the source of infection found. The outbreak was considered successfully eradicated in April 2001. So far, monitoring has not resulted in new findings of the virus in Norway.
Pepino mosaic potexvirus has been found in several cases on imported tomato fruits in Norway.

Poland
Pepino mosaic potexvirus was detected in 2001 on 2 tomato plants in a glasshouse of a Dutch cultivar. The virus was detected during varietal tests and its presence was confirmed by ELISA tests. The circumstances in which the virus was detected might suggest that is was introduced into that place. Infected plants were destroyed. The virus has not been detected in imported consignments.

Portugal
During 2001, a survey was done in Portugal to detect *Pepino mosaic potexvirus* in tomato. This survey was carried out in tomato nurseries, glasshouses and open fields in several regions of the country. In total, 53 places of production were inspected and 813 samples were processed in the laboratory. All results were negative, indicating that the virus is absent in Portugal. The virus was not found in imported consignments, but no inspections or sampling were specifically done to detect it on imported tomatoes.

Romania
The virus has never been recorded in Romania, so far.

Slovak Republic
Pepino mosaic potexvirus does not occur in Slovak Republic and has never been intercepted on imported consignments.

Slovenia
In 2001, *Pepino mosaic potexvirus* was subject to an official survey in Slovenia. The survey was performed by the Phytosanitary inspection service. The officially approved laboratory of the National Institute of Biology proposed test methods in 2000, and provided technical information on virus symptoms and instructions for sampling in a Manual for Phytosanitary Inspection in 2001. During this survey of glasshouses, 62 samples were taken and tested: 51 samples of tomato, 1 pepper, 3 ornamental plants and 7 weed hosts. All samples gave negative results.
***Pest status**: Absent, confirmed by survey.*
Until now, no infected consignment has been intercepted in Slovenia.

Sweden
During late autumn 2001, *Pepino mosaic potexvirus* was found once in tomato production. This was the first record for Sweden. Repeated samplings were negative. Destruction of the plants followed by careful disinfection of the glasshouse and other facilities were carried out in November 2001, which is the normal time to finish the production of the year. In 2002, about 30 production sites were inspected and so far, no positive samples were found.
On imports, *Pepino mosaic potexvirus* was found in 7 samples of imported tomato fruits during the winter 2000/2001.

Tunisia
Pepino mosaic potexvirus has never been found in Tunisia or on imported consignments.

Turkey
Pepino mosaic potexvirus does not occurs in Turkey.

United Kingdom
In UK, several outbreaks of *Pepino mosaic potexvirus* have been reported since 1999 in glasshouse tomatoes in various regions (Kent, Cheshire, East Yorkshire, Isle of Wight, North Yorkshire, Somerset, South Wales, West Sussex). All outbreak crops have been grown from

seed supplied from the Netherlands and propagated either in the Netherlands or UK. All outbreaks have been eradicated by destruction of the plants at the end of the growing season. So far, there is no evidence that the disease is established in the UK.
Pepino mosaic potexvirus has been intercepted from the Netherlands and Spain (including Canary islands), 36 times in 2000, 37 in 2001, and 2 in 2002.

Source: **EPPO Secretariat, 2002-06.**

Additional key words: detailed records, absence **Computer codes:** PEPMV0, AT, CY, DE, DK, DZ, EE, FR, GB, GR, HU, JS, LV, MA, MT, NO, PL, PT, RO, SE, SI, SK, TN, TR

2002/093 Further studies on an Italian isolate of *Pepino mosaic potexvirus*

Studies were done in Italy on the experimental host range, possible seed transmission and detection of *Pepino mosaic potexvirus* (EPPO Alert List). The experimental host range of an Italian isolate of the virus (from *Lycopersicon esculentum* cv. Camona, Sardinia) was tested. Systemic infection was obtained only on *Solanaceae* with severe symptoms on *Nicotiana megalosiphon* and *Datura stramonium*, and mild mosaic in *N. benthamiana*, *Solanum melongena* (aubergine) and tomato. It is noted that in its experimental host range, the Italian isolate differed markedly from the Peruvian isolate from pepino (*S. muricatum*) and to a lesser extent from a Spanish isolate (also collected from tomato). In particular, capsicum (*Capsicum annuum*) and potato (*S. tuberosum*) were not found susceptible to this Italian isolate. It is stressed that further studies are needed to assess the biodiversity of *Pepino mosaic potexvirus* isolates from tomato in Europe. Seed transmission experiments confirmed that *Pepino mosaic potexvirus* is not seed-transmitted. Detection methods were also studied and it was observed that the virus was efficiently detected in tomato (and other hosts) by different ELISA procedures and by a rapid field immunochromatographic system based on lateral flow.

Source: Salomone, A.; Roggero, P. (2002) Host range, seed transmission and detection by ELISA and lateral flow of an Italian isolate of *Pepino mosaic potexvirus.* **Journal of Plant Pathology, 84(1), 65-68.**

Additional key words: biology, diagnostics **Computer codes:** PepMV, IT

2002/094 *Maconellicoccus hirsutus* found in Florida (US)

In June 2002, *Maconelicoccus hirsutus* (EPPO Alert List) was reported for the first time in Florida (US). It was found on Hibiscus plants at several locations in two counties (Broward and Miami-Dade). Surveys are being carried out to determine the extent of infestation. After surveys are completed, a biological programme using the parasitoids *Anagyrus kamali* and *Gyranusoidea indica* will be launched to control the pest. *M. hirsutus* occurs in many parts of the Caribbean, and in USA it had previously been reported in southern California (EPPO RS 99/172).

Source: **NAPPO Phytosanitary Alert System** - http://www.pestalert.org/Pestnews.cfm

Florida Department of Agriculture and Consumer Services – Press Release 2002-06-20.
http://doacs.state.fl.us/press/06202002.html

Additional key words: detailed record **Computer codes:** PHENHI, US

2002/095 First report of *Aonidiella citrina* in France

Aonidiella citrina (EU Annexes) has recently been found in the south of France (Alpes Maritimes). The first specimen was caught near Menton in an orchard, on an orange tree (*Citrus sinensis*), at the end of 2001. Another mandarin tree (*C. reticulata*) located in its immediate vicinity was also infected. Citrus samples taken from various locations in Menton carried the pest. In addition, *A. citrina* was identified on a *Citrus aurantium* tree in a private garden in Antibes. It is suspected that *A. citrina* was introduced into France some years ago but its origin is not known. Its presence remained unnoticed probably because of its possible confusion with *A. aurantii* and the low level of damage. In addition, treatments against other scales (e.g. *A. aurantii*) are already applied, and natural enemies are also controlling pest populations. As in Italy, *A. citrina* is considered as a minor pest of citrus. Nevertheless, it was felt useful that further surveys should be carried out to delimitate the extent of *A. citrina* in the south of France. The situation of *A. citrina* in France can be described as follows. **Present, found (at the end of 2001) only in the south near Antibes and Menton (Côte d'Azur).**

Source: Germain, J.F., Bertaux, F. (2002) *Aonidiella citrina* maintenant présente en France. Cette nouvelle espèce de cochenille a été identifiée sur oranger et mandarinier sur la Côte d'Azur.
Phytoma – La Défense des Végétaux, no. 550, 49-51.

Additional key words: new record **Computer codes:** AONDCI, FR

2002/096 Further details on the finding of *Paysandisia archon* in France

As reported in EPPO RS 2002/011, *Paysandisia archon* (Lepidoptera: Castniidae) has recently been reported on palm trees in the south of France (Var département). Infestations were detected in several 'communes' (Six-Fours, Carqueiranne, La Londe, La Crau …). It is suspected that the pest was introduced from Argentina on imported *Trithrinax campestris* and *Butia yatay* plants. It can also be recalled that the same pest has also been recently introduced into Spain. It is now considered as widespread in the Province of Girona, and it was observed near Barcelona. Data is generally lacking on *P. archon*. Its geographical distribution is not known, but it includes at least parts of Argentina and Uruguay. Its life cycle is currently under study in France. Eggs are laid on the plant and it is thought that young larvae penetrate directly into the plant through the rachis or stipe. Larvae bore galleries inside the stipe, which may cross young developing leaflets (making holes in leaflets of the palm later) or completely cut the base of young palms. The last larval stage exits the plant and makes a cocoon. Adults are strong and rapid flyers. Damage caused by *P. archon* includes: leaf perforations, presence of sawdust on the stipes, presence of galleries, abnormal drying of palms, dieback of the tree. In order to help palm growers in France, a special coordination group was created to gather more information on the pest and try to find control methods. *P. archon* has been added onto a list of pests against which control is mandatory in the region concerned. Phytosanitary measures are still being discussed but the following ones could be envisaged: declaration of all palm imports (thus implying phytosanitary checks), implementation of a special system to trace palm tree material moving in France, compulsory notification of any suspect symptoms to the authorities, destruction or treatments of infested plants.

Note: during surveys done on *P. archon*, another Lepidopteran was found on *Phoenix canariensis* trees showing holes at the basis of rachis. It was identified as *Pseudarenipses insularum* (Lepidoptera: Pyralidae). This species is also reported as present in Spain (Almería, Alicante and Islas Canarias). However, the potential damage it may cause to palm trees remains to be evaluated.

Source: Reynaud, P.; Chapin, E.; Hostachy, B.; Drescher, J.; Blanchon; F.; Vidal, C. (2002) Deux nouveaux papillons à l'assaut des palmiers de la Côte d'Azur. *Paysandisia archon* et *Pseudarenipses insularum*.
Phytoma – La Défense des Végétaux, no. 550, 18-21.

Additional key words: detailed record, new record **Computer codes:** FR

EPPO *Reporting Service*

2002/097 Biotypes of *Bemisia tabaci*

In a review paper, T.M. Perring (2001) presents current knowledge about the *Bemisia tabaci* species complex (EPPO A2 quarantine pest). So far, 41 distinct populations of *B. tabaci* have been studied, among them 24 have been given a specific biotype designation (the remaining 17 were not labelled). 20 of these biotypes were identified by using non-specific esterase band patterns. A review of the work done comparing populations from various geographic locations, using a variety of techniques (mating experiments, allozymes, mitochondrial 15S and COI, ribosomal ITS1 genes), led to the conclusion that seven groups could be distinguished.

Group 1: New World (biotypes A,C,N,R)
Group 2: Cosmopolitan B biotype (also referred to as *B. argentifolii*), and B2
Group 3: Benin (E), Spain (S)
Group 4: India (H)
Group 5: Sudan (L), Egypt (?), Spain (Q), Nigeria (J)
Group 6: Turkey (H), Hainan in China (?), Korea (?)
Group 7: Australia (AN)

It is noted that studies on the biology of these groups, and in particular virus transmission, are of primary importance but that so far, only a limited amount of work has been done. Considering the lack of reliability of nymphal morphology, it is also suggested that a re-evaluation of adult morphology of *B. tabaci* might provide characters to distinguish between variants.

Source: Perring, T.M. (2001) The *Bemisia tabaci* species complex.
Crop Protection, 20(9), 725-737.

Additional key words: taxonomy **Computer codes:** BEMITA

2002/098 Details on *Gibberella circinata* (pitch canker) in Chile

The NPPO of Chile recently informed the EPPO Secretariat of the situation of *Gibberella circinata* (EPPO Alert List – anamorph *Fusarium circinatum*). *G. circinata* was identified for the first time in Chile in December 2001 on *Pinus radiata*, in 3 nurseries located in Region VIII (see also EPPO RS 2001/176). National surveys (visual inspections, sampling and laboratory testing) have been carried in forest nurseries, plantations, hedges and isolated pine trees to delimit the extent of the infestation. In parallel, inoculation tests on nursery plants are being carried out to study the symptomatology and pathogenicity of *G. circinata*. Phytosanitary measures are being considered.

Source: **NPPO of Chile, 2002-04.**

Additional key words: detailed record **Computer codes:** GIBBFS, CL

2002/099 Finding of *Ralstonia solanacearum* on *Pelargonium* in Florida (US)

As reported in EPPO RS 2001/106 and 2001/124, *Ralstonia solanacearum* (EPPO A2 quarantine pest) has been reported in several countries on *Pelargonium*. In autumn, 2001 a further finding has been made on *Pelargonium* x *hortorum* (cvs Patriot Cherry and Patriot Bright Red) grown in Florida, US. Affected plants showed wilted and chlorotic leaves, and rotting of the stem base and roots. Inspections were done at the production site to assess the severity of the disease. Several benches of diseased *Pelargonium* were observed. Sanitation procedures were applied and 60,000 *Pelargonium* plants were destroyed. Total loss was estimated at 80,000 USD. In this case, *R. solanacearum* biovar 1 was identified.

Source: Momol, T.; Pradhanang, P. (2002) Occurrence of Southern wilt caused by *Ralstonia solanacearum* on Geranium in Florida.
University of Florida, Pest Alert of 2002-06-07.
http://extlab7.entnem.ufl.edu/PestAlert/tmm-0607.htm

Additional key words: detailed record **Computer codes:** PSDMSO, US

2002/100 First report of *Iris yellow spot tospovirus* on onion in Colorado (US)

In September 2001, a new disease was observed on onions (*Allium cepa*) growing in a field in Larimer county in northern Colorado (US). Symptoms included straw-coloured, dry, tan, spindle-or diamond-shaped lesions on the leaves of onion plants. The presence of *Iris yellow spot tospovirus* (EPPO Alert List) was detected in diseased plants. It is recalled that a similar disease of onion had also been reported in Idaho. The EPPO Secretariat had previously no data on the occurrence of *Iris yellow spot tospovirus* in the United States. Further studies will be made to assess the extent and severity of the disease in other onion-growing areas of the country. The situation of *Iris yellow spot tospovirus* in USA can be described as follows: **Present, found in one onion field in Colorado, symptoms observed in Idaho.**

Source: Schwartz, H.F.; Brown, W.M. Jr; Blunt, T.; Gent, D.H. (2002) *Iris yellow spot virus* on onion in Colorado.
Plant Disease, 86(5), p 560.

Additional key words: new record **Computer codes:** IYSV, US

2002/101 New host plants of *Cucumber vein yellowing virus*

The natural host range of *Cucumber vein yellowing virus* (CVYV - EPPO Alert List) was previously thought to be restricted to Cucurbitaceae. However, in south-eastern Spain, studies have recently shown that other plants could be natural hosts of the virus. In spring 2001, leaf symptoms ranging from vein clearing to general leaf chlorosis were observed on weed species commonly growing within or near commercial glasshouses. Samples were collected from 6 weed species and tested for the presence of CVYV. The virus was detected in *Ecballium elaterium* (Cucurbitaceae), *Convolvulus arvensis* (Convolvulaceae), *Malva parviflora* (Malvaceae), *Sonchus oleraceus, S. asper* and *S. tenerrimus* (Asteraceae). In addition, whitefly transmission was used to confirm that *S. oleraceus* is a natural host of CVYV. Natural infection of these six common weed species consistently coincided with an outbreak of CYVY in cucurbitaceous crops and high infestations of *Bemisia tabaci* in the commercial glasshouses nearby.

Source: Janssen, D.; Ruiz, L.; Velasco, L.; Segundo, E.; Cuadrado, I.M. (2002) Non-cucurbitaceous weed species shown to be natural hosts of *Cucumber vein yellowing virus* in south eastern Spain.
New Disease Reports, volume 5, January 2002 – July 2002.
http://www.bspp.org.uk/ndr/july2002/2002-10.htm

Additional key words: new host plants **Computer codes:** CVYV

2002/102 ‘*Candidatus* Phytoplasma australiense’: revision of the EPPO Alert List

So far, only one disease associated with ‘*Candidatus* Phytoplasma australiense’, the strawberry lethal yellows, appeared on the EPPO Alert List. However, the same phytoplasma has been shown to cause other diseases on various host plants. Therefore, it was felt more appropriate to revise the EPPO Alert List to include the pathogen ‘*Candidatus* Phytoplasma australiense’ as such, and all the diseases it may cause.

‘*Candidatus* Phytoplasma australiense’

Why	At first, strawberry lethal yellows disease associated with ‘*Candidatus* Phytoplasma australiense’ came to our attention because it appeared to us as a 'new' and severe disease of strawberry in New Zealand. Later, it was felt more appropriate to revise the Alert List to include the pathogen as such and all diseases which have been associated to it.
Where	Australia, New Zealand. It is hypothetised that the phytoplasma originates from New Zealand and may have been introduced into Australia.
On which plants	*Cordyline australis* (cabbage tree – Agavaceae): ‘*Candidatus* Phytoplasma australiense is associated with sudden decline of cabbage tree in New Zealand. *C. australis* is common in forest margins and wetlands and also widely cultivated as an ornamental. *Fragaria ananassa* (strawberry – Rosaceae): strawberry lethal yellows which occurs in New Zealand, in propagation beds in Kitikati district, Bay of Plenty. *Carica papaya* (papaya – Caricaceae): papaya die-back, can be devastating in Queensland but occasional in Northern Territory and Western Australia. *Phormium tenax* and *P. cookianum* (New Zealand flax – Phormiaceae): yellow leaf disease, occurs in New Zealand where a vector has been identified (*Oliarus atkinsoni,* Homoptera: Cixiidae, monophagous species feeding on New Zealand flax). *Vitis vinifera* (grapevine – Vitaceae): Australian grapevine yellows, it occurs in south Australia. It is also suspected in *Coprosma robusta* (Rubiaceae), a common shrub in New Zealand.
Note	In New Zealand, Padovan *et al*. (2000) have also observed that phytoplasmas found in strawberry plants showing symptoms of green petal or lethal yellows were indistinguishable. The fact that the same phytoplasma is associated with two distinct diseases on the same host cannot yet be explained. In addition to New Zealand, it can be recalled that green petal symptoms are seen sporadically in Europe, North America and Australia. In North America, another(?) phytoplasma disease called strawberry lethal decline was reported first in the north western US and then in British Columbia (CA). The pathogen can be transmitted by the leafhopper *Aphrodes bicincta*. Experimental transmission of western X-disease to strawberry produced symptoms similar to those of lethal decline. Reported to be of minor importance. The only reported control measure is to rogue infected plants. In Australia, another lethal yellows had been associated in the past with a rickettsia-like-bacterium. But this disease has apparently not been seen again. More studies are needed to understand better the aetiology and epidemiology of phytoplasma diseases of strawberry.
Damage	Symptoms usually include leaf yellowing, followed by more or less severe plant decline. Plant mortality has been reported at least on strawberry (severe decline, in field conditions plants may die and in glasshouse conditions they rapidly die), on papaya and *Cordyline australis*.
Pathway	Infected plants for planting (see host plants above) from New Zealand and Australia.

Possible risks Among host plants of '*Candidatus* Phytoplasma australiense', grapevine and strawberry are important crops in the EPPO region. *Cordyline australis* is also a widely grown ornamental plant (mainly pot plant, but also garden plant in southern parts). Insect vectors are suspected but so far only one New-Zealand species *Oliarus atkinsoni* has been identified (it does not occur in Europe). The phytoplasma can cause lethal diseases in particular on strawberry, although it is probably of a limited extent (apparently restricted in one region). On grapevine, more data is needed on the impact of the disease in the field.

Source(s)

Andersen, M.T.; Longmore, J.; Liefting, L.W.; Wood, G.A.; Sutherland, P.W.; Beck, D.L.; Forster, R.L.S. (1998) Phormium yellow leaf phytoplasma is associated with strawberry lethal yellows disease in New Zealand. Plant Disease, 82(6), 606-609.

Andersen, M.T.; Beever, R.E.; Sutherland, P.W.; Forster, R.L.S. (2001) Association of '*Candidatus* Phytoplasma australiense' with sudden decline of cabbage tree in New Zealand. Plant Disease, 85(5), 462-469.

Liefting, L.W.; Padovan, A.C.; Gibb, K.S.; Beever, R.E.; Andersen, M.T.; Newcomb, R.D.; Beck, D.L.; Forster, R.L.S. (1998) '*Candidatus* Phytoplasma australiense' is associated with Australian grapevine yellows, papaya dieback and Phormium yellow leaf diseases. European Journal of Plant Pathology, 104(6), 619-623.

Padovan, A.; Gibb, K.; Persley, D. (2000) Association of '*Candidatus* Phytoplasma australiense' with green petal and lethal yellows diseases in strawberry. Plant Pathology, 49(3), 362-369.

Padovan, A.C.; Gibb, K.S. (2001) Epidemiology of phytoplasma diseases in papaya in Northern Australia. Journal of Phytopathology, 149(11/12), 649-658.

EPPO RS 98/171, 2000/162, 2002/102
Panel review date 2002-01 Entry date 1998-09

2002/103 Biological control of *Botryosphaeria berengeriana* f.sp. *piricola*

Botryosphaeria berengeriana f.sp. *piricola* (EU Annexes) is the causal agent of apple ring rot. It is widely distributed and established in orchards in northern China where it can cause yield losses of up to 50 % on susceptible cultivars. Since the late 1970s, with the increase of good quality cultivars susceptible to the disease, apple ring rot has become a major problem in fruit production. Fungicide treatments are applied (up to 10 times per season) to control the disease, but some resistance has been reported. Laboratory and field trials were carried out in Hebei province to evaluate the potential of *Trichoderma harzianum* and *T. atroviride* to control *B. berengeriana* f.sp. *piricola*. In the laboratory, both *Trichoderma* species inhibited *B. berengeriana* f.sp. *piricola*, apparently by direct antagonism with minor inhibition by antibiosis. In the field, where apple trees were severely affected by the disease, the application of spore suspensions of both fungi gave satisfactory results and the efficacy was similar to that of routine chemical control.

Source: Potential of *Trichoderma harzianum* and *T. atroviride* to control *Botryosphaeria berengeriana* f.sp. *piricola*, the cause of apple ring rot.
Journal of Phytopathology, 150(4-5), 271-276.

Additional key words: control **Computer codes:** PHYOPI, CN

2002/104 Monoclonal antibodies to detect apple proliferation phytoplasma

Two monoclonal antibodies were obtained to detect specifically apple proliferation phytoplasma (EPPO A2 quarantine pest) by ELISA or immunofluorescence (IF). These two serological methods were compared with DAPI staining and PCR. From July until leaf fall, ELISA was as sensitive as PCR but more rapid and easier to use. IF was found more sensitive than DAPI. IF was found useful to detect the phytoplasma on roots throughout the year; on stems from ripening until dormant bud stage. ELISA was found convenient on leaves from the end of July until leaf fall. It was concluded that ELISA and IF using monoclonal antibodies provided easy, rapid, specific and sensitive detection methods which could be used on roots, stems and leaves depending on the phenological stages of apple trees.

Source: Loi, N.; Ermacora, P.; Carraro, L.; Osler, R.; Chen, T.A. (2002) Production of monoclonal antibodies against apple proliferation phytoplasma and their use in serological detection.
European Journal of Plant Pathology, 108(1), 81-86.

Additional key words: diagnostic **Computer codes:** PHYP14

2002/105 Implementation of ISPM no. 15 is suspended

The IPPC Secretariat recently notified EPPO that the implementation of ISPM no. 15 Guidelines for regulating wood packaging material in international trade (approved in March 2002) was suspended for the following reasons:
'A key provision of the standard is the use of a mark for the certification of approved measures. Difficulties have arisen as a result of efforts by FAO to legally protect the mark for use according to the standard. The FAO Legal Office is recommending that governments temporarily suspend implementation of the standard until these legal issues are resolved. In the meantime, the IPPC Secretariat is undertaking to establish a new mark. It is anticipated that this will require approximately five months. Members will be notified immediately when the standard can be implemented again.'

Source: **IPPC Secretariat, FAO, 2002-06**

2002/106 New Windows version of PQR is available

The new Windows version of PQR (version 4.1) is now available on CD-Rom. PQR is the EPPO database system on quarantine pests (information on geographical distribution, host plants, pathways…). This new Windows version contains up-to-date information and provides a much more flexible user interface and better possibilities for saving or printing the output.

It can be ordered from the EPPO Secretariat at a price of 100 EUR. For more information, you can consult the EPPO web site:
http://www.eppo.org/PUBLICATIONS/Software/pqr.html

PQR version 4.1 is only available as a CD for single users. Users are not authorized to make copies. The previous version 3.10 (dated June 2000, DOS application) can still be downloaded freely from the EPPO web site (see above).

Source: EPPO Secretariat, 2002-06.