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2001/039 First report of *Heterodera glycines* in Italy

In summer 2000, *Heterodera glycines* (EPPO A1 quarantine pest) was found in 3 soybean (*Glycine max*) fields, near Pavia, Lombardia, Italy. Affected fields showed circular to oval patches of stunted and yellow soybean plants. Soybean roots were poorly developed, without or with few nitrogen nodules, and the presence of adult nematode females and cysts was observed. Identification of *H. glycines* was based on cyst and juvenile morphology and morphometric measurements. Symptoms had been noticed by farmers since 1998, but were attributed to mineral deficiencies. *H. glycines* population appears well established, as all nematode stages were observed in high abundance. Cyst and egg densities were estimated. They varied from 32 to 79 cysts/100 m^3 and 7900 to 19200 eggs/100 m^3, respectively. This is the first report of *H. glycines* in Italy. The situation of *H. glycines* in Italy can be described as follows: **Present: found only in 3 fields near Pavia, Lombardia**.

Source: Manachini, B. (2000) First report of *Heterodera glycines* Ichinohe on soybean in Italy.
Bolletino di Zoologia Agraria e di Bachicoltura, Serie II, 32(3), 261-267.

Additional key words: new record **Computer codes:** HETDGL, IT

2001/040 First report of *Xanthomonas axonopodis* pv. *dieffenbachiae* in Réunion

In Réunion, *Xanthomonas axonopodis* pv. *dieffenbachiae* (EPPO A1 quarantine pest) was first observed in 1997 during routine inspections. It was found in 2 nurseries on *Anthurium andreanum* plants imported from the Netherlands. The disease rapidly spread to other *Anthurium* plants in the nurseries causing severe damage. Between 1997-1999, 114 isolates were collected from 3 main locations: the 2 nurseries where the disease had originally been found, and another nursery which was later found contaminated. All isolates were identified as *X. axonopodis* pv. *dieffenbachiae*. Since 1997, phytosanitary measures are being applied and include the following: destruction of all affected plants, infected nurseries are placed under quarantine, surveillance at entry ports is intensified to prevent any further introduction. This is the first report of *X. axonopodis* pv. *dieffenbachiae* in Réunion. The situation of *X. axonopodis* pv. *dieffenbachiae* in Réunion can be described as follows: **Present: found only in a few areas, under eradication**.

Source: Soustrade, I.; Gagnevin, L.; Roumagnac, P.; Gambin, O.; Guillaumin, D.; Jeuffrault, E. (2000) First report of Anthurium blight caused by *Xanthomonas axonopodis* pv. *dieffenbachiae* in Reunion Island.
Plant Disease, 84(12), p 1343.

Additional key words: new record **Computer codes:** XANTDF, RE

2001/041 EU survey on *Pepino mosaic potexvirus*

Following the provisions of Article 4 of Commission Decision 2000/325/EC, official surveys on the presence of *Pepino mosaic potexvirus* (EPPO Alert List) were carried out by the 15 EU Member States from April 2000 to January 2001. *Pepino mosaic potexvirus* was not detected in tomato nurseries. However, outbreaks were reported in several tomato fruit production sites: 3 in United Kingdom, 1 in Germany and 5 in the Netherlands. The virus was also detected in Spain near Murcia, but no details on the total number of outbreaks or their extent was given. Several countries (France, Sweden and United Kingdom) intercepted *Pepino mosaic potexvirus* on tomato fruits imported from Spain (including Canary Islands) and the Netherlands.

Source: European Commission, DG Health and Consumers Protection, Brussels, 2001-03.

Commission Decision (2000/325/EC) of 11 May 2000 authorising Member States to take measures provisionally against the introduction into, and the spread within the Community of Pepino mosaic virus as regards tomato plants, intended for planting, other than seeds.

Additional key words: detailed record **Computer codes:** PZMXXX, DE, GB, NL

2001/042 *Ralstonia solanacearum:* further details on the situation in France

Further to RS 2001/022 which reported an outbreak of *Ralstonia solanacearum* (EPPO A2 quarantine pest) in France, the French NPPO provides additional information. The seed potato producer concerned in 1998 in Haute-Normandie did not use irrigation, produced seed potatoes on fields not previously used for potato and did not share any equipment with other farms. These points exclude the possibility that the infestation came from contaminated ground water, from carry over from a previous crop, or from contaminated equipment and support the assertion that the origin of the infestation was seed potatoes from the Netherlands. All necessary eradication measures were taken at the infested site and for seed potatoes sold to other growers, according to the EU Control Directive. However, further monitoring of all possible infestation sites will be needed through the growing season of 2001 before successful eradication can be confirmed. In conclusion, the present situation concerning the outbreak is that *R. solanacearum* can be considered as present, but under eradication, at a few locations in the North of France.

Source: NPPO of France, 2001-01-11, 2001-01-30, 2001-03-29.

Additional key words: introduction **Computer codes:** PSDMSO, FR

EPPO *Reporting Service*

2001/043 Surveys on *Clavibacter michiganensis* subsp. *sepedonicus* and *Ralstonia solanacearum* in Germany: 1999 harvest

The German NPPO informed the EPPO Secretariat of the results of the regular surveys on *Clavibacter michiganensis* subsp. *sepedonicus* and *Ralstonia solanacearum* (both EPPO A2 quarantine pests) carried out in Germany for the 1999 potato harvest.

Clavibacter michiganensis subsp. *sepedonicus*
In total, 18.091 samples were tested for the presence of the bacterium (12.174 samples of seed potatoes, 326 samples from gene banks and breeding material, 1.020 samples of traded potato material, and 4.571 samples of ware and industrial potatoes). In addition to laboratory testing, visual inspections were performed on cut tubers.
As a result, *C. michiganensis* subsp. *sepedonicus* was found in 16 samples of seed potatoes and 41 samples of ware and industrial potatoes. The situation of *C. michiganensis* subsp. *sepedonicus* in Germany can be described as follows: **Present: only in some areas**.

Ralstonia solanacearum
In total, 16.561 samples were tested in the laboratory for the presence of the bacterium (11.871 samples of seed potatoes, and 4.690 samples of ware and industrial potatoes). Infection was found in a limited area in 2 growers, on a total of 11 plots. This low occurrence probably results from the introduction of infected planting material from outside Germany. Therefore, the NPPO of Germany assumed that *R. solanacearum* is not established in Germany. The situation of *R. solanacearum* in Germany can be described as follows: **Present: at very low prevalence, under eradication**.

Control measures against both bacteria were applied in accordance with EU Directives 93/85/EEC and 98/57/EC. Surveys were continued on the 2000 harvest with the same intensity, but the final results are not yet available.

Source: NPPO of Germany, 2001-02.

Additional key words: detailed records **Computer codes:** CORBSE, PSDMSO, DE

2001/044 Phytosanitary incident: *Clavibacter michiganensis* subsp. *sepedonicus* found in imported potatoes in Finland

In Finland, in March and April 2000, 3 seed potato lots (*Solanum tuberosum* cv. Velox) were imported from Germany and tested negative for *Clavibacter michiganensis* subsp. *sepedonicus* (EPPO A2 quarantine pest) by immunofluoresence assay (IFA). During summer 2000, these lots were then cultivated in 3 Finnish farms. In November 2000, one tuber showing visual symptoms of potato ring rot was observed in 1 farm. The tuber was tested by IFA and PCR and gave positive results. All other seed lots were immediately tested and contaminations were found in all lots of potatoes cv. Velox cultivated in the 3 farms concerned. These farms are specialized in seed potato production. For several years, they have only been cultivating officially inspected seed potatoes, and their whole potato production has yearly been tested for latent infections. Until this incident, the disease had never been found. It was concluded that the only possible source of infestation was the import of infected seed potatoes from Germany. According to Directive 93/85/EEC, strict eradication measures are being applied.

Source: NPPO of Finland, 2001-02.

Additional key words: phytosanitary incident **Computer codes:** CORBSE, FI

2001/045 Phytosanitary incidents reported on bonsais and pot plants in the Netherlands

The NPPO of the Netherlands informed the EPPO Secretariat of the following phytosanitary incidents found in 2000 on bonsais and pot plants. Every year, the Dutch NPPO carries out various regular inspections at places of production. These inspections are performed to follow-up inspections done at the time of import, and secondly to issue plant passports.

Bonsai plants

During regular inspections of various firms growing bonsai plants, infestations of *Anoplophora chinensis* (EPPO A1 quarantine pest) and *Cnidocampa flavescens* on *Acer palmatum*, and of *Rhizoecus hibisci* (EU Annexes) on *Celtis*, *Serissa* and *Zelkova* were found. In addition, infestations of *Stegophora ulmea* (EPPO Alert List) on *Ulmus* and *Zelkova*, and of *Oligonychus perditus* (EPPO A1 quarantine pest) on *Juniperus* were found. The inspections were carried out as a follow-up of earlier inspections done at the time of import. All plants concerned were imported from China, except some *Juniperus* plants which were imported from Japan. The pests were most likely introduced from China and Japan with the imported bonsai plants.

Under the supervision of the Dutch NPPO, infested plants were either destroyed or treated depending on the availability of chemical treatments. Furthermore, hygienic measures were applied on the firms concerned, under the supervision of the Dutch NPPO, to prevent any further infestations. The measures applied were successful and all infestations were eradicated.

Citrus pot plants

During regular inspections, *Xanthomonas axonopodis* pv. *citri* (EPPO A1 quarantine pest) was found in pot plants of *Citrus hystrix* in the glasshouse of a firm growing pot plants for the final consumer. The infested plants were imported from Indonesia. Although this is prohibited, 50 plants had been imported under another name. This infringement of the import prohibition was therefore not discovered during import inspection. Infested plants and all other Citrus plants present on this firm were destroyed. Strict hygienic measures were applied. The glasshouse and equipment were disinfected, and the firm was not allowed to drain water into surface water. These measures applied under the supervision of the Dutch NPPO resulted in the eradication of the bacterium.

***Bacopa* and *Portulaca* pot plants**

During inspections, *Tobacco ringspot nepovirus* (EPPO A2 quarantine pest) was found in *Bacopa* and *Portulaca*. The identity of the virus was confirmed by laboratory tests. The firms concerned had received planting material from the same company in Israel. The Israeli authorities have been informed by the Dutch NPPO. All firms, to which planting material from these Dutch companies had been delivered, were inspected and the virus was found in some of them. Eradication measures were applied under the supervision of the Dutch NPPO, taking into account the fact that the nematode vector, *Xiphinema americanum*, does not occur in the Netherlands. All infestations were successfully eradicated.

Source: **NPPO of the Netherlands, 2001-02**.

Additional key words: phytosanitary incidents, eradication

Computer codes: ANOLCN, GNOMUL, OLIGPD, RHIOHI, TORSXX, XANTCI, NL

2001/046 Details on the finding of *Diabrotica virgifera virgifera* in Lombardia, Italy

At the request of the EPPO Secretariat, Dr Boriani (Servizio Fitosanitario Regionale, Milano) kindly provided more details on the recent finding of *Diabrotica virgifera virgifera* (EPPO A2 quarantine pest) in Lombardia, Italy (see EPPO RS 2001/03). *D. virgifera virgifera* was found for the first time in Lombardia, near Malpensa International Airport (Varese). In September 2000, three adults were caught in three pheromone traps and in two quarantine areas. In these areas, maize production has been prohibited. In 2001, a larger and more intensive monitoring programme will be carried out and other phytosanitary measures will be taken to eliminate the pest and prevent any further spread.

Source: Personal communication with Dr Boriani, Servizio Fitosanitario Regionale, Milano, 2001-03.

Additional key words: detailed record **Computer codes:** DIABVI, IT

2001/047 Situation of quarantine pests in Lithuania in 2000

During the year 2000, the situation of the following quarantine pests was reported by the NPPO of Lithuania. The situation of the pest concerned is indicated in bold, using the terms of ISPM no. 8.

Ambrosia spp. were found in one garden and in two garbage dumps. All weeds were destroyed. **Present, at low prevalence, under eradication.**

Clavibacter michiganensis subsp. *sepedonicus* (EPPO A2 quarantine pest): 17 foci were recorded. The disease was found on 557.24 tons of seed potatoes (15 cultivars). All these seed potatoes were grown in Lithuania and later used for human or animal consumption. **Present: only in some areas.**

25 outbreaks of *Ditylenchus destructor* (EU Annexes) were reported on 1257.7 tons of potatoes (22 cultivars). These seed potatoes were grown in Lithuania and later used for human or animal consumption. **Present: only in some areas.**

Frankliniella occidentalis (EPPO A2 quarantine pest) was found in 4 glasshouses on ornamentals plants. All infested plants were destroyed and premises were disinfected. **Present: only in 4 glasshouses.**

Liriomyza bryoniae (EU Annexes) was found in 12 glasshouses, using pheromone traps. Chemical control was applied. **Present: only in 12 glasshouses.**

Mycosphaerella linicola was found on flax stalks in 16 farms, and on seeds in 2 farms. On these farms, the use of seeds for sowing was prohibited. **Present: only in some areas.**

Plum pox potyvirus (EPPO A2 quarantine pest) was detected on plum trees in 10 gardens. All infected trees and surrounding trees were destroyed. **Present: only in some areas.**

Puccinia horiana (EPPO A2 quarantine pest) was detected in 2 glasshouses on chrysanthemums. All infected plants were destroyed. **Present: only in 2 glasshouses.**

Source: NPPO of Lithuania, 2001-03.

Additional key words: detailed records **Computer codes:** AMBSS, CORBSE, DITYDE, FRANOC, LIROBO, MYCOLN, PLPXXX, PUCCHN, LT

2001/048 First report of *Impatiens necrotic spot tospovirus* in Czech Republic

In 1999, *Impatiens necrotic spot tospovirus* (INSV – EPPO A2 quarantine pest) was detected for the first time in Czech Republic in imported *Columnea* and *Curcuma* plants. These plants were growing in a garden among other ornamental crops. By June 2000, INSV was detected in 17 ornamental plant species in several gardening establishments which had never received imported plants. In all infested sites, populations of *Frankliniella occidentalis* (EPPO A2 quarantine pest) were present. Natural infection of INSV was also detected in the common weed species, *Stellaria media*. The situation of INSV in Czech Republic can be described as follows: **Present: only in some areas**.

Source: Mertelik, J.; Mokra, V.; Gotzova, B.; Gabrielova, S. (2000) First report of *Impatiens necrotic spot tospovirus* in the Czech Republic.
Plant Disease, 84(9), p 1045.

Additional key words: new record **Computer codes:** IMNSXX, CZ

2001/049 First report of *Cucurbit yellow stunting disorder crinivirus* in Portugal

During autumn 1998, symptoms of chlorotic mottling, yellowing and stunting were observed on cucumbers (*Cucumis sativus*) in an experimental plot in Algarve, Portugal. First symptoms appeared 3 weeks after planting and were associated with heavy infestation by *Bemisia tabaci* (EPPO A2 quarantine pest). Plants which showed early infection produced few and small fruits. Molecular studies revealed the presence of *Cucurbit yellow stunting disorder crinivirus* (EPPO Alert List). This virus was also detected in samples of cucumber, melon (*Cucumis melo*) and watermelon (*Citrullus lanatus*) collected during summer 1999 in commercial greenhouses. This is the first report of *Cucurbit yellow stunting disorder crinivirus* in Portugal. The situation of *Cucurbit yellow stunting disorder crinivirus* in Portugal can be described as follows: **Present: found only in a few areas**.

Source: Louro, D.; Vicente, M.; Vaira, A.M.; Accotto, G.P.; Nolasco, G. (2000) *Cucurbit yellow stunting disorder* (Genus *Crinivirus*) associated with the yellowing disease of cucurbit crops in Portugal.
Plant Disease, 84(10), p 1156.

Additional key words: new record **Computer codes:** KUYSXX, PT

2001/050 First report of Alternaria brown spot of citrus in Spain

In 1998, a new disease of Fortune mandarin trees (*Citrus reticulata*) was observed in the Province of Valencia, Spain. Symptoms were typical of those caused by Alternaria brown spot of citrus (EPPO Alert List). Young leaves showed brown necrotic and irregular blighted areas with characteristic yellow halos. On fruits, symptoms included light brown, slightly depressed spots to circular and dark brown areas on the external surface. Necrotic lesions on leaves had a tendency to follow the veins. Infected young fruits and leaves often fell and mature fruits were unmarketable because of the lesions, resulting in important economic losses. It is noted that Fortune mandarin is one of the most important late-maturing cultivars grown in Spain. The pathogen was isolated and identified as *Alternaria alternatata* on the basis of conidial morphology. Koch's postulates were fulfilled. In 1999, the disease was also found in other citrus-growing areas on Fortune and Nova mandarins, and on Minneola tangelos. The situation of Alternaria brown spot in Spain can be described as follows: **Present: found in several citrus-growing areas**.

Source: Vicent, A.; Armengol, J.; Sales, R.; García-Jiménez, J. (2000) First report of Alternaria brown spot of citrus in Spain.
Plant Disease, 84(9), p 1044.

Additional key words: new record **Computer codes:** ALTEAC, ES

2001/051 First report of *Neotoxoptera formosana* in Italy

In July 2000, *Neotoxoptera formosana* (EPPO Alert List) was reported for the first time in Italy. The onion aphid was found in Oppeano near Verona (Veneto) on chives (*Allium schoenoprasum*) grown under glasshouse as a continuous crop. Rather high aphid populations were observed and affected plants showed wilting, yellowing and desiccation of the leaves. In their paper, the authors are also giving a few morphological details in order to separate *N. formosana* from other relative species present in Italy and in other countries of Southern Europe (*N. oliveri* and *N. violae*). The situation of *N. formosana* in Italy can be described as follows: **Present: found only in glasshouses near Verona, Veneto**.

Note: In this paper, the presence of *N. formosana* was also reported in Canada, Mexico, USA (California, New York, North Carolina, Pennsylvania) and Papua New Guinea. The EPPO Secretariat had previously no data on the presence of the onion aphid in these countries or US States.

Source: Barbagallo, S.; Ciampolini, M. (2000) The onion aphid, *Neotoxoptera formosana* (Takahashi), detected in Italy.
Bolletino di Zoologia Agraria et di Bachicoltura, Serie II, 32(3), 245-258.

Additional key words: new records, detailed records **Computer codes:** NEOTFO, IT, CA, MX, PG, US

2001/052 *Iris yellow spot tospovirus* causes a new disease on lisianthus in Israel

Iris yellow spot tospovirus (EPPO Alert List) has been reported on several monocotyledonous hosts: onions (*Allium cepa*) in Israel and Brazil, *Hippeastrum* in Israel and *Iris hollandica* in the Netherlands. In Israel, during 1999, lisianthus (*Eustoma russellianum*) plants grown in the field (in the Besor area) showed unusual symptoms. These were characterized by necrotic spots, rings on leaves and stems, and apical necrosis. The causal agent was identified as *Iris yellow spot tospovirus*, and Koch's postulates were fulfilled. This is the first time that *Iris yellow spot tospovirus* is reported on a dicotyledonous host. It is noted that the outbreak on lisianthus in Israel is sporadic and limited, whereas the disease on onions has an important economic impact.

Source: Kritzman, A.; Beckleman, H.; Alexandrow, S.; Cohen, J.; Lampel, M.; Zeidan, M.; Raccah, B.; Gera, A. (2000) Lisianthus leaf necrosis: a new disease of lisianthus caused by iris yellow spot virus.
Plant Disease, 84(11), 1185-1189.

Additional key words: new host plant **Computer codes:** IRYSXX

2001/053 High Plains disease found in Washington State (US)

In 1998, samples of sweet maize (*Zea mays*) showing symptoms of mosaic, yellow streaking and severe stunting were observed in 3 eastern counties of Washington State, USA. Older leaves showed extensive tip burn and severe scorch. Microscopic observation revealed the presence of eriophyid mites within leaf whorls. ELISA tests confirmed the presence of wheat High Plains disease (EPPO Alert List) in sweet maize (*Z. mays* cvs Golden Jubilee, Peaches Cream, Lyric). The disease was also found on a fourth location on maize. This is the first report of High Plains disease in Washington State.

Source: Bentley, E.M.; Eastwell, K.C. (2000) First report of High Plains disease in Washington corn (*Zea mays*). Abstract of a paper presented at the APS Pacific Division meeting in Riverside, California, 1999-06-15/16, USA.
Phytopathology, 90(6), S 117.

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

2001/054 Molecular characterization of *Citrus mosaic badnavirus*

The genome (dsDNA) of *Citrus mosaic badnavirus* (EPPO A1 quarantine pest) which causes a common citrus disease in India, has been completely sequenced. This information will be useful to study relationships between *Citrus mosaic badnavirus* and other badnaviruses, genetic variability within CYMV, and to develop diagnostic tools.

Source: Huang, Q.; Hartung, J.S. (2000) Molecular characterization of citrus yellow mosaic virus. Abstract of a paper presented at the APS 2000 Annual Meeting in New Orleans, Louisiana, 2000-08-12/16, USA.
Phytopathology, 90(6), S 37.

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

2001/055 New begomoviruses

Many new begomoviruses have recently been described from various parts of the world, on Cucurbitaceae, Malvaceae or Solanaceae. For convenience, they have been gathered here. For the moment, the main difficulty in assessing their importance is the lack of information on the extent and severity of the diseases they may cause on the crops.

Cucurbit leaf crumple begomovirus in California (US)
In 1998, a new bipartite begomovirus tentatively called *Cucurbit leaf crumple begomovirus* was observed in cucurbits in the Imperial Valley of California, US (Hernandez *et al*., 2000)

Cucurbit leaf curl begomovirus in USA (Arizona, Texas) and Mexico
In 1998-1999, virus symptoms were observed on pumpkin (*Cucurbita pepo*) in Arizona (US), and on melons (*Cucumis melo*) in Texas (US) and Coahuila (MX). Symptoms were similar to those caused by *Squash leaf curl begomovirus* (EPPO A1 quarantine pest) described in Arizona in 1981. Cucurbit plants were also infested by whiteflies. Molecular studies (PCR and nucleotide sequence comparisons) revealed the presence of a new begomovirus, tentatively called *Cucurbit leaf curl begomovirus* (Brown *et al*., 2000).

Cotton leaf curl begomovirus - Sudan
In Sudan, cotton leaf curl disease was first reported in 1931. Symptoms on cotton plants were characterized by vein thickening and leaf curling. It was shown that *Bemisia tabaci* (EPPO A2 quarantine pest) could transmit the disease to cotton, okra and several weeds. However, the probable begomovirus aetiology was not ascertained. During 1994-1996, 4 cotton samples showing typical symptoms of the disease were collected form different fields in the region of Gezira, in Central Sudan. Molecular studies (PCR, nucleotide sequence analysis) showed that the 4 isolates corresponded to a new single monopartite begomovirus. Its closest relatives were *Althaea rosea enation begomovirus* from Egypt (79% similarity) and *Cotton leaf curl begomovirus – Pakistan* (66%). This new virus was tentatively called *Cotton leaf curl begomovirus - Sudan* (Idris & Brown, 2000).

Pepper yellow leaf curl begomovirus in Thailand
In 1995, pepper plants (*Capsicum annuum*) showing symptoms of yellow leaf curl were observed at Kanchanaburi in central Thailand. 3 naturally infected pepper plants were collected and virus cultures were maintained on pepper plants. The virus was transmitted by *Bemisia tabaci* (EPPO A2 quarantine pest). Molecular studies (PCR, nucleotide sequence comparisons with 28 well known begomoviruses) revealed the presence of a new begomovirus. Its closest relative was Tomato leaf curl virus from Taiwan (85 % sequence similarity). This new virus was tentatively called *Pepper yellow leaf curl begomovirus* (Samretwanich *et al*., 2000).

Tomato curly stunt begomovirus - South Africa

In South Africa, preliminary reports in 1997 suggested that *Tomato yellow leaf curl begomovirus* (TYLCV - EPPO A2 quarantine pest) was present. In 1998, 140 ha of tomato fields in the region of Onderberg (Mpumalanga) were studied for the possible presence of TYLCV-Israel. Disease incidence ranged from less than 1% to 50 %. Yield losses in individual plants ranged from negligible to 100 %. Molecular studies (PCR, nucleotide sequence comparisons) of two isolates were carried out. They showed that the 2 isolates were indistinguishable, and that the virus present was a distinct begomovirus (it shared less than 78% sequence identity with other well studied begomoviruses). This virus was tentatively called *Tomato curly stunt begomovirus - South Africa* (Pietersen *et al*., 2000).

Tomato leaf curl begomovirus - Barbados

In September 1998, tomato plants showing symptoms of severe leaf curling without marginal chlorosis were observed in Barbados. Symptoms were often associated with populations of *Bemisia tabaci* (EPPO A2 quarantine pest). Molecular studies revealed the presence of a new begomovirus which was tentatively called *Tomato leaf curl begomovirus - Barbados* (Roye *et al*., 2000).

Source:

Brown, J.K.; Idris, A.M.; Olsen, M.W.; Miller, E.; Isakeit, T.; Anciso, J.; (2000) *Cucurbit leaf curl virus*, a new whitefly transmitted geminivirus in Arizona, Texas, and Mexico.
Plant Disease, 84(7), p 809.

Hernandez, N.A.; Sudarshana, M.R.; Guzman, P.; Gilbertson, R.L. (2000) Generation and characterization of infectious clones of *Cucurbit leaf crumple virus*, a new bipartite geminivirus from the Imperial Valley of California. Abstract of a paper presented at the APS 2000 Annual Meeting in New Orleans, Louisiana, 2000-08-12/16, USA.
Phytopathology, 90(6), S 35.

Idris, A.M.; Brown, J.K. (2000) Identification of a new, monopartite begomovirus associated with leaf curl disease of cotton in Gezira, Sudan.
Plant Disease, 84(7), p 809.

Pietersen, G.; Idris, A.M.; Krüger, K.; Brown, J.K. (2000) *Tomato curly stunt virus*, a new begomovirus of tomato within the *Tomato yellow leaf curl virus*-IS cluster in South Africa.
Plant Disease, 84(7), p 810.

Roye, M.E.; Henry, N.M.; Burrell, P.D.; Mc Laughlin, W.A.; Nakhla, M.K.; Maxwell, D.P. (2000) A new tomato-infecting begomovirus in Barbados.
Plant Disease, 84(12), p 1342.

Samretwanich, K.; Ciemsombat, P.; Kittipakorn, K.; Ikegami, M. (2000) A new geminivirus associated with a yellow leaf curl disease of pepper in Thailand.
Plant Disease, 84(9), p 1047.

Additional key words: new pests

2001/056 Unusual ilarvirus of tomato found in Greece and Southern Italy

An unusual ilarvirus of tomato serologically related to *Parietaria mottle ilarvirus* has been reported in Italy and in the south of France (see EPPO RS 2000/081). This virus causes a necrotic disease of tomato. Symptoms are characterized by necrotic spots on the leaves, corky rings and brown patches on fruits. In Italy, it was sporadically observed in Piemonte, Liguria, Lazio and Sardegna. Recently, this virus was also found in symptomatic tomato plants collected from 1997 to 1999 in Greece and Southern Italy. In Greece, the virus was detected in tomato samples from Mount Athos (Chalkidiki Prefecture), Arethoussa and Vasilika (Thessaloniki Prefecture). In Italy, it was sporadically detected in Campania, Basilicata, Sicilia and Puglia.

Source: Roggero, P.; Ciuffo, M.; Katis, N.; Alioto, D.; Crescenzi, A.; Parrella, G.; Gallitelli, D. (2000) Disease Note – Necrotic disease in tomatoes in Greece and Southern Italy caused by the tomato strain of Parietaria mottle virus.
Journal of Plant Pathology, 80(2), p 159.

Additional key words: new pest **Computer codes:** GR, IT

2001/057 Introduction of *Corythucha arcuata* in Italy. Addition to the EPPO Alert List

In northern Italy, in May 2000, a few adults of an unusual insect were observed on *Quercus robur* trees in the Parco delle Groane (north of Milano). The insect was identified as *Corythucha arcuata* (Heteroptera, Tingidae), a North American species which was previously absent from Europe. Since then, *C. arcuata* has been observed in several other areas (in parks or along roads) in Lombardia and Piemonte regions which suggests that it was introduced some years ago. In Italy, *C. arcuata* has been observed on *Quercus robur*, *Q. pubescens* and presumed hybrids of *Q. robur* x *Q. petraea*. It can be recalled that a related species *C. ciliata* (sycamore lace bug) was introduced into Italy in 1964 and then rapidly spread within Europe. It still causes problems in particular on urban *Platanus* trees in many countries in southern Europe.
In North America, *C. arcuata* occurs in southern Canada and in most states of USA. Its host plants are essentially oaks (*Q. acuminata*, *Q. alba*, *Q. macrocarpa*, *Q. muehlenbergii*, *Q. prinoides*, *Q. prinus*, *Q. rubra*) and *Castanea americana*. It is occasionally reported on *Acer*, *Malus* and *Rosa*. Adults and nymphs feed on the underside of the leaves, as a result of which discoloration appears on the upper leaf surface. Heavily infested leaves turn yellowish to whitish and often drop prematurely. In addition, the lower surface of the leaf is littered with dark nymphal skins, eggshells and scattered dots of brownish-black excrement which reduce phytosynthesis. Adults have broad, transparent, lace-like wing covers and are about 6 mm

long. Nymphs are black and covered with spines. Adults overwinter in bark crevices. In spring, eggs are laid on the underside of the leaf usually along leaf veins. There are 5 nymphal stages from eggs to adults. A complete cycle may develop in 30 to 45 days, and several generations (1 to 3) can be observed per year. Preliminary observations done in Italy suggested that *C. arcuata* could complete 3 generations per year. In USA, *C. arcuata* is considered as a pest of amenity trees and chemical treatments are sometimes applied in nurseries and parks. Apparently, it is not considered as a forest pest. It is felt that the introduction of this pest into Europe may represent a threat for forest and amenity oaks.

Corythucha arcuata (Heteroptera, Tingidae), the oak lace bug

Why	*Corythucha arcuata* came to our attention because it was recently introduced into Europe (Italy). [A picture of *C. arcuata* can be viewed at: http://cedarcreek.umn.edu/insects/album/020014007ap.html].
Where	It originates from North America: Canada (south), USA (most states). Reported for the first time in 2000, in Italy (Lombardia, Piemonte).
On which plants	Oaks (*Q. acuminata, Q. alba, Q. macrocarpa, Q. muehlenbergii, Q. prinoides, Q. prinus, Q. rubra*) and *Castanea americana.* Occasionally found on *Acer, Malus* and *Rosa.*
Damage	Direct feeding on the leaves (discoloration of the upper surface), reduced photosynthesis and in case of heavy infestation, premature leaf fall.
Pathway	Oak plants for planting, cut branches from countries where *C. arcuata* occurs.
Possible risks	Oaks are very important forest and amenity trees in Europe. Past experience with a similar insect (*Corythucha ciliata*) feeding and damaging *Platanus* species showed that it was a considerable nuisance in public places, and that it was difficult to prevent natural spread of these insects and to control them especially in urban environment. Oaks grown in nurseries, along the roads, and in parks and gardens are particularly at risk. Apparently, *C. arcuata* is not reported as a forest pest, but the risk for European oak forests cannot be excluded.
Source(s)	Bernardinelli, I.; Zandigiacomo, P. (2000) First record of the oak lace bug *Corythucha arcuata* (Say) (Heteroptera, Tingidae) in Europe. Informatore Fitopatologico, no. 12, 47-49. INTERNET Ohio State University Extension Fact Sheet. Lace bugs. http://www.ag.ohio-state.edu/~ohioline/hyg-fact/2000/2150.html Pennsylvania State Entomology Department. Entomological Notes. Lace bugs on deciduous woody ornamental plants. http://www.ento.psu.edu/extension/facsheets/lace_bug_woody_orn.htm University of Vermont Extension. Lace bugs by G.R. Nielsen. http://ctr.uvm.edu/ctr/El/el153.htm University of Georgia. The Bugwood Network. Oak lace bug. http://www.forestpests.org/oak/lacebug.html

EPPO RS 2001/057

Panel review date 2001- Entry date 2001-03

Additional key words: addition to the Alert List **Computer codes:** CRTHAR, IT

2001/058 Particle lengths of whitefly-transmitted criniviruses

With an improved measurement method, particle lengths of the following whitefly-transmitted criniviruses have been published:
Abutilon yellows crinivirus: 800 to 850 nm
Cucurbit yellow stunting disorder crinivirus (EPPO Alert List): 750 to 800 nm
Lettuce chlorosis crinivirus (EPPO Alert List): 800 to 850 nm
Lettuce infectious chlorosis crinivirus (EPPO A1 quarantine pest): 700 to 750 nm
Tomato chlorosis crinivirus (EPPO Alert List): 800 to 850 nm
Tomato infectious chlorosis crinivirus (EPPO Alert List): 850 to 900 nm

Source: Liu, H.-Y.; Wisler, G.C.; Duffus, J.E. (2000) Particle lengths of whitefly-transmitted criniviruses.
Plant Disease, 84(7), 803-805.

Additional key words: taxonomy **Computer codes:** ABYXXX, KUYSXX, LECXXX, LEIYXX, TMCXXX, TMICXX

2001/059 *Xylella fastidiosa* can cause pecan leaf scorch

Several forms of leaf scorch diseases have been observed on pecan (*Carya illinoinensis*) and attributed to various causes, such as nutrition deficiencies, environmental problems or fungal pathogens. So far, various fungi (*Phomopsis, Pestalotia, Epicoccum, Curvularia, Fusarium*) had been thought to be associated with a particular form of leaf scorch disease which was accordingly called fungal leaf scorch disease. Symptoms were characterized by necrotic areas which first appeared on the tips or margins of leaflets and progressed towards the midribs. The advancing necrosis was often delimited by a black margin and affected leaflets abscised. In 1998, *Xylella fastidiosa* (EPPO A1 quarantine pest) was found in association with this disease. By completing Koch's postulates, Sanderlin and Heyderich-Alger (2000) have now shown that *X. fastidiosa* can cause leaf scorch in pecan orchards in Louisiana. It appears that *X. fastidiosa* is the primary pathogen, as the disease can develop in the absence of fungi. It is likely that fungi are secondary pathogens, or saprophytes developing on dead tissues. It was proposed to call the disease pecan bacterial leaf scorch. It is noted that, unlike other diseases caused by *X. fastidiosa* on other host plants, pecan bacterial leaf scorch does not lead to the death of pecan plants.

Source: Sanderlin, R.S.; Heyderich-Alger (2000) Evidence that *Xylella fastidiosa* can cause leaf scorch disease of pecan.
Plant Disease, 84(12), 1282-1286.

Additional key words: new host plant **Computer codes:** XYLEFA

2001/060 Citrus variegated chlorosis (*Xylella fastidiosa*) can be transmitted through natural root grafts

Citrus variegated chlorosis is caused by *Xylella fastidiosa* (EPPO A1 quarantine pest). The bacterium can be spread over long distances by infected nursery trees and is transmitted in orchards by insect vectors. Studies have been carried out in Brazil on the distribution of *X. fastidiosa* within citrus roots and it was shown that the bacterium can colonize root systems. In addition, pot experiments with *Citrus sinensis* plants (1 inoculated and 1 non-inoculated plant per pot) showed that *X. fastidiosa* could be transmitted between citrus plants through natural root grafts. This is the first time that this mode of transmission is reported. Further studies are needed to evaluate the actual importance of transmission through natural root grafts in the epidemiology of the diseases caused by *X. fastidiosa* on its various host plants.

Source: He, C.X.; Li, W.B.; Ayres, A.J.; Hartung, J.S.; Miranda, V.S.; Teixeira, D.C. (2000) Distribution of *Xylella fastidiosa* in citrus rootstocks and transmission of citrus variegated chlorosis between sweet orange plants through natural root grafts.
Plant Disease, 84(6), 622-626.

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