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2004/022 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**

Phytophthora cambivora (formerly on the EPPO Alert List) which causes a severe decline of common alder (*Alnus glutinosa*) is reported for the first time in Poland (Orlikowski *et al*., 2003). **Present, no details.**

In Lithuania, *Longidoridae* are considered as quarantine pests with the exception of the indigenous species, *Longidorus elongatus*. In 2001, 6049 soil samples from 1078 ha were examined for the presence of plant-parasitic nematodes. *Longidorus euonymus* was recorded from a single field (12 ha) of natural grassland in the Marijapolė region. This is the first report of *L. euonymus* in Lithuania (Stanelis, 2003). **Present, first found in 2001 in one grassland field in Marijapolė region.**

- **Detailed records**

Beet necrotic yellow vein benyvirus (causing rhizomania – EPPO A2 list) occurs in North Dakota, USA (Workneh *et al*., 2003).

In Italy, *Cacoecimorpha pronubana* (Lepidoptera: *Tortricidae* – EPPO A2 list) occurs in the following regions: Abruzzi, Basilicata, Calabria, Campania, Emilia-Romagna, Lazio, Liguria, Lombardia, Molise, Piemonte, Puglia, Sicilia and Sardegna, Toscana, Trentino-Alto Adige, Veneto (Trematerra, 2003).

In USA, *Iris yellow spot tospovirus* (EPPO Alert List) has recently been reported in onion seed and bulb crops in Washington State. So far, this virus has also been reported in Colorado, Idaho and Oregon (du Toit *et al.*, 2004).

In 2000/2002, surveys and molecular studies were done in Tunisia on tomato yellow leaf curl diseases in the main tomato-growing areas. Results showed that only *Tomato yellow leaf curl Sardinia virus* (EPPO A2 list) occurs in Tunisia. It was found on tomato samples from Sahel and South regions, but not from other tomato-growing areas (Fekih-Hassan *et al*., 2003).

Xanthomonas arboricola pv. *pruni* (EPP A2 list) was found for the first time in France in 1995 (see EPPO RS 97/112). The disease caused serious damage in peach in Drôme and Gard. However, in 2002, the disease incidence was moderate in Drôme and low in Gard. Studies are being carried on possible control measures (e.g. copper and sulphur treatments).

Work is also being done on the influence of soil type, irrigation and peach cultivar (Rouzet *et al*., 2003).

- **New host plants**

In Florida (US), *Plasmopara halstedii* (EU Annexes) was reported for the first time on *Rudbeckia fulgida* (*Asteraceae*) in August 2003. Affected plants did not produce flowers, and this outbreak led to the loss of 6,500 potted plants. The disease was observed after the excessive rains of summer 2003, but the origin of this outbreak is unknown (Dankers *et al*., 2004).

In Poland, *Tomato black ring nepovirus* (EU Annexes) is reported for the first time on cucumbers (*Cucumis sativus*) growing in a private garden. Affected plants showed growth reduction, leaf deformation and yellow spots (Pospieszny *et al*., 2003).

In Washington D.C. (US), *Xylella fastidiosa* (EPPO A1 list) has been observed for the first time on *Quercus velutina* causing leaf scorch symptoms (Huang, 2004).

Source:

Dankers, H.; Kimbrough, J.W.; Momol, M.T. (2004) First report of *Plasmopara halstedii* on perennial black-eyed Susan in North Florida. **Plant Health Progress (on-line publication, 2004-01-19).** http://www.plantmanagementnetwork.org/pub/php/brief/2004/susan/

Fekih-Hassan, I.; Gorsane, F.; Djilani, F.; Fakhfakh, H.; Nakhla, M.; Maxwell, D.; Marrakchi, M. (2003) Detection of *Tomato yellow leaf curl Sardinia virus* in Tunisia. **Bulletin OEPP/EPPO Bulletin, 33(2), 347-350.**

Huang, Q. (2004) First report of *Xylella fastidiosa* associated with leaf scorch in black oak in Washington D.C. **Plant Disease, 88(2), p 224.**

Orlikowski, L.; B.; Oszako, T.; Szkuta, G. (2003) First record of alder *Phytophthora* in Poland. **Journal of Plant Protection Research, 43(1), 33-39.**

Pospieszny, H.; Jończyk, M.; Borodynko, N. (2003) First record of *Tomato black ring virus* (TBRV) in the natural infection of *Cucumis sativus* in Poland. **Journal of Plant Protection Research, 43(1), 11-18.**

Rouzet, J.; André; J.; Garcin, A.; Aymard, J.; Chaumel, M.; Blanc, P.; Boudon, S.; Payen, C. (2003) Quelles alternatives face à la bactérie *Xanthomonas arboricola* pv. *pruni*. Bilan des expérimentations menées depuis 1998. **Phytoma – La Défense des Végétaux n° 565, 45-49.**

Stanelis, A. (2003) The occurrence of *Longidorus euonymus* Mali & Hooper, 1974 (Nematoda: Dorylaimida) in Lithuanian natural grassland. **Russian Journal of Nematology, 11(1), 61-62.**

du Toit, L.J.; Pappu, H.R. ; Druffel, K.L., Pelter, G.Q. (2004) *Iris yellow spot virus* in onion bulb and seed crops in Washington. **Plant Disease, 8(2), p 222.**

Trematerra, P. (2003) Catalogo dei *Lepidoptera Tortricidae* della fauna italiana : geonemia, distribuzione in Italia, note biologiche, identificazione. **Bolletino di Zoologia agraria e di Bachicoltura. Serie II, volume 35 (suppl.), 270 pp.**

Workneh, F.; Villanueva, E.; Steddom, K.; Rush, C.M. (2003) Spacial association and distribution of *Beet necrotic yellow vein virus* and *Beet soilborne mosaic virus* in sugar beet fields. **Plant Disease, 87(6), 707-711.**

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

Computer codes: BNYVV0, IYSV00, LONGSP, PHYTCM, PLASHA, TBRV00, TORTPR, TYLCV0, XANTPR, XYLEFA, FR, IT, LT, PL, RU, TN, US

2004/023 Surveys done in 2003 in Estonia on several quarantine pests

In 2003, surveys were carried out in Estonia on the following pests.

***Bursaphelenchus xylophilus* (EPPO A1 list)**
A survey for *B. xylophilus* was carried out for the first time in Estonia in 2002 (see EPPO RS 2003/070). In 2003, the survey continued: in total 451 samples were collected and analysed in the laboratory using the Baermann funnel method. Samples were taken at storage places of wood-processing companies which handle imported and domestic wood (150 samples) and from forests (301 samples) in all 15 Estonian districts. *B. xylophilus* was not found. The situation of *B. xylophilus* in Estonia can be described as follows: **Absent, confirmed by survey.**

***Erwinia amylovora* (EPPO A2 list)**
Surveys have been carried out since 2000 (see EPPO RS 2003/022). In 2003, 100 samples were collected from all districts, mainly from nurseries. All samples were tested in the laboratory by immunofluorescence. *E. amylovora* was not found. The situation of *E. amylovora* in Estonia can be described as follows: **Absent, confirmed by survey.**

Glasshouse pests
In 2003, 145 samples were collected from 57 glasshouses and examined for the presence of *Thrips palmi* (Thysanoptera: *Thripidae* – EPPO A1 list), *Liriomyza* species (Diptera: *Agromyzidae*) and *Bemisia tabaci* (Homoptera: *Aleyrodidae* – EPPO A2 list). Samples were mainly collected from vegetable crops (cucumber, capsicum, tomato) and ornamentals (pot plants and cut flowers). Among these pests, only *Liriomyza bryoniae* (EU Annexes) was detected in 20 samples. The presence of the pest was confirmed in 15 glasshouses (5.06 ha).
The situation of *L. bryoniae* in Estonia can be described as follows: **Present, found only in a few glasshouses.**
The situation of *B. tabaci, L. huidobrensis, L. sativae, L. trifolii* and *T. palmi* in Estonia can be described as follows: **Absent, confirmed by survey.**

***Synchytrium endobioticum* (EPPO A2 list)**
In the past, *S. endobioticum* had been found in 3 districts: Rapla district (1 site) in 1949, Võru district (10 sites) in the 1970s and Valga district (2 sites) in 1985. In all cases, phytosanitary action was immediately taken and the disease was eradicated. In 2002, 26 soil samples were taken from all previously infected sites and their vicinity. In addition, random samples were taken in other districts. All samples were analysed in the laboratory and *S. endobioticum* was not found. In 2003, the survey continued, 63 soil samples were taken from Võru and Valga districts and analysed in the laboratory. Again, *S. endobioticum* was not found. The situation of *S. endobioticum* in Estonia can be described as follows: **Absent, found in the past but now declared eradicated, confirmed by survey.**

Tomato spotted wilt tospovirus **(TSWV - EPPO A2 list)**

During the 2003 survey, 58 samples were collected from ornamental pot plants and vegetable crops in 20 glasshouses. TSWV was not found in 2003. It can be recalled that in 2002 (see EPPO RS 2003/022), 2 samples were positive but eradication measures had been taken.

The situation of TSWV in Estonia can be described as follows: **Absent, 2 positive samples were found in 2002 and eradication measures were taken. No longer found in 2003.**

Source: **NPPO of Estonia, 2004-02.**

Additional key words: absence, detailed records

Computer codes: BURSXY, ERWIAM, LIROBO, RIRIHU, LIRITR, LIRISA, SYNCEN, THRIPL, TSWV00, EE

2004/024 Update on tree infections by *Phytophthora ramorum* in United Kingdom

As reported in EPPO RS 2003/145 and 2003/162, several trees infected by *Phytophthora ramorum* (EPPO Alert List) were found in United Kingdom, in the vicinity of diseased *Rhododendron*. As of February 2004, 9 trees at 3 sites in Cornwall have now been found infected by *P. ramorum*. These trees are: 4 *Quercus ilex* (European holm oak), 1 *Q. cerris* (Turkey oak), 2 *Fagus sylvatica* (beech), 1 *Castanea sativa* (sweet chestnut) and 1 *Aesculus hippocastanum* (horse chestnut). On *C. sativa* and *Q. ilex*, symptoms were only seen on leaves, but on *F. sylvatica, Q. cerris* and *A. hippocastanum*, conspicuous bleeding cankers were observed. In Europe, two other trees (American oak species) are known to be infected: a *Q. falcata* (Southern red oak) in Sussex and a *Q. rubra* (Northern red oak) in a park in the Netherlands. At one of the sites in Cornwall, another species of *Phytophthora*, which has not yet been identified, was detected causing a disease on rhododendrons and a nearby beech tree. Investigations on the identity of the pathogen and the risk it may present are being carried out. It is recalled that at the majority of the 300 reported outbreaks in United Kingdom (mainly confined to rhododendrons in nurseries and garden centres), eradication has been achieved by the immediate destruction of the plants. Eradication and containment measures will continue, and surveillance will be increased to reduce the risk of spread of *P. ramorum* into the wider natural environment.

Source: **NPPO of United Kingdom, 2004-02.**
Forestry Commission and DEFRA News Release of 2004-02-01. *ramorum* disease: update. http://www.defra.gov.uk/news/2004/040202b.htm

Additional key words: new host plants

Computer codes: PHYTRA, GB

2004/025 *Stromatinia cepivorum* is absent from Israel

The NPPO of Israel (PPIS) informed the EPPO Secretariat that *Stromatinia cepivorum* (anamorph: *Sclerotium cepivorum*), causal agent of onion white rot, is absent from Israel. The fungus was found once in the country in the early 1960s, in an onion field located in the Jerusalem corridor, planted with imported bulbs. The said plot was destroyed, and the disease has not been recorded since. The declared status of *S. cepivorum* in Israel is: **Absent, quarantine pest, recorded once in one location and eradicated.**

Source: **NPPO of Israel 2004-03.**

Netzer, D (1963) New diseases of vegetables in Israel.
Hassadeh 43: 1267-1269 (in Hebrew)

Additional key words: absence **Computer codes:** SCLOCE, IL

2004/026 Modifications made to the EU regulations concerning *Erwinia amylovora*

Modifications have recently been made to the European Union phytosanitary regulations concerning *Erwinia amylovora* (EPPO A2 list). These amendments to EU Council Directive 2000/29 were published in December 2003 in Commission Directive 2003/116, and EU Member States are requested to implement these modifications by 2004-03-31. The EPPO Secretariat has tried to summarize the main changes, but for more detail it is necessary to refer to the full text of both Directives.

Better coverage of the host range of *Erwinia amylovora*

The host range of *E. amylovora* has been extended, as some known host plants were previously missing. *Amelanchier* and *Photinia davidiana* (synonym of *Stranvaesia davidiana*) are now included, and the genus *Sorbus* is included as a whole (no exception now being made for *S. intermedia*). All provisions concerning *E. amylovora* (restrictions, buffer zones and protected zones, PC and plant passports) in the EU Directive 2000/29 now apply to: *Amelanchier*, *Chaenomeles*, *Cotoneaster*, *Crataegus*, *Cydonia*, *Eriobotrya*, *Malus*, *Mespilus*, *Photinia davidiana*, *Pyracantha*, *Pyrus*, and *Sorbus.*

Reducing the risks associated with the movements of bee hives

It has been recognized that movements of bee hives may transport *E. amylovora*, and that this presented a particular risk for areas which were still free from the disease. Therefore movements of beehives to and within protected zones are now regulated. In protected zones, from 15 March to 30 June: beehives should originate from non-EU countries free from *E. amylovora* or beehives should originate from a protected zone or they should have undergone an appropriate phytosanitary measure.

Reducing the risks of short distance spread of *E. amylovora* by improving provisions for buffer zones and protected zones

In protected zones, host plants intended for planting can be introduced only if they originate:
- from a non-EU country which is free from *E. amylovora*, or
- from a pest-free area in a non-EU country (which must be delimited and maintained under specified conditions in the non-EU country), or
- from another protected zone, or
- from a field located at least 1 km inside the border of an officially designated buffer zone (plants must have been produced in this field, but if moved there should have remained there for a certain period).

Provisions for buffer zones have been improved. These buffer zones should now be clearly delimited, all host plants produced and maintained in fields located in these buffer zones are placed under a strict control regime. The field and a surrounding zone of at least 500 m width should have been found free from *E. amylovora* since the last complete cycle of vegetation (regular visual inspections and laboratory tests). In the buffer zone any plant showing symptoms of *E. amylovora* should be removed (this is valid in areas outside the fields concerned and their surrounding zones of 500 m, in the latter no symptoms should be found).

Source: Commission Directive 2003/116/EC of 4 December 2003 amending Annexes II, III, IV and V to Council Directive 2000/29/EC as regards the harmful organism *Erwinia amylovora* (Burr.) Winsl. *et al*.
Official Journal of the European Union, 2003-12-06, L 321, 36-40.

Additional key words: phytosanitary regulations **Computer codes:** ERWIAM, EU

2004/027 Studies on antibiotic resistance in *Erwinia amylovora* in Israel

Erwinia amylovora (EPPO A2 list) was first found in Israel in 1985. In 1986, streptomycin was registered as the only bactericide to be used against fireblight and was widely applied by pear growers during bloom. In 1991 the first resistant strains were detected. These were collected from Sharon, Galilee and Golan Heights (see also EPPO RS 96/147). In 1997, streptomycin was withdrawn and replaced by oxolinic acid. Studies were done to monitor any appearance of resistance to oxolinic acid and to determine how long streptomycin-resistant strains could persist in orchards. Surveys were done from 1998 to 2001 in pear, apple and quince orchards. They revealed a decrease in the frequency of locations with streptomycin-resistant strains: 57% in 1998 to 15 % in 2001 (corresponding to 5 locations within 2 restricted areas in western Galilee and Golan Heights). In 1999, strains resistant to oxolinic acid were isolated for the first time from two pear orchards in the northern part. Again in 2000/2001, oxolic acid-resistant strains were detected in several orchards in two restricted areas in northern Galilee.

Source: Manulis, S.; Kleitman, F.; Shtienberg, D.; Shwartz, H.; Oppenheim, D.; Zilberstaine, M.; Shabi, E. (2003) Changes in the sensitivity of *Erwinia amylovora* populations to streptomycin and oxolinic acid in Israel.
Plant Disease, 87(6), 650-654.

Additional key words: resistance **Computer codes:** ERWIAM

2004/028 *Erwinia amylovora* populations in apple calyxes do not constitute a pathway for fireblight dissemination

Epiphytic populations of *Erwinia amylovora* (EPPO A2 list) have been reported to survive on symptomless flowers, twigs and external apple fruit tissues. In particular, *E. amylovora* has been isolated from a small percentage of calyxes of apple fruit collected from heavily infected orchards. Several countries have raised concerns about the possibility of moving fireblight with infected fruits and imposed trade restrictions, although no clear scientific results could support this. Studies were carried out in New Zealand to know whether *E. amylovora* populations present in apple calyxes are able to multiply and spread to susceptible hosts, in sufficiently high numbers to cause fireblight infection. 600 apples (*Malus domestica* cv. Braeburn) were inoculated with a marked strain of *E. amylovora*. These apples were then discarded in an apple orchard (cvs. Royal Gala, Braeburn, Pacific Rose) which was initially free from fireblight and isolated from possible alternative hosts. The survival and possible spread of *E. amylovora* was assessed over 20 days in October/November 2000, at flowering (susceptible growth stage). The same experiment was repeated in 2001. During these periods, a model was used to verify that climatic conditions were favourable to disease spread. Results

obtained both in 2000 and 2001 showed that bacterial numbers in fruit calyxes decreased significantly in the first 4 days, and persisted at low levels for the following 16 days. Spread of *E. amylovora* from infected apples was not detected (by isolation on growing medium and PCR) in any of the samples of rainwater, apple flowers, leaves, or insects. This demonstrates that *E. amylovora* was not transferred to susceptible hosts, even when apples with epiphytic populations of *E. amylovora* in calyxes were placed in close proximity to susceptible hosts at a receptive stage. The authors concluded that the presence of *E. amylovora* on calyxes of apple fruit does not provide a pathway for dissemination of fireblight.

Source: Taylor, R.K.; Hale, C.N.; Gunson, F.A.; Marshall, J.W. (2003) Survival of the fire blight pathogen, *Erwinia amylovora*, in calyxes of apple fruit discarded in an orchard.
Crop Protection, 22(4), 603-608.

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

2004/029 First record of *Eutetranychus orientalis* in the south of Spain

In 2001, the presence of *Eutetranychus orientalis* (Acari: *Tetranychidae* – EPPO A2 list) was observed for the first time in the province of Málaga, south of Spain. This mite mainly affects lemons and oranges, and to a lesser extent mandarins. Heavy and repeated infestation of citrus orchards may lead to a loss of vigour and reduction of fruit size. During 2002, infested citrus-growing areas increased, and the pest was also found on other crops. In Málaga, *E. orientalis* was observed on avocados and mangoes, near infested lemon orchards. In the provinces of Sevilla and Cordoba, it was found in urban areas on ornamentals (e.g. *Cercis siliquastrum* and *Melia*). Chemicals applied against other mites can efficiently control *E. orientalis*. Biological control agents usually applied against other mites are probably effective but this has not yet been verified. The situation of *E. orientalis* in Spain can be described as follows: **Present, first found in 2001 in the south of Spain (Andalucía).**

Note: Another mite species affecting citrus crops, *Eutetranychus banksi*, has also been reported recently in the Iberian Peninsula. This species originates from the Americas. *E. banksi* was first reported in Portugal in 1999, and in the south of Spain in 2001.

Source: García, E.; Márquez, A.L.; Orta, S.; Alvarado, P. (2003) Caracterización de la presencia de *Eutetranychus banksi* (McGregor) y *Eutetranychus orientalis* (Klein) en el Sur de España.
Phytoma España, no. 153, 90-96.

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

2004/030 History of a disastrous biological invasion: *Tecia solanivora* in Ecuador

The history of the introduction and spread of *Tecia solanivora* (Lepidoptera: *Gelechiidae* – EPPO A2 list) in Ecuador is presented by Barragán *et al*. (2004). In Ecuador, the presence of *T. solanivora* was officially declared in 1996 in the province of Carchi (north of the country), although observations made by farmers suggested that it may have been present since 1994. The authorities took phytosanitary measures (restrictions on potato movements from infested areas and control of potato imports) to try to prevent any further spread of the pest. Information and training courses were also provided to growers. At the end of 1997, climatic conditions changed (as an effect of El Niño) to cooler temperatures and abundant rains. This led to an apparent disappearance of *T. solanivora* in all infested areas. It was rapidly concluded that the pest was no longer present, and uncontrolled trade of potatoes continued. In 2000, a systematic survey done in all potato-growing areas and on the main markets revealed that the pest was still widespread. At the end of 2000, climatic conditions returned to higher temperatures and lower precipitations, which were more favourable to potato production and to the insect. Potato production increased but market prices dramatically fell, and large amounts of unsold potatoes were abandoned in the fields. These readily constituted good resources for the rapid development of *T. solanivora* populations. In 2001-2002, the situation was critical with drastic increases of infected seed potatoes and infected crops. An international workshop took place in Quito in 2002. It highlighted the need for international cooperation in south America, for continuing research on biology and ecology, and for developing IPM strategies to control *T. solanivora.*

Source: Barragán, A.; Pollet, A.; Onore, G. (2004) La teigne du Guatemala en Equateur. Comprendre une invasion biologique réussie outre-Atlantique pour la prévenir en Europe.
Phytoma – La Défense des Végétaux, no. 569, 52-54.

Additional key words: **Computer codes:** TECASO, EC

2004/031 Studies on climatic factors and damage of *Tecia solanivora* in Ecuador

In Ecuador, observations have shown that only abiotic factors influence population levels of *Tecia solanivora* (Lepidoptera: *Gelechiidae* – EPPO A2 list), and that climatic factors were probably the most important. So far, virtually no natural enemies have been found. For example, out of 10,024 larvae collected during 2 years from various parts of the country, only 2 were parasitized by Braconids, 1 by nematodes and 1 by a virus. Field studies were done from July 2000 to July 2001 to determine relationships between the development of *T. solanivora* populations and climatic factors. 10 potato plots (300 m²) were planted at different dates (every month, starting from March) and population levels were regularly assessed by using pheromone traps (to catch males) and samples of tubers (to count larvae and assess damage). Various climatic parameters were recorded by meteorological stations in each plot (temperatures, relative humidity, precipitations). Results showed that only few correlations could be established between climate and pest populations, and that interactions were quite complex. However, it appeared that there was a strong correlation between tuber damage noted at harvest and climatic variations observed during the first 2 to 3 months of plant growth. Strong correlations were also observed between the infestation of tubers at harvest and flying males captured in pheromone traps; male flights being also significantly impacted by climatic conditions. It is concluded that by using pheromone traps and climatic measures at early flowering (i.e. 2 months before harvest), it should be possible to predict the percentage of infected tubers at harvest.

Source: Pollet, A.; Barragán, A.; Lagnaoui, A.; Prado, M.; Onore, G.; Aveiga, I.; Lery, X.; Zeddam, J.L. (2003) Predicción de daños de la polilla guatemalteca *Tecia solanivora* (Povolny) 1973 (Lepidoptera: Gelechiidae) en el Ecuador.
Boletín de Sanidad Vegetal – Plagas, 29(2), 233-242.

Additional key words: control **Computer codes:** TECASO

2004/032 *Agrilus planipennis* found in Virginia (US)

The emerald ash borer, *Agrilus planipennis* (Coleoptera: *Buprestidae* – EPPO Alert List) has recently been reported in Virginia (US). It was discovered that, despite restrictions imposed on the movement on host plants, ash trees (*Fraxinus*) had been shipped by an infested nursery in Michigan to another nursery in Prince George's County, Maryland (see EPPO RS 2003/148). 16 of the infested trees were then planted in the nearby Fairfax county in Virginia. All trees were removed and burnt. However, prior to destruction, observations revealed the presence of exit holes characteristic of *A. planipennis*. This indicates a strong possibility that adults may have escaped. In order to prevent any further spread in Virginia, all ash trees located within a 800 m radius of the initial infestation site will be destroyed.

Source: **NAPPO Pest Alert, 2004-02.**
Emerald ash borer *Agrilus planipennis* Fairmaire (Coleoptera: Buprestidae) discovered in Fairfax County, Virginia.
http://www.pestalert.org/pestnews.cfm

Web site of Fairfax County – Virginia.
Emerald ash borer infects area of Fairfax County.
http://www.co.fairfax.va.us/news/default.htm

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

EPPO *Reporting Service*

2004/033 Details on pests and diseases in Curaçao (Netherlands Antilles)

A publication from Heidweiller and van Buurt (1998) provides detailed information on the common pests and diseases present on the island of Curaçao (Netherlands Antilles). The EPPO Secretariat has extracted the following details:

Aleurocanthus woglumi (Homoptera: Aleyrodidae – EPPO A2 list) is reported as present in Curaçao on citrus and mangoes.

Anastrepha serpentina (Diptera: Tephritidae – EPPO A1 list) is found in Curaçao on fruits of sapodilla (*Manilkara zapotilla).*

Bemisia tabaci (Homoptera: Aleyrodidae – EPPO A2 list) occurs in Curaçao on a wide range of vegetable and ornamental crops. It presence first detected in 1989 at Fuik Bay.

Liriomyza sativae (Diptera: Agromyzidae – EPPO A2 list) is present in Curaçao (probably indigenous) on vegetable crops. The EPPO Secretariat had previously no data on the occurrence of this pest in the Netherlands Antilles.

In the Netherlands Antilles, *Maconellicoccus hirsutus* (Homoptera: Pseudococcidae – EPPO A1 list) was first recorded in St Maarten in 1996, in Curaçao in 1997, in St Eustatius and Aruba in 1997.

Thrips palmi (Thysanoptera: Thripidae – EPPO A1 list) was first found in Curaçao in 1994. It occurs on a wide range of vegetable (Cucurbitaceae, Solanaceae) and ornamental crops.

Toxoptera citricida (Homoptera: Aphididae – EPPO A1 list) was first found in Curaçao in 1989.

Source: Personal communication with M. G. van Buurt, 2004.

Heidweiller, K.A.; van Buurt, G. (1998) Plaga i malesa mas komun di mata i berdura na Kòrsou [plant pests and diseases in Curaçao].
Dienst Landbouw, Veeteelt en Visserij (L.V.V.), 129 pp.

Additional key words: new record, detailed records **Computer codes:** ALECWO, ANSTSE, BEMITA, LIRISA, PHENHI, THRIPL, TOXOCI, AN

2004/034 First report of Moko disease of banana in Jamaica

Moko disease of banana caused by *Ralstonia solanacearum* race 2 (EPPO A2 list) is reported from Jamaica. The disease was noticed in November 2003 in a few fields at Maroon Town, St James (north west of the island) on banana and plantain showing wilting and reduced fruit size. The presence of the bacterium has now been confirmed by CABI Bioscience. Eradication and containment measures are being implemented by the Ministry of Agriculture in Jamaica. Infected fields (approximately 8 ha) will be destroyed and restrictions will be imposed on plant and soil movements from the infested area. A survey will be carried out over the whole island to determine the extent of the disease. This finding is considered as a serious threat to Jamaican banana production. It is noted that, in Jamaica, approximately 9,600 ha of banana and 5,100 ha of plantains are grown by 85,200 farmers for both the export and domestic markets.

Source: **INTERNET**
Jamaica Information Service. Ministry outlines plan of action for banana disease, Kingston, 2004-03-10. http://www.jis.gov.jm
Jamaica Gleaner. The threat to banana. 2004-03-11. http://www.jamaica-gleaner.com/gleaner/20040311/cleisure/cleisure1.html
ProMed posting of 2004-03-17. Moko disease, banana – Jamaica (St James). http://www.promedmail.org

Additional key words: new record **Computer codes:** PSDMSO, JM

2004/035 First report of *Tomato chlorosis crinivirus* in Taiwan and first report of *Tomato chlorosis* and *Tomato infectious chlorosis criniviruses* on zinnia

In Southern Taiwan, in spring 1998, pronounced yellowing symptoms were observed on lower leaves of tomato plants growing at a research centre and in several commercial fields. Symptoms suggested the possible presence of *Tomato chlorosis crinivirus* or *Tomato infectious chlorosis crinivirus* (ToCV and TICV - both on the EPPO Alert List). Molecular tests (specific digoxigenin-labeled riboprobes) revealed the presence of ToCV in 6 symptomatic tomato samples out of the 17 tested. No hybridization was obtained with the specific probe for TICV. On the same locations, similar symptoms were observed on zinnia plants. ToCV was detected in 5 zinnia plants (out of the 8 tested) and one of them was also found positive for TICV. According to the authors, this is the first published records of ToCV and TICV in zinnia plants, and of the presence of ToCV on tomatoes in Taiwan.

Source: Tsai, W.S.; Shih, S.L.; Green, S.K.; Hanson, P.; Liu, H.Y. (2004) First report of the occurrence of *Tomato chlorosis virus* and *Tomato infectious chlorosis virus* in Taiwan. **Plant Disease, 88(3), p 311.**

Additional key words: new host plant, new record **Computer codes:** TICV00, ToCV00, TW

2004/036 First report of *Tomato chlorosis crinivirus* on *Capsicum annuum*

In southern Spain, epidemics of a tomato yellowing disease have been observed in the provinces of Málaga and Almería since 1997. These epidemics have been associated with infections by *Tomato chlorosis crinivirus* (ToCV - EPPO Alert List). During the past few years, the incidence of the disease has increased and it spread to new areas including eastern Spain and islas Baleares and Canarias. In 1999, *Capsicum annuum* plants showing symptoms of interveinal yellowing, mild upward leaf curling, and stunting were observed in glasshouses of Almería heavily infested with *Bemisia tabaci*. These plants were tested (PCR) for the presence of *Tomato yellow leaf curl begomovirus* (TYLCV) as well as for the presence of tomato criniviruses. A few plants tested positive for TYLCV. In addition, the presence of ToCV was detected in several samples. This is the first report of a natural infection of ToCV on *Capsicum annuum*. Further studies are being conducted on the relationships between ToCV infections and the expression of specific symptoms on *C. annuum.*

Source: Lozano, G.; Moriones, E.; Navas-Castillo, J. (2004) First report of sweet pepper (*Capsicum annuum*) as a natural host plant for *Tomato chlorosis virus.* **Plant Disease, 88(2), p 224.**

Additional key words: new host plant **Computer codes:** ToCV00

2004/037 Bumble bees can disseminate *Pepino mosaic potexvirus*

Pepino mosaic potexvirus (PepMV - EPPO Alert List) is easily transmitted by plant contact, common cultural practices (staking, pruning …) and insufficiently disinfected seeds. Observations also suggested that bumble bees (*Bombus* spp.) used as pollinators in tomato glasshouses may also play a role in disease dissemination. Trials were conducted in Spain (near Murcia) in tomato plastic houses with *Bombus terrestris* and *B. canariensis*. In spring, healthy tomato plants were transplanted in a commercial plastic house where infected tomato plants were growing. Symptoms of PepMV appeared 4 weeks after transplantation and after 7-8 weeks all transplanted tomatoes showed symptoms. On bumble bees, the virus was detected by ELISA mainly on legs (with and without pollen), but also on head and abdomen. Body extracts obtained from infected bumble bees were inoculated to healthy tomato plants, infections and symptoms were observed in more than 85% of the cases. Although, the exact mechanisms of dissemination of PepMV by *Bombus* species are not known, these studies demonstrated that they can spread the virus within tomato crops.

Source: Lacasa, A.; Guerrero, M.M.; Hita, I.; Martínez, M.A.; Jordá, C.; Bielza, P.; Contreras, J.; Alcázar, A.; Cano, A. (2003) Implicaciones de los abejorros (*Bombus* spp.) en la dispersión del virus del mosaico del pepino dulce (Pepino mosaic virus) en cultivos de tomate.
Boletín de Sanidad Vegetal – Plagas, 29(3), 393-403.

Additional key words: epidemiology **Computer codes:** PepMV0

2004/038 Recent information on *Cameraria ohridella*

In Germany, *Cameraria ohridella* (Lepidoptera: *Gracillariidae* - formerly on the EPPO Alert List) is now established throughout the country, and the public is increasingly concerned at the defoliation it causes to horse chestnut trees (*Aesculus hippocastanum*) in urban environments. A Symposium was organized by BBA in Braunschweig on 'strategies for reducing infestations by the horse chestnut leafminer in public places on 2003-06-24/25. A special session was also dedicated to *C. ohridella* during the 2nd International Symposium on Plant Health in Urban Horticulture, held in Berlin, on the 2003-08-27/29.

Control methods

Much information on possible control measures has been presented during these symposia. In large cities such as Berlin, Bonn and Hamburg, it is generally considered that the most efficient measure is the destruction of fallen leaves in autumn to reduce insect populations. New techniques to destroy leaves, such as the use of heated organic foam (originally designed for weed control), have been tested on a small scale and gave good results. The application of insecticide is difficult in urban environments but soil injections or drenches with systemic insecticides, or the use of biological products (e.g. *Bacillus thuringiensis* or neem extracts) are also being studied. Pheromone traps could also be useful to assess populations levels, and it is also envisaged to study 'attract and kill' or sexual confusion methods.

First record in Greece

During the Symposium in Berlin, the presence of *C. ohridella* in Greece was also reported (new record according to the EPPO Secretariat). The pest was first observed in Greece in 1996, although observations made by gardeners suggest that it was probably present at an earlier date. *C. ohridella* occurs both in wild and urban environments, but its damage is moderate due to the limited occurrence of horse chestnut in Greece (Avtzis & Avtzis, 2003).

EU project (Control of *Cameraria* – CONTROCAM)

An EU project is running from 2001 to 2004 and has the aim of:

- assessing the present and future potential impact of the pest on urban and natural ecosystems;
- developing integrated management strategies ;
- using the case of *C. ohridella* to make recommendations on the development of European strategies against biological invasions.

Spread continues in France

In France, a map published in Phytoma clearly shows that *C. ohridella* continues to spread towards the West. At the end of 2002, more than 40 départements were infested. In 2003, outbreaks were reported in the region of Ile-de-France. All regions are being consulted to assess the present situation of the pest over the whole French territory.

Source: Anonymous (2003) Phyto Régions. *Cameraria* sur marronnier – Toujours plus à l'ouest.
Phytoma – La Défense des Végétaux, no. 565, p 4.

Avtzis, N.; Avtzis, D. (2003) *Cameraria ohridella* Deschka & Dimic (Lep : Gracillariidae) : a new pest on *Aesculus hippocastanum* in Greece
Mitteilungen aus der Biologischen Bundesanstalt für Land- und Forstwirtschaft, no. 394, 199-202.

Papers presented at the BBA Symposium on *Cameraria ohridella*, Braunschweig, DE, 2003-06-24/25.
Nachrichtenblatt des Deutschen Pflanzenschutzdienstes, 55(10), 201-244.

Papers presented at the 2nd International Symposium on Plant Health in Urban Horticulture, Berlin, 2003-08-27/29.
Balder, H.; Strauch, K.H.; Backhaus, G.F. (eds.) (2003) Mitteilungen aus der Biologischen Bundesanstalt für Land- und Forstwirtschaft, no. 394, 304 pp.

Additional key words: new record, detailed record, control methods

Computer codes: LITHOD, DE, FR, GR

2004/039 Publications on *Bursaphelenchus xylophilus*

The following useful publications on *Bursaphelenchus xylophilus* (EPPO A1 list) are available:

A Workshop on *B. xylophilus* took place in Evora (PT), and the proceedings of this Workshop are now available. The pinewood nematode, *Bursaphelenchus xylophilus*. Proceedings of an International Workshop, University of Evora, Portugal, 2001-08-20/22. Edited by M. Mota and P. Vieira. It can be ordered from Brill Academic Publishers at the price of 60 EUR:

Brill Academic Publishers
P.O. Box 9000, 2300 PA Leiden
The Netherlands
Fax: 31-71-5317532
E-mail: orders@brill.nl
Website: http://www.brill.nl/product_id21507.htm

A CD on the taxonomy of the genus *Bursaphelenchus*, with original descriptions for all species, is also now available. The 'Pinewood Nematode Taxonomic Database' can be ordered from Mactode Publications at the price of 49.95 USD:

Mactode Publications
3510 Indian Meadow Drive
Blacksburg, VA 24060, USA
E-mail: mactode@mac.com
Website: http://www.mactode.com/Pages/TaxonomicDatabase.html

Source: **Personal communication with Dr P. Vieira, Universidade de Evora (PT), 2004-01.**

Additional key words: publications **Computer codes:** BURSXY