ORGANISATION EUROPEENNE
ET MEDITERRANEENNE
POUR LA PROTECTION DES PLANTES

EUROPEAN AND MEDITERRANEAN
PLANT PROTECTION
ORGANIZATION

EPPO

Reporting

Service

Paris, 2005-01-01 **Reporting Service 2005, No. 1**

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

2005/001 First report of *Leptinotarsa decemlineata* in Iraq

In October 2003, *Leptinotarsa decemlineata* (Colorado beetle - Coleoptera: Chrysomelidae, EPPO A2 list) was observed for the first time in Iraq. The pest was found in Dahuk Governorate, north of Iraq, and it then spread to Mosul Governorate during 2003/2004. Field workers indicated that the insect had been observed earlier in the country. Serious outbreaks led the Ministry of Agriculture to recommend chemical treatments to prevent further spread of the pest.
The situation of *Leptinotarsa decemlineata* in Iraq can be described as follows: **Present, first reported in 2003, in the north of the country (Dahuk, Mosul governorates).**

Source: El-Jboory I (2004) A new potato pest in Northern Iraq. Disease and pest outbreaks – Iraq.
Arab and Near East Plant Protection Newsletter, no. 38, June 2004, p 27.

Additional key words: new record **Computer codes:** LEPTDE, IQ

2005/002 First report of *Sternochetus mangiferae* in Yemen

In July 2004, *Sternochetus mangiferae* (Coleoptera: Curculionidae, EPPO A1 list) was observed for the first time in Yemen. The pest was found in mango fruits collected from the Ahkoom region, Ta'izz Governorate. More samples were collected from Sanaa fruit market, and it appeared that the mango seed weevil is now probably present in all mango-growing regions of Yemen.
The situation of *Sternochetus mangiferae* in Yemen can be described as follows: **Present, first reported in 2004, probably present in all mango-growing areas.**

Source: Suleiman H, Mehdi A (2004) First record of mango seed beetle in Yemen.
Arab and Near East Plant Protection Newsletter, no. 38, June 2004, 25-26.

Additional key words: new record **Computer codes:** CRYPMA, YE

2005/003 *Quercus rubra* is not a host for *Anoplophora glabripennis*

In the EPPO RS 2004/163 concerning the finding of *Anoplophora glabripennis* (Coleoptera: Cerambycidae – EPPO A1 list) at Ste Anne-sur-Brivet (Loire Atlantique) in France in July 2004, it was mentioned that, in addition to *Acer*, the pest was also found on *Quercus rubra*. *Acer* trees were indeed infested by *A. glabripennis* but NOT the *Q. rubra* trees. Suspect larvae were found on *Q. rubra*, but were not identified as *A. glabripennis* by molecular analysis. Their exact identity is not known yet, awaiting further rearing in quarantine and appearance of adults.

Source: Personal communication with P. Reynaud, LNPV Montpellier, FR, 2005-02.

Additional key words: host plants **Computer codes:** ANOLGL

2005/004 More details about the eradication of *Thrips palmi* in United Kingdom

In United Kingdom, *Thrips palmi* (Thysanoptera: Thripidae – EPPO A1 list) was first found in Southern England at 1 production site of chrysanthemum cut flowers in April 2000 (EPPO RS 2001/007). *T. palmi* had been detected during a routine survey in 2 glasshouses (2.1 and 2.6 ha). Although investigations were done, the pathway of introduction remained unknown. This outbreak was then successfully eradicated but this imposed significant costs on both the grower and the NPPO. An evaluation was made of eradication costs, as well as of the potential economic impact of *T. palmi* on horticulture in England, if eradication had not been achieved. Eradication measures led to the use of additional pesticides, soil sterilization with methyl bromide, imidacloprid-treated compost, plastic sheeting to cover growing media. These activities also implied additional labour costs, as well as some technical studies to improve spraying technologies and equipment. The situation was closely monitored with yellow sticky traps and many official inspections were done at the infested production site and in its vicinity (all neighbouring glasshouses within 5 km of the outbreak were checked). Bait plants were used to confirm eradication. From April 2000 to July 2001, the estimated eradication cost of this single outbreak was approximately 56,000 GBP (81,600 EUR) for the grower and 122,850 GBP (178,600 EUR) for the government (so a total of 260,200 EUR).
If eradication had not been achieved, *T. palmi* may have spread from the infested site to other glasshouses and gradually established throughout the country. Economic impact would include yield and quality losses, additional research and extension, plant health certification costs and, with some uncertainty, loss of exports. The economic impact of such an introduction has been estimated over a period of 10 years, with various rates of spread, and was estimated between 16.9 and 19.6 million GBP (24.5 to 28.5 million EUR). A cost/benefit analysis was also attempted to compare the cost of eradication with the cost of 'living with *T. palmi*'. The 'benefit:cost' ratio

ranged from approximately 10:1 if there is no loss of exports, and from approximately 100:1 if significant export losses resulted from the establishment of *T. palmi*.

Source: MacLeod A, Head J, Gaunt A (2004) An assessment of the potential economic impact of *Thrips palmi* on horticulture in England and the significance of a successful eradication campaign.
Crop Protection, 23(7), 601-610.

Additional key words: eradication **Computer codes:** THRIPL, GB

2005/005 First report of *Lissorhoptrus oryzophilus* (rice water weevil) in Italy: Addition to the EPPO Alert List

Recently, many adult females of *Lissorhoptrus oryzophilus* (Coleoptera: Curculionidae – rice water weevil) were collected in the western part of Lombardia, in 2 localities in the provinces of Milano and Pavia (Abbiategrasso and Vigevano, respectively). Diapausing specimens were collected under *Calluna vulgaris* in January and March, and then further specimens were observed moving on grasses and sedges (mainly *Carex acutiformis*) near rice fields. This is the first report of *L. oryzophilus* in Italy and in Europe. Considering the fact that only females were found and that the 2 localities were near the international airport of Milano (Malpensa), it is considered that the pest was probably introduced by imports of infested plant material from America or Asia. Surveys will be carried out to monitor these populations. As *L. oryzophilus* is a serious pest of rice in all countries where it is present, the EPPO Secretariat decided to add it to the EPPO Alert List.

Lissorhoptrus oryzophilus (Coleoptera: Curculionidae) – rice water weevil

Why	*Lissorhoptrus oryzophilus* came to our attention because it was recently introduced into Italy, and is generally considered as a major rice pest.
Where	*L. oryzophilus* originates from America and was then accidentally introduced into Asia (first in Japan on infested rice straw in 1976, and then to other important rice-producing countries). **EPPO region:** Italy (Lombardia). **Asia:** China, India, Japan, Korea Democratic Peoples' Republic, Korea Republic, Taiwan. **North America:** Canada, Mexico, USA. **Central America**: Cuba, Dominican Republic. **South America:** Colombia, Suriname, Venezuela
On which plants	*L. oryzophilus* is a pest of rice (*Oryza sativa*), but it also attacks many other wild grasses and sedges (Poaceae and Cyperaceae, e.g. *Agrotis, Axonopus, Cynodon, Cyperus, Echinochloa, Leersia, Panicum, Paspalum, Poa, Setaria*) which serve as alternative hosts for adult weevils in or near rice fields.
Damage	Adult weevils (3 mm long) feed on leaves making longitudinal scars on the upper leaf surface, but generally do not cause economic damage. Larvae (white, legless with light brown head) are responsible for the main damage as they feed on roots and prune them. Small larvae can feed inside the roots. Root pruning results in reductions in vegetative growth, tillering, grain number and grain weight. Severely attacked plants become yellow and stunted, with delayed maturity

and reduced yield. Occasionally, root pruning is so severe that plants are no longer firmly attached to the soil, and when disturbed will float on water surface. The rice water weevil is reported as the most destructive insect pest of rice in the USA. Serious crop losses are reported in all countries where it occurs (e.g. yield losses of about 10 % in Arkansas, up to 25 % in Louisiana, up to 30% in California, up to 60% in Japan).

Adults are semi-aquatic and can be found on or beneath the soil surface. They overwinter (diapause) in grasses, leaf litter and moist soil (1 to 5 cm deep). Adult fly from overwintering sites and begin to feed on host plants. Females lay eggs (singly) in submerged leaf sheaths above the plant crown. Larvae feed on leaf for a short period and then crawl down to the roots. There are 4 larval instars (last instar of about 8 mm long). Larvae have paired dorsal hooks to pierce the roots and obtain oxygen. The fourth larval instar forms a mud-coated cocoon attached to the roots. Adults then emerged either to enter into diapause or to re-infest rice. There is usually one generation per year but in some cases two generations may be observed (e.g. in Taiwan). In USA, both males and females occur, but in Asia (and in California) only parthenogenetic females are found.

Dissemination — Adults can fly between fields. Over longer distances infested plants or plant parts (e.g. hay) may transport the insect.

Pathway — Rice plants for planting (not really a traded commodity?), rice hay, soil from countries where the pest occurs. Rice grain is not a likely pathway as adults and larvae do not feed on seeds.

Possible risks — Rice water weevil is considered as a major pest of rice in all areas where it occurs. In USA and Asia, control mainly relies on insecticides, but resistance has appeared to some compounds. IPM strategies are being developed (trapping, timing of flooding, use of resistant varieties, weed control, preventive treatment limited to field edges, use of biocontrol agents). Rice is cultivated in some EPPO countries (e.g. Italy, Russia, Spain, Portugal, Greece, France, Ukraine), and the introduction or spread of dangerous rice pests such as *L. oryzophilus* should be avoided. More data would be needed on the situation of *L. oryzophilus* in Italy and on its climatic requirements to better assess its potential of establishment in the EPPO region.

Source(s)

Caldara R, Diotti L, Regalin R (2004) [First record for Europe of the rice water weevil, *Lissorhoptrus oryzophilus* Kuschel (Coleoptera, Curculionoidea, Erirhinidae).]. Bollettino di Zoologia Agraria e di Bachicoltura, Serie II, 36(1), 165-171.

Hill DS (1983) Agricultural insect pests of the tropics and their control. Cambridge University Press, Cambridge, 516 pp.

Zou L, Stout MJ, Ring DR (2004) Degree-day models for emergence and development of rice water weevil (Coleoptera: Curculionidae) in Southwestern Louisiana. Environmental Entomology, 33(6), 1541-1548.

INTERNET

Crop Protection Compendium 2004. CABI, Wallingford, UK. http://www.cabicompendium.org

University of California Pest Management Guidelines. http://www.ipm.ucdavis.edu/PMG/r682300511.html

University of Arkansas. http://www.aragriculture.org/pestmanagement/insects/rice/insects/rice_water_weevil.asp

Texas A&M University. Growth and Yield Response of Rice to Rice Water Weevil Injury.http://beaumont.tamu.edu/Research/Agroecosystems/Rice/RiceWeevil.htm

EPPO RS 2005/005

Panel review date - Entry date 2005-01

2005/006 Use of sounds to detect *Rhynchophorus ferrugineus*

It has been observed that boring larvae of *Rhynchophorus ferrugineus* (Coleoptera: Curculionidae – EPPO Alert List) continuously create audible sounds while severing vascular bundles of palm trees. The use of a commercial acoustic device, originally developed for the detection of pests of grain, was studied and found useful. Software was then developed to recognize the 'crunching sounds' among other recorded sounds. Studies are currently being done to develop a sound profile which will serve as a basis for future instrumental detection of *R. ferrugineus* within palm trunks and offshoots.

Source: Soroker V, Nakache Y, Landau U, Mizrach A, Hetzroni A, Gerling D (2004) Utilization of sounding methodology to detect infestation by *Rhynchophorus ferrugineus* on palm offshoots.
Phytoparasitica 32(1), 6-8.

Additional key words: detection **Computer codes:** RHYCFE

2005/007 Review paper on *Xylella fastidiosa* and its vectors

A few species of xylem fluid-feeding insects are considered as important pests because they can transmit *Xylella fastidiosa* (EPPO A1 List) which induces diseases on grapevine, citrus, coffee, almond, lucerne, stone fruits, ornamental plants and hardwood trees. In particular, two diseases caused by *X. fastidiosa*, citrus variegated chlorosis and grapevine Pierce's disease are currently causing problems. In Brazil, citrus variegated chlorosis became important in the early 1990s and has now expanded through many citrus-growing areas of South America. The recent establishment of *Homalodisca coagulata* (Homoptera: Cicadellidae – EPPO Alert List) in California has led to serious outbreaks of Pierce's disease, and consequently to much research on insect vectors and disease management. A review paper on *X. fastidiosa* and its vectors presents the current knowledge on disease epidemiology and tries to identify which vectors may have the potential to invade new areas outside their natural range and become important disease vectors. Today, 39 species and 19 genera of Cicadellidae and 5 species of Cercopidae have been shown to be vectors of *X. fastidiosa*. In North America, the following species are reported as particularly abundant in affected crops or adjacent vegetation: *Xyphon* (*Carneocephala*) *fulgida*, *Draeculacephala minerva*, *Graphocephala atropunctata*, *Homalodisca coagulata* and *Oncometopia* spp. In Brazilian citrus groves, the main species found are: *Dilobopterus costalimai*, *Oncometopia facialis*, *Acrogonia citrina*, *Bucephalogonia xanthophis*.

A simplified table below presents the vector species which may have the potential to invade new areas and further spread *X. fastidiosa* (a more complete table is given in the review paper). The authors stressed that this list is only an attempt, as information is still incomplete for many species.

Species	Disease	Distribution	Risk
Bucephalogonia xanthophis	CVC CLS	Argentina, Brazil	High. Common in diverse ecosystems and abundant on ornamental plants and nursery stocks
Dilobopterus costalimai	CVC CLS	Argentina, Brazil, Paraguay	High. Common in diverse ecosystems, crops and ornamental plants
Draeculacephala minerva	PD AD ALS	California, Hawaii, south-west and west USA, Mexico, Central America	High. Common in diverse ecosystems
Graphocephala atropunctata	PD AD ALS	South-west USA to Central America	High. Common in diverse ecosystems. Associated with ornamental plants
Macugonalia leucomelas	CVC	Argentina, Bolivia, Brazil, Paraguay	High. Common in diverse ecosystems. Associated with ornamental plants and nursery trees
Acrogonia citrina	CVC	Brazil	High. Common in diverse ecosystems, ornamental plants and nursery trees
Homalodisca coagulata	PD PPD OLS	South-east USA to Texas, California, Mexico	High. History of range expansion on nursery stock. Ability to feed on woody tissue may allow secondary transmission of *X. fastidiosa* in grapes
Oncometopia nigricans	PD	South USA	High. Associated with disease epidemics, large host range.

CVC: citrus variegated chlorosis – CLS: coffee leaf scorch – PD: Pierce's disease – AD – alfalfa dwarf - ALS: almond leaf scorch – PPD: phony peach disease – OLS: oleander leaf scorch.

Source: Redak RA, Purcell AH, Lopes JRS, Blua MJ, Mizell RF, Andersen PC (2004) The biology of xylem fluid-feeding insect vectors of *Xylella fastidiosa* and their relation to disease epidemiology.
Annual Review of Entomology, 49243-270.

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

2005/008 Invasion risk of *Homalodisca coagulata*, vector of *Xylella fastidiosa* in grapevine-growing regions of the world

Homalodisca coagulata (Homoptera: Cicadellidae – EPPO Alert List) is an efficient vector of *Xylella fastidiosa* (EPPO A1 list) and its spread to California (US) has resulted in a chronic Pierce's disease problem for grapevine growers. In USA, Pierce's disease occurs mainly in areas with mild winters (winter temperatures not falling below 1–4°C). *H. coagulata* probably originates from south-eastern USA and north-eastern Mexico. Climate matching studies (using CLIMEX) were done to determinate the potential geographical distribution of *H. coagulata* and grapevine strains of *X. fastidiosa* in California and other grapevine-growing regions of the world. Model predictions indicated that suitable climatic conditions for *H. coagulata* and Pierce's disease strains existed in almost all grapevine-producing regions of the world. However, it was found that regions north of California are not able to sustain populations of either the vector or the disease because of cold stress. It was found that *H. coagulata* could establish in the major grapevine-growing regions of New Zealand, Australia, France (Bordeaux), Spain (Andalucía, Cataluña, Galicia, País Vasco, Valencia), central and southern parts of Italy. However, cold stress would exclude it from Bourgogne and Champagne regions of France, provinces of Northern Italy and Central Spain. CLIMEX predicted that cold stress would exclude Pierce's disease from most of New Zealand, Tasmania and Victoria state in Australia, from all France, and from northern and central areas of Spain and Italy. Grapevine-growing areas of Chile (from Valparaiso to Concepción close to the Pacific coast) and the Western Cape Province in South Africa appear vulnerable to both the disease and its vector.

Source: Hoddle MS (2004) The potential adventive geographic range of glassy-winged sharpshooter, *Homalodisca coagulata* and the grape pathogen *Xylella fastidiosa*: implications for California and other grape growing regions of the world.
Crop Protection, 23(8), 691-699.

Additional key words: PRA **Computer codes:** HOMLTR, XYLEFA

2005/009 *Phytophthora alni* sp. nov. and its variants described as causal agents of a new disease of alder in Europe

In 1993, a new root disease of alders (*Alnus* spp.) causing tree mortality was reported by the United Kingdom. The disease (formerly on the EPPO Alert List – EPPO RS 99/134) was then found in: Austria, Belgium, France, Germany, Hungary, Netherlands and Sweden. Studies have shown that the alder *Phytophthora* comprised a group of hybrids, probably between *P. cambivora* and a species related to *P. fragariae*. These hybrids included a common 'standard' type occurring across much of Europe (from Scotland and Sweden to Hungary and south east France), and four other variant types (Swedish, Dutch, German and UK variants) showing some morphological and genetic differences. Whatever the precise origins of this new alder *Phytophthora* are, the pathogen is now considered as a behaviourally, morphologically and genetically unique entity, which is now well established and ecologically successful in several European countries. It is therefore considered as a species unit and the name *Phytophthora alni* Brasier & S.A. Kirk, sp. nov. is proposed. The standard hybrid type is now formally designated as *Phytophthora alni* subsp. *alni*. The Swedish variant is designated as *P. alni* subsp. *uniformis*, and the Dutch, German and UK variants collectively as *P. alni* subsp. *multiformis*.

Source: Brasier CM, Kirk SA, Delcan J, Cooke DEL, Jung T, Man in't Vled WA (2004) *Phytophthora alni* sp. nov. and its variants: designation of emerging heteroploid hybrid pathogens spreading on *Alnus* trees.
Mycological Research, 108(10), 1172-1184.

Additional key words: etiology, taxonomy **Computer codes:** PHYTSP

2005/010 PCR detection of latent infections of *Glomerella acutata* on strawberry

Glomerella acutata (anamorph *Colletotrichum acutatum* – EU annexes) can easily be spread with visibly or latently infected strawberry planting material (e.g. cold-stored transplants) moving in trade. A PCR method using specific primers has been developed in Finland to detect *G. acutata*. This method allows detection of *G. acutata* in symptomatic and asymptomatic plant parts as well as in artificially or naturally infected strawberry tissues. The pathogen could be detected on ripe/unripe berries, runners, petioles and parts of crowns. It was felt that this method could usefully be used for phytosanitary inspections.

Source: Parikka P, Lemmetty A (2004) Tracing latent infection of *Colletotrichum acutatum* on strawberry by PCR.
European Journal of Plant Pathology, 110(4), 393-398.

Additional key words: diagnostics **Computer codes:** COLLAC

2005/011 First report of *Tomato chlorosis crinivirus* in Israel

In December 2003, symptoms resembling those of *Tomato chlorosis crinivirus* (ToCV - EPPO A2 list) were observed in glasshouse tomato plants in Bet Dagan, Israel. *Bemisia tabaci* was also present in these affected crops. Molecular studies revealed the presence of *Tomato chlorosis crinivirus* in symptomatic tomato plants, as well as in artificially inoculated test plants (*Physalis wrightii*). This is the first record of ToCV in Israel.
The situation of *Tomato chlorosis crinivirus* in Israel can be described as follows: **Present, first found in 2003 in glasshouse tomatoes in Bet Dagan.**

Source: Segev L, Wintermantel WM, Polston JE, Lapidot M (2004) First report of *Tomato chlorosis virus* in Israel.
Plant Disease, 88(10), p 1160.

Additional key words: new record **Computer codes:** TOCV00, IL

2005/012 Current situation of *Plum pox potyvirus* near Ankara, Turkey

Apricot (*Prunus armeniaca*) is an important crop for Turkey, approximately 520,000 tons of fresh and dried fruits being produced every year. Apricot production is mainly concentrated near Malatya (East Anatolia) which is still free from *Plum pox potyvirus* (PPV - EPPO A2 list). In Turkey, PPV was first found in plums (*P. domestica*) near Edirne, close to the Bulgarian border in 1968, and subsequently in apricot and plum trees in 2 private gardens in Ankara in 1973. Further studies were done in Ankara, which is not an important fruit-growing area (no commercial fruit-tree orchards, except a few sour and sweet cherry orchards). Stone-fruit trees are grown in private gardens. In 1990, PPV was detected in apricot and plum trees in 31 private gardens. In 1993, it was found that only PPV-M strains occurred and that they were transmitted by the aphid *Hyalopterus pruni*. A survey was conducted in 2002/2003 in 212 private gardens (corresponding to 21 locations and 935 trees inspected and tested by ELISA). Of a total of 935 trees, PPV was found in 523 trees: 286 apricot, 172 plum and 65 peach trees (*P. persica*). It was not detected on sour or sweet cherry. The incidence of the disease was 71.1 %, 60.5 % and 48.8% in apricot, plum and peach, respectively. Strains were also characterized: PPV-M (on 406 trees), PPV-D (17 trees) and mixed infections of both strains (100 trees) were detected. PPV is therefore considered as widespread in apricot, plum and peach in the Ankara area. However, it is stressed that PPV is of limited distribution in Turkey and, more importantly, absent from commercial fruit-growing areas (except in the area of Bursa, Marmara region). It is considered that this rather satisfactory situation may be due to healthy status of native cultivars, prohibitions on the

movement of propagation material from areas where PPV occurs, and absence of imports of propagation material from other countries.

Source: Elibüyük IO (2004) Current situation of sharka disease in Ankara, Turkey. **Phytoparasitica, 32(4), 417-420.**

Elibüyük IO (2003) Natural spread of plum pox virus in Ankara, Turkey. **Journal of Phytopathology, 151(11/12), 617-619.**

Additional key words: detailed record **Computer codes:** PPV000, TR

2005/013 Bean yellow disorder crinivirus: a new whitefly-transmitted virus of bean crops found in Spain

In October 2003, a new disease of beans (*Phaseolus vulgaris*) was observed in the Province of Almería, Spain. Affected plants showed interveinal mottling and leaf yellowing combined with stiffness or brittleness, and were all grown in glasshouses infested with *Bemisia tabaci*. Affected pods are curved and smaller, with a bright and shiny green colour which affect their commercial value. Plant growth is reduced, and up to 40-50% yield loss is reported. Studies revealed the presence of a new crinivirus, and the name Bean yellow disorder crinivirus was proposed. Recommended control methods are mainly based on the control of the insect vector, *B. tabaci* (e.g. insect-proof glasshouses, yellow sticky traps, chemical/biological control) and destruction of all infected plants.

Source: Segundo E, Martín G, Cuadrado IM, Janssen D (2004) A new yellowing disease in *Phaseolus vulgaris* associated with a whitefly-transmitted virus. **Plant Pathology, 53(4), p 517.**

Web site of the 'Servicio de Sanidad Vegetal, Andalucia (ES)' http://desaveal.ual.es/sifa/pdf/ficha_tecnica_judia.pdf

Additional key words: new pest **Computer codes:** BEMITA, ES

EPPO *Reporting Service*

2005/014 Molecular tests for routine diagnosis of *Chrysanthemum stunt pospiviroid*

In Italy, two molecular tests were developed to detect *Chrysanthemum stunt pospiviroid* (EPPO A2 list): a tissue blot hybridization assay and a one tube-one step RT-PCR. These tests were evaluated on chrysanthemum material at a flower-producing company in Central Italy which followed a certification scheme to verify the absence of CSVd during the production and selection of new cultivars and hybrids. Both techniques were found sensitive and reliable for CSVd in routine diagnosis. Tissue blot hybridization assay was preferable when large numbers of samples had to be tested (fresh leaf samples could be rapidly processed and imprinted membranes could then be stored at 4°C before subsequent viroid detection, low cost). RT-PCR was found useful when limited number of samples had to be tested, and in particular for testing *in vitro* nuclear stock plants, as only a small amount of plant tissue is needed. During this study, 267 plantlets belonging to 84 *in vitro* nuclear stock plants (corresponding to 39 varieties and 45 hybrids) and more than 2500 samples of leaf cuttings were tested. Only one chrysanthemum variety was found infected by CSVd and immediately eliminated.

Source: Tomassoli L, Faggioli F, Zaccaria A, Caccia R, Albani M, Barba M (2004) Molecular diagnosis of *Chrysanthemum stunt viroid* for routine indexing. **Phytopathologia Mediterranea 43(2), 285-288.**

Additional key words: diagnostics **Computer codes:** CSVD00

EPPO *Reporting Service*

2005/015 Apple sessile leaf: a new phytoplasma disease of apple found in Lithuania

A new disease of apple (*Malus domestica*) has been found in the Kaisiadorys region of Lithuania. Affected trees showed leaf yellowing, shoot proliferation and a previously undescribed symptom of 'sessile leaf', where 'golden' leaves are directly attached to the trunk. These symptoms differ from those of apple proliferation (associated with '*Candidatus* Phytoplasma mali' - EPPO A2 list) which are characterized by enlarged stipules, witches' broom and bronze-reddish discoloration of leaves. PCR using universal primers confirmed the presence of a phytoplasma. RFLP and nucleotide sequence analysis revealed the presence of a phytoplasma belonging to 16SrI-B subgroup (phytoplasmas associated with aster yellows and related diseases, for which the name '*Candidatus* Phytoplasma asteris' has been proposed). This is the first report of '*Candidatus* Phytoplasma asteris' infecting apple in Lithuania.

Source: Jomantiene R, Davis RE (2004) Apple sessile leaf: a new disease associated with a '*Candidatus* Phytoplasma asteris' subgroup 16SrI-B phytoplasma in Lithuania. **British Society for Plant Pathology. New Disease Reports, vol 10.**
http://www.bspp.org.uk/ndr/volume.asp

Additional key words: new pest **Computer codes:** LT

2005/016 Review paper on the composting of organic waste to eliminate plant pathogens and nematodes

Composted organic wastes are increasingly used by the horticultural and agricultural sectors and concerns have been raised about the possible presence of plant pathogens and nematodes in these composts. A review paper has recently been published by Noble & Roberts (2004), on the basis of information published in the literature, about the effects of temperature/time combinations and other sanitizing factors during composting on 54 plant pathogens and nematodes. Among pathogens and nematodes reviewed, the following are regulated pests in the EPPO region: *Synchytrium endobioticum, Verticillium albo-atrum, V. dahliae, Phytophthora cinnamomi, P. ramorum, Clavibacter michiganensis* subsp. *michiganensis, Ervinia amylovora, E. chrysanthemi, Ralstonia solanacearum, Tomato spotted wilt tospovirus, Globodera pallida, G. rostochiensis, Meloidogyne chitwoodi*. It is noted that in most papers reviewed, pathogen survival was determined by bioassays of unknown sensitivity and minimum detection limits of 5 % or more. In most cases reviewed, it was found that a peak temperature of 64-70°C during 21 days was sufficient to reduce numbers of pathogens and nematodes below the detection limits of the tests used. Some organisms appeared as more temperature-tolerant (e.g. *Plasmodiophora brassicae, Fusarium oxysporum* f. sp *lycopersici Macrophomina phaseolina* and a few viruses). In particular, *Synchytrium endobioticum* survived in water at 60°C for 2 h, but was not examined in compost. In many studies reviewed, the potential survival of plant pathogens in cooler zones of composts (particularly when compost is not turned) has not been quantified, although this may be an important risk factor. The authors concluded that for the moment, there is still insufficient data to produce comprehensive temperature-time matrices for the elimination of specific plant pathogens by composting.

Source: Noble R, Roberts SJ (2004) Eradication of plant pathogens and nematodes during composting: a review.
Plant Pathology, 53(5), 548-568.

Additional key words: publication, composting