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Reporting

Service

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EPPO *Reporting Service*

2005/032 EPPO welcomes Uzbekistan as its 47th member country

Uzbekistan joined EPPO in 2005-01. EPPO now has 47 member countries. The contact point for Uzbekistan is:

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Source: **French Ministry of Foreign Affairs.**
EPPO Secretariat, 2005-04.

Additional key words: new EPPO member country **Computer codes:** UZ

2005/033 New data on quarantine pests and pests of the EPPO Alert List

By browsing through the CABI Abstracts, 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 records**

Ceratitis quinaria (Diptera: Tephritidae – EPPO A1 list) has recently been identified for the first time from Mali on mango crops (Vayssières *et al.*, 2004).

Liriomyza trifolii (Diptera: Agromyzidae – EPPO A2 list) occurs in Saudi Arabia. Hassan and Mohammed (2004) mentioned its presence on cucumbers grown under protected conditions.

Liriomyza huidobrensis and *L. sativae* (Diptera: Agromyzidae – EPPO A2 list) are reported as important pests of vegetable crops in Indonesia (Prijono *et al*., 2004). The EPPO Secretariat had previously no data on the occurrence of *L. sativae* in Indonesia.

In Croatia, *Mycosphaerella pini* (EU Annexes) is reported to occur in *Pinus nigra* plantations, but causing little damage (Diminić, 2001). This is in accordance with earlier reports made in former Yugoslavia.

During studies on *Capsicum annuum* done in Venezuela, *Tomato ringspot nepovirus* and *Tobacco ringspot nepovirus* (both on the EPPO A2 list) were detected for the first time (Rodríguez *et al*., 2004).

- **Detailed records**

Ceratitis capitata (Diptera: Tephritidae – EPPO A2 list) occurs in Ceará state, Brazil (Braga Sobrinho *et al*., 2004)

Choristoneura rosaceana (Lepidoptera: Tortricidae - EPPO A1 list) occurs in Minnesota, USA (Fadamiro, 2004)

In South Africa, *Globodera rostochiensis* (EPPO A2 list) was first reported in 1971 and was subsequently eradicated. In 1999, it was found again in Western Cape. Surveys showed that *G. rostochiensis* only occurred in the Sandveld and Ceres areas of the Western Cape. Phytosanitary measures are being applied to prevent any further spread. During these surveys, *G. pallida* was not found (Knoetze *et al.*, 2004).

In Mexico, *Rhynchophorus palmarum* (Coleoptera: Curculionidae – Alert List) was found for the first time in Baja California Sur on *Washingtonia robusta* in November 2000 and January 2001 (García-Hernández *et al*., 2003).

In Italy, *Scaphoideus titanus* (Homoptera: Cicadellidae – vector of grapevine flavescence dorée phytoplasma) was thought to be confined to the Po valley, but in recent years it has been found in other regions of Italy, notably in the southern provinces of Basilicata, Apulia and Calabria. It has also been found in Campania (Viggiani, 2004).

Scirtothrips dorsalis (Thysanoptera: Thripidae – EPPO A2 list) occurs in Sichuan, China. It is reported there as a serious pest of litchi (Li *et al.*, 2004).

- **New host plants**

Natural infection of *Apple mosaic ilarvirus* (EPPO A2 list) was observed for the first time in a *Fragaria vesca* plant maintained in a germplasm collection in Oregon (US). An RT-PCR test was developed and will allow detection of this virus in field samples to determine its distribution and importance in strawberry production (Tzanetakis & Martin, 2005)

Natural infections of *Tomato black ring nepovirus* (EU Annexes) on *Sambucus nigra* were observed for the first time in 2002 in Poland (Pospieszny *et al*., 2004).

Source:

Braga Sobrinho R, Mesquita ALM, Peixoto MJA, Hoeflick WRE (2004) Development of fruit fly attractant systems for mango. Proceedings of the 7th International Mango Symposium, Recife, BR, 2002-09-22/27. In: Review of Agricultural Entomology 92(10), October 2004, abst. 9574, p 1488.

Diminić D (2001) [The role of pathogenic fungi on health status in Austrian pine plantations in Croatia.] Šumarski fakultet, p 422. In: Review of Plant Pathology 83(10), October 2004, abst. 7925, p 1248.

Fadamiro, HY (2004) Pest phenology and evaluation of traps and pheromone lures for monitoring flight activity of obliquebanded leafroller (Lepidoptera: Tortricidae) in Minnesota apple orchards. Journal of Economic Entomology, 97(2), 530-538.

García-Hernández JL, Beltrán-Morales F, Loya-Ramírez JG, Morales-Cota JR, Troyo-Diéguez E, Beltrán-Morales FA (2003) [First record of *Rhynchophorus palmarum* (Coleoptera: Dryophthoridae) in Baja California Sur.] Folia Entomológica Mexicana, 42(3), 415-417. In: Review of Agricultural Entomology 92(11), November 2004, abst. 11410, p 1778.

Hassan AA, Mohammed AD (2004) Trapping efficiency of various colored traps for insects in cucumber crop under greenhouse conditions in Riyadh, Saudi Arabia. Pakistan Journal of Biological Sciences, 7(7), 1213-1216. In: Review of Agricultural Entomology 92(11), November 2004, abst. 10576, p 1651.

Knoetze R, Malan AP, Swart A, Pieterse W (2004) Present status of potato cyst nematode in South Africa. Abstract of a paper presented at the 16th Symposium of the Nematological Society of Southern Africa, 2003-06-01/04, Somerset Strand (ZA). African Plant Protection 10(2), p 129.

Li JM, Liu GW, Peng RB (2004) [Bionomics an control of the yellow tea thrips, *Scirtothrips dorsalis* infesting litchi.] Entomological Knowledge, 41(2), 172-173. In: Review of Agricultural Entomology 92(10), October 2004, abst. 9562, p 1486.

Pospieszny H, Borodynko N, Jończyk (2004) First report of *Tomato black ring virus* (TBRV) in the natural infection of *Sambucus nibra* in Poland. Journal of Plant Protection Research 44(4), 373-376.

Prijono D, Robinson M, Rauf A, Bjorksten T, Hoffmann AA (2004) Toxicity of chemicals commonly used in Indonesian vegetable crops to *Liriomyza huidobrensis* populations and the Indonesian parasitoids *Hemiptarsenus varicornis*, *Opius* sp. and *Gronotoma micromorpha*, as well as the Australian parasitoids *Hemiptarsenus varicornis* and *Diglyphus isaea*. Journal of Economic Entomology 97(4), 1191-1197.

Rodríguez Y, Ranger E, Centeno F, Mendoza O, Parra A (2004) [Detection of viral diseases affecting sweet pepper in Counties Iribarren, Jiménez and Torres of Lara State, Venezuela, using ELISA technique.] Revista de la Facultad de Agronomía, Universidad del Zulia, 21(2), 105-115. In: Review of Plant Pathology 83(12), December 2004, abst. 9536, p 1511.

Tzanetakis IE, Martin RR (2005) First report of strawberry as a natural host of *Apple mosaic virus*. Plant Disease 89(4), p 431.

Vayssières JF, Sanogo F, Noussourou M (2004) Inventaire des espèces de mouches de fruits (Diptera: Tephritidae) inféodées au manguier au Mali et essais de lutte raisonnée. Fruits, 59(1), 3-16. In: Review of Agricultural Entomology 93(2), February 2005, abst. 1227, p 199.

Viggiani G. (2004) [The vector of flavescence dorée in Campania.] Informatore Agrario, 60(18), 47-50. In: Review of Agricultural Entomology 93(1), January 2005, abst. 166, p 28.

Additional key words: new records, new pests, detailed records

Computer codes: APLV00, CERTCA, CERTQU, CHONRO, HETDRO, LIRISA, LIRITR,RHYCPA, SCAPLI, SCIRPI, SCITDO, TBRV00, TORSV0, TRSV00, BR, CN, HR, ID, IT, ML, MX, PL, SA, US, VE, ZA

2005/034 First report of *Synchytrium endobioticum* in Turkey

In October 2003, *Synchytrium endobioticum* (potato wart disease - EPPO A2 list) was detected for the first time in Turkey. Symptoms were observed on a local potato cultivar in Aybastı county (Ordu province in Black Sea region) which is not an important potato-growing area. Later in 2003, *S. endobioticum* was also found in Niğde and Nevşehir provinces (Central Anatolia) which are important potato-growing areas. In these provinces, potato cultivars (cvs. Agria, Donella, Granola, Marfona and Russet Burbank) were affected by the disease but at a low percentage. Surveys showed that the disease is now present on 907.7 and 23.3 ha in Niğde and Nevşehir provinces, respectively. In Ordu province, it now covers 10 ha. Phytosanitary measures are being applied by the Turkish Ministry of Agriculture, according to EU Directive 69/464. Surveys are continuing in Turkey. The situation of *S. endobioticum* in Turkey can be described as follows: **Present, first found in 2003 in Ordu province (Black Sea region) and Niğde and Nevşehir provinces (Central Anatolia), under official control.**

Source: Çakır E (2005) First report of potato wart disease caused by *Synchytrium endobioticum* in Turkey. New Disease Reports, Volume 11: February 2005 - July 2005. http://www.bspp.org.uk/ndr/july2005/2005-23.asp

Additional key words: new record **Computer codes:** SYNCEN, TR

2005/035 *Phymatotrichopsis omnivora* is present in Venezuela

In Venezuela, the presence of *Phymatotrichopsis omnivora* (EPPO A1 list) was reported in spring 2000, in the coastal area of Aragua state on peach trees (*Prunus persica*). Later in the year, further outbreaks were reported in the south of Mérida state on various crops (*Passiflora edulis, Theobroma cacao, Persea americana, Matisia cordata, Coffea arabica, Xanthosoma sagittifolium, Manihot esculenta, Musa, Rosa, Inga*). In 2002, *P. omnivora* was found in other localities in Aragua state causing significant damage to *Carica papaya, Mangifera indica, Lycopersicon esculentum, Cucumis sativa* and *Cucurbita maxima*. Symptoms are characterized by leaf yellowing followed by quick decline and death of the plants. These observations confirm an earlier record which was based on a specimen detained in a herbarium (CABI map no. 15, 1990). The situation of *Phymatotrichopsis omnivora* in Venezuela can be described as follows: **Present, confirmed in 2000 in two states (Aragua, Mérida).**

Source: *Phymatotrichopsis* root rot by Dr AM Colmenares http://www.plantpathology.galeon.com

Additional key words: detailed record **Computer codes:** PHMPOM, VE

2005/036 Chemical control of *Phytophthora ramorum*

In Poland, the efficacy of 6 fungicides (phosetyl Al, furalaxyl, fenamidone + phosetyl Al, propamocarb + phosetyl Al, oxadixyl +mancozeb, cymoxanil + famoxate) against twig blight of rhododendron, caused by *Phytophthora ramorum* (EPPO Alert List), was assessed. Laboratory studies and glasshouses trials were conducted with artificially inoculated soils and plants, and the tested compounds were applied at a dose of 8 µg of a.s/cm². The inhibition of zoosporangia formation in treated soil extracts was recorded after 6 days of incubation in the laboratory. In glasshouse trials, the length and diameter of necrosis on stems and leaves was recorded at 7 and 14 days after inoculation. All tested compounds significantly inhibited the development of twig blight, but furalaxyl was found to be the most effective.

Source: Orlikowski LB (2004) Chemical control of Rhododendron twig blight caused by *Phytophthora ramorum*.
Journal of Plant Protection Research, 44(1), 41-46.

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

2005/037 Real-time PCR to detect *Phytophthora ramorum*

A real-time PCR assay was developed in California (US) to detect and quantify *Phytophthora ramorum* (EPPO Alert List). This method was found sensitive (it can detect less than 12 fg of pathogen DNA) and specific (it did not react with 21 other species of *Phytophthora*). However, it gave some cross-reactions with *P. lateralis* under certain circumstances (high DNA concentrations). As *P. lateralis* has a completely distinct host range, it was considered that this should not cause problems in practice. This PCR assay has been used for a state-wide survey and results are given for the period from May 2001 to August 2002 (the survey is still continuing). Using this method, the presence of *P. ramorum* was detected in 4 new counties in California (Contra Costa, Humbolt, Mendocino and Solano). This assay also allowed detection of *P. ramorum* on new host plants (*Acer macrophyllum, Aesculus californica, Arbutus menziesii, Arctostaphylos manzanita, Heteromeles arbutifolia, Lonicera hispidula, Rhamnus californica, Rhododendron macrophyllum, Sequoia sempervirens, Umbellularia californica*). These PCR-based discoveries were then confirmed by traditional pathogen isolations and inoculation studies. First data on seasonality of the pathogen was also obtained with this method. The highest

frequency of detection was obtained from March to June, which suggests that surveys for *P. ramorum* in California are best carried out in late spring.

Source: Hayden KJ, Rizzo D, Tse J, Garbelotto M (2004) Detection and quantification of *Phytophthora ramorum* from California forest using a real-time polymerase chain reaction assay.
Phytopathology, 94(10), 1075-1083.

Additional key words: diagnostics, detailed record, new host plants. **Computer codes:** PHYTRA, US

2005/038 First report of *Citrus tristeza closterovirus* in Serbia and Montenegro

In Serbia and Montenegro, approximately 400,000 citrus trees (mainly Satsuma mandarins and lemons grafted on *Poncirus trifoliata*) are grown in the Montenegrin coastal region which is the major citrus-producing area. In December 2003, 8 samples taken near the cities of Bar and Ulcinj were tested by ELISA and IC-RT-PCR for the presence of *Citrus tristeza closterovirus* (CTV – EPPO A2 list). CTV was detected in 7 samples which had been collected from 5 trees showing chlorosis, gummosis and fruit deformation, and from 2 symptomless trees. As symptoms observed in these 5 trees were not typical of CTV, it is felt that the virus is probably not responsible for symptoms observed in the field. Although a very small number of samples was analysed, CTV appears to be very common in Satsuma orchards. It is suggested that this could be due to the traditional use of trifoliate rootstock which prevents the appearance of tristeza decline and enables the unnoticed propagation of infected material. This is the first confirmed report of CTV in Serbia and Montenegro. In former Yugoslavia, the presence of CTV had previously been confirmed in a region which is now part of Croatia.
The situation of *Citrus tristeza closterovirus* in Serbia and Montenegro can be described as follows: **Present, first confirmed in 2003 on a few samples taken in the Montenegrin coastal region.**

Source: Papic T, Santos C, Nolasco G (2005) First report of *Citrus tristeza closterovirus* in Serbia and Montenegro.
Plant Disease 89(4), p 434.

Additional key words: new record **Computer codes:** CTV000, YU

2005/039 First report of *Citrus tristeza closterovirus* in Guadeloupe

In Guadeloupe, citrus is mainly cultivated on Basse-Terre (south and south-west of the Island). The volume of production is relatively small but citrus is nevertheless a key element in a crop diversification programme which has been initiated in Guadeloupe. The main species grown are Tahiti limes (*Citrus latifolia*), sweet oranges (*C. sinensis*), and mandarins (*C. reticulata*). In Guadeloupe, *Toxoptera citricida* (Homoptera: Aphididae - EPPO A1 list) was first identified in 1991 and rapidly colonized all citrus-growing areas. *Citrus tristeza closterovirus* (CTV – EPPO A2 list) was detected for the first time in 1997 on a few lime trees showing mild symptoms (leaf vein clearing and stem pitting). In 1999/2000, 506 citrus trees from 20 orchards were sampled and tested. The orchards studied had been planted before 1995, mainly with lime but also orange, mandarin and grapefruit trees grafted on rootstocks susceptible to CTV (*C. aurantium* and *C. macrophylla*). Immunoprinting tests showed that 42% of the trees were infected. CTV was found in 18 orchards and affected all *Citrus* species, but more particularly Tahiti lime. In 1999, CTV was also detected in mother trees and grafted trees in nurseries. Another survey done in 2002 in the previously studied orchards showed progression of the disease, as newly infected trees were found. It is concluded that CTV is now established in the main citrus-growing areas of Guadeloupe. Research and extension services are recommending growers to use new CTV-tolerant rootstocks, and financial support is provided for establishment of new orchards. In parallel, a certification programme is currently being developed to provide growers with virus-free planting material.
The situation of CTV is Guadeloupe can be described as follows: **Present, first found in 1997 and now established in all citrus-growing regions, under official control.**

Source: Urbino C, Le Bellec F, Fournier F, Bruyère S, Ramassamy M, Chidiac A, Deroche J, Monnerville G (2004) La maladie de la tristeza des agrumes est en Guadeloupe. La production de plants de qualité s'impose.
Phytoma – La Défense des Végétaux, n° 573, 26-27.

Additional key words: new record **Computer codes:** CTV000, GD

2005/040 First report of *Iris yellow spot tospovirus* on onions in India

In India during 2002/2003, onion plants (*Allium cepa*) growing in the Jalna and Nasik regions of Maharashtra state showed symptoms of chlorotic spindle or diamond shaped lesions on the leaves and scapes with twisting or bending flower stalks. In advanced stages of the disease, lesions coalesced, leading to withering of leaves and flower-bearing stalks. Studies (mechanical inoculation to indicator plants, ELISA, RT-PCR) revealed the presence of *Iris yellow spot tospovirus* (IYSV - EPPO Alert List). This is the first report of IYSV in India. The situation of *Iris yellow spot tospovirus* in India can be described as follows: **Present, first found in 2002/2003 on *Allium cepa* in Maharashtra state.**

Source: Ravi KS, Kitkaru AS, Winter S (2005) *Iris yellow spot virus* in onions: a new tospovirus record from India. New Disease Reports, Volume 11: February 2005 - July 2005. http://www.bspp.org.uk/ndr/july2005/2005-32.asp

Additional key words: new record **Computer codes:** IYSV00, IN

2005/041 First report of *Iris yellow spot tospovirus* on onions in Réunion

In August 2003, onion plants (*Allium cepa*) growing in Réunion showed symptoms characterized by irregularly shaped chlorotic or necrotic lesions on the leaves. In 2004, 84 symptomatic samples were collected from two onion fields, one intended for seed production and the other for bulb production. Studies (DAS-ELISA, RT-PCR) revealed the presence of *Iris yellow spot tospovirus* (IYSV - EPPO Alert List) in 4 samples (out of 6) and 34 samples (out of 78) of onions for bulb and seed production, respectively. This is the first report of IYSV in Réunion island. Further studies were then done on other *Allium* crops, and IYSV was detected in leek (*A. porrum*), garlic (*A. sativum*) and shallot (*A. cepa* var. *ascalonicum*). In all *Allium* crops surveyed, *Thrips tabaci* (which is a vector of IYSV) was widespread, whereas *Frankliniella occidentalis* (which is not a vector) was only occasionally observed. The situation of *Iris yellow spot tospovirus* in Réunion island can be described as follows: **Present, first found in 2003 on several *Allium* crops (*A. cepa, A. porrum, A. sativum, A. cepa* var. *ascalonicum*).**

Source: Robène-Soustrade I, Hostachy B, Roux-Cuvelier M, Minatchy J, Hédont M, Pallas R, Couteau A, Cassam N, Wuster G (2005) First report of *Iris yellow spot virus* in onion bulb and seed production fields in Réunion island. New Disease Reports, Volume 11: February 2005 - July 2005. http://www.bspp.org.uk/ndr/july2005/2005-33.asp

Additional key words: new record **Computer codes:** IYSV00, RE

2005/042 Characterization of *Erwinia amylovora* strains collected in Spain

In Spain, *Erwinia amylovora* (EPPO A2 list) was found for the first time in 1995 in Guipúzcoa (País Vasco – see EPPO RS 96/107). Other isolated foci were then found in other parts of Spain: in 1996 in Navarra and Castilla-Léon (Segovia); in 1998 in Aragón (Huesca), Cataluña (Lérida) and Castilla-La Mancha (Guadalajara, Madrid); in 2000 in Aragón (La Rioja, Zaragoza). Eradication measures were applied in all affected areas. Intensive surveys carried out in other Spanish regions did not detect new outbreaks. Studies were carried out to characterize *E. amylovora* strains collected in Spain from 1995 to 2000. 130 strains isolated from 7 host plant species and 8 Spanish regions were characterized and compared with strains from other countries (colony morphology on various growing medium, antibiotic susceptibility, biochemistry, pathogenicity tests). Results of this comparison showed a high phenotypic homogeneity among Spanish isolates and no differences could be related to host or geographical origin. It is considered that the presence of *E. amylovora* in Spain is most likely related to the introduction of infected plant material from other countries.

Source: Donat V, Biosca EG, Rico A, Peñalver J, Borruel M, Berra D, Basterretxea T, Murillo J, López MM (2005) *Erwinia amylovora* strains from outbreaks of fire blight in Spain: phenotypic characteristics.
Annals of Applied Biology 146(1), 105-114.

Additional key words: detailed record **Computer codes:** ERWIAM, ES

2005/043 First report of bacterial leaf spot of poinsettia in China

In China, unusual symptoms were observed on poinsettia (*Euphorbia pulcherrima* cv. Fu-xing) at a flower nursery in the Zhejiang province in October 2003. Small, water-soaked lesions scattered across the leaf surface, rapidly enlarged becoming yellow-to-tan. Spots often coalesced to form large, necrotic areas surrounded by a yellow halo, which at times extended into the lateral veins causing a blighted appearance. No spots were observed on the coloured bracts. A bacterium was isolated from symptomatic leaves and bacterial exudates often formed on lesions, especially on the lower leaf surface. The bacterium was identified as *Xanthomonas campestris* pv. *poinsettiicola* using the traditional classification of xanthomonads, but data was not sufficient to allocate it to *X. axonopodis* pv. *poinsettiicola* (EPPO Alert List) or other species using the new classification proposed by Vauterin *et al.* (1995).

Source: Li B, Xie GL, Swings J (2005) First report of leaf spot caused by Xanthomonas campestris on poinsettia in China. New Disease Reports, Volume 11: February 2005 - July 2005. http://www.bspp.org.uk/ndr/july2005/2005-28.asp

Vauterin L, Hoste B, Kersters K, Swings J (1995) Reclassification of *Xanthomonas*.
International Journal of Systematic Bacteriology 45, 472-489.

Additional key words: new record **Computer codes:** XANTSP, CN

2005/044 Study on *Hirschmanniella* species found in rice in Yunnan, China

Yunnan is a major rice-producing province in China with approximately 0.9 million hectares grown annually. From 1998 to 2002, studies were done in rice fields on *Hirschmanniella* species (EU Annexes) which are important rice pests. They mainly infect rice roots, reducing tillering and yield (up to 40% in cases of severe infestations). Rice roots and attached soil were collected from various ecological regions in Yunnan and nematodes were extracted and identified. The following *Hirschmanniella* species were found: *H. belli, H. caudacrena, H. diversa, H. gracilis, H. imamuri, H. mexicana, H. microtyla, H. mucronata, H. oryzae* and *H. spinicaudata*. The most commonly found species were: *H. oryzae* and *H. imamuri*, often in mixed populations.

Source: Hu XQ, Yu M, Lin LF, Wang Y, Yu SH (2004) Species and distribution of rice root nematode in Yunnan Province, China.
Agricultural Sciences in China, 8(3), 598-603.

Additional key words: detailed record **Computer codes:** HIRSSP, CN

2005/045 Irradiation treatment against *Rhagoletis pomonella*

Studies were done in USA on the efficacy of irradiation against *Rhagoletis pomonella* (Diptera: Tephritidae – EPPO A1 list) in apples under storage conditions (hypoxic atmosphere and low-temperatures). The efficacy of irradiation was assessed by measuring the failure of adult emergence from puparium, after treatment of third larval instars. The irradiation treatment was not significantly affected by cold temperatures but its efficacy was reduced by hypoxia. It was also found that a dose of 50 Gy completely prevented development into full pupae when apples were irradiated in ambient and hypoxic atmospheres. It is noted that apples and pears can tolerate doses 300-900 Gy, depending on cultivar. It is concluded that a dose of 57 Gy could be recommended for a phytosanitary treatment of host fruits of *R. pomonella*.

Source: Hallman GJ (2004) Irradiation disinfestation of apple maggot (Diptera: Tephritidae) in hypoxic and low-temperature storage.
Journal of Economic Entomology, 97(4), 1245-1248.

Additional key words: phytosanitary treatment **Computer codes:** RHAGPO

2005/046 Irradiation treatment against *Bactrocera dorsalis*, *Ceratitis capitata* and *B. cucurbitae*

In USA, the currently approved doses for irradiation treatments for *Bactrocera dorsalis, Ceratitis capitata* and *B. cucurbitae* (Diptera: Tephritidae –A1 list for *Bactrocera* spp., A2 list for *C. capitata*) are respectively 210, 225 and 250 Gy. Irradiation may be required as a phytosanitary treatment for exporting fruits and vegetables from Hawaii to continental USA. Further laboratory studies on third larval instars irradiated at different doses, in artificial diet or in fruit, showed that lower doses could be used. No adult survival was obtained with irradiation at 150, 100 and 125 Gy for *B. curcurbitae, C. capitata* and *B. dorsalis*, respectively. It was concluded that a common dose of 150 Gy could be proposed as a phytosanitary treatment against these fruit flies.

Source: Follett PA, Armstrong JW (2004) Revised irradiation doses to control melon fly, Mediterranean fruit fly, and oriental fruit fly (Diptera: Tephritidae) and a generic dose for Tephritid fruit flies.
Journal of Economic Entomology, 97(4), 1254-1248.

Additional key words: phytosanitary treatment **Computer codes:** CERTCA, DACUCU, DACUDO

2005/047 Vapour heat treatment against *Maconellicoccus hirsutus*

The following vapour heat treatments were tested against *Maconellicoccus hirsutus* (Homoptera: Pseudococcidae – EPPO A1 list): 47 °C for 5 to 50 min (in 5 minutes increments), and 49 °C for 3, 5, 8, 10 and 12 min. All tests were conducted using a computer-controlled vapour heat treatment chamber specifically designed for research (RH 95-100 %). Populations of mixed ages of *M. hirsutus* placed on pods of Chinese peas (*Pisum sativum*) were used in this experiment. Results showed that it took 45 minutes to kill all stages of *M. hirsutus* at 47 °C, whereas it took 10 minutes at 49 °C. Further large-scale studies are needed to validate the efficacy of vapour heat treatments against *M. hirsutus* on specific commodities.

Source: Follett PA (2004) Generic vapor heat treatments to control *Maconellicoccus hirsutus* (Homoptera: Pseudococcidae).
Journal of Economic Entomology, 97(4), 1263-1268.

Additional key words: phytosanitary treatment **Computer codes:** PHENHI

2005/048 EPPO Standards for the Efficacy Evaluation of Plant Protection Products: a new update is available

The EPPO standards for the efficacy evaluation of plant protection products describe the conduct of trials carried out to assess the efficacy of plant protection products against specific pests. They were republished in 2004 in five volumes, which cover all standards approved until 2003-09. As the preparation of EPPO Standards is a continuing activity, new and revised standards have been approved since this publication. An update containing new and revised standards approved in 2004-09 is now available (in English only). This update can be ordered from the EPPO Secretariat at the price of 40 EUR, and includes the following standards:

Revised Standards

PP 1/10(4) *Delia coarctata*
PP 1/46(3) Wireworms
PP 1/178(3) *Meligethes aeneus* on rape

New Standards

PP 1/227(1) Definition of a plant protection product
PP 1/228(1) Aphids on beet
PP 1/229(1) Aphids on leguminous crops
PP 1/230(1) Aphids on potato
PP 1/231(1) Aphids on sunflower
PP 1/232(1) Aphids on tobacco
PP 1/233(1) *Athalia rosae, Plutella xylostella* and *Autographa gamma* on arable Brassicaceae
PP 1/234(1) *Haplodiplosis marginata*

PP 1/235(1) Leaf miners on cereals
PP 1/236(1) *Oulema* spp. on cereals
PP 1/237(1) Thrips on cereals
PP 1/238(1) White grubs

Source: **EPPO Secretariat, 2004-03.**

Additional key words: publications

2005/049 ‘Vocabulary of Insect Common Names’ on CD-Rom

A ‘Vocabulary of Insect Common Names’ on CD-Rom has been prepared by Prof. Jan Nawrot from the Institute of Plant Protection, Poznań, Poland.
It provides for 4100 insect pest species, common names in 8 different languages (English, Polish, German, Russian, Czech, Slovak, French and Hungarian). The system contains more than 34,000 common names. Latin names are given with their authority, as well as with the order and family to which the species belongs. This vocabulary will be particularly useful to NPPOs, translators, students and librarians.

‘Vocabulary of Insect Common Names’ on CD-Rom can be obtained from:
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Price: 200 Euros.

Source: **Personal communication with Prof. Nawrot, Poznań, PL.**

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