EPPO

Reporting

Service

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CONTENTS

EPPO *Reporting Service*

2000/091 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.

- **New geographical records**

Eutetranychus orientalis (EPPO A2 quarantine pest) occurs in Okinawa Prefecture, Ryukyu Archipelago, Japan. Review of Agricultural Entomology, 88(4), p 544 (3953).

Frankliniella occidentalis (EPPO A2 quarantine pest) is reported in Brazil, in Distrito Federal. Review of Agricultural Entomology, 88(4), p 483 (3510).

Liriomyza sativae (EPPO A1 quarantine pest) is present on various crops in Nigeria. Review of Agricultural Entomology, 88(4), p 544 (3956).

- **Detailed records**

Cameraria ohridella (EPPO Alert List) was found in summer 1998 around Bonn and Köln. A survey done in 1999 showed that the infested area has increased and that almost the whole region of Nordrhein is infested (Greib, 2000).

Citrus leprosis ?rhabdovirus (EPPO A1 quarantine pest) and its vector *Brevipalpus phoenicis* are reported for the first time in Tocantins state, Brazil. The mite vector was also observed in the north of Mato Grosso. Review of Agricultural Entomology, 88(4), p 433 (3140).

Frankliniella occidentalis (EPPO A2 quarantine pest) was found in Kumamoto Prefecture, Kyushu, Japan. Review of Agricultural Entomology, 88(4), p 486 (3537).

Liriomyza sativae (EPPO A1 quarantine pest) was found on *Malpighia glabra* in Ceara state, Brazil. Review of Agricultural Entomology, 88(4), p 433-434 (3141).

Radopholus similis (EPPO A2 quarantine pest) is widely present on banana crops in Zanzibar, Tanzania. (Rajab *et al*., 1999).

Stenocarpella maydis (EPPO A2 quarantine pest) occurs on maize in Rio Grande do Sul, Brazil. Review of Plant Pathology, 79(4), p 345 (2597).

Tomato yellow leaf curl begomovirus (EPPO A2 quarantine pest) is present in Madhya Pradesh, India (reported as tomato leaf curl virus). Review of Plant Pathology, 79(4), p 396 (2964).

Thrips palmi (EPPO A1 quarantine pest) is present in Distrito Federal, Brazil. Review of Agricultural Entomology, 88(4), p 483 (3510).

Trioza erytreae (EPPO A1 quarantine pest) occurs in Cameroon in citrus orchards. Surveys done in 1992-1996 showed that it occurs primarily in the highlands. Review of Agricultural Entomology, 88(3), p 292 (2129).

Source: **EPPO Secretariat, 2000-05.**

Greib, G. (2000) [Occurrence of the horse chestnut leafminer *Cameraria ohridella* Desch. & Dem. (Lep., Gracillariidae) in the Northrhine area).]
Gesunde Pflanzen, 52(2/3), 94-95.

Rajab, K.A.; Salim, S.S.; Speijer, P.R. (1999) Plant-parasitic nematodes associated with *Musa* in Zanzibar.
African Plant Protection, 5(2), 105-110.

Review of Agricultural Entomology, 88 (3 & 4). March & April 2000.
Review of Plant Pathology, 79(4). April 2000.

Additional key words: new records, detailed records

Computer codes: CSLXXX, DIPMA, EUTEOR, FRANOC, LIRISA, LITHOD, RADOSI, THRIPL, TMYLCX, TRIZER, BR, CM, DE, IN, JP, NG, TZ

2000/092 *Clavibacter michiganensis* subsp. *sepedonicus* occurs in Belarus

The situation of potato diseases in Belarus was presented at the EPPO Conference on Potato Protection in Chernivtsy, Ukraine in 1998-07-07/10. During the last 10 years, the importance of *Phytophthora infestans*, *Alternaria solani*, *Streptomyces scabies*, *Polyscytalum pustulans* and *Erwinia atroseptica* has increased. In addition, diseases which were previously considered as relatively minor are now causing problems, such as *Geotrichum candidum*, *Fusarium* spp., *Phytophthora erythroseptica*). Finally, it is reported that after a long period of absence from potato crops, *Clavibacter michiganensis* subsp. *sepedonicus* (EPPO A2 quarantine pest) has started to be detected again causing problems. The EPPO Secretariat had previously no data on the occurrence of *C. michiganensis* subsp. *sepedonicus* in Belarus.

Source: Ivanyuk, V.G. (1998) Phytopathological situation in potato in Belarus.
Bulletin OEPP/EPPO Bulletin, 28(4), 475-479.

Additional key words: new record

Computer codes: CORBSE, BY

2000/093 *Clavibacter michiganensis* subsp. *sepedonicus* does not occur in Peru

The Ministry of Agriculture in Peru has recently informed the EPPO Secretariat that *Clavibacter michiganensis* subsp. *sepedonicus* (EPPO A2 quarantine pest) has never been found in Peru. Records from the 1960s arose from confusion with *Ralstonia solanacearum*. The record in PQR will be modified accordingly.

Source: **Ministerio de Agricultura, Servicio Nacional de Sanidad Agraria, Peru, 2000-05.**

Additional key words: denied record **Computer codes:** CORBSE, PE

2000/094 First report of tomato yellow leaf curl begomovirus in France

During summer 1999, tomato yellow leaf curl begomovirus (EPPO A2 quarantine pest) was reported for the first time in France. The disease was found in one tomato field in Gard département (Languedoc-Roussillon region). Eradication measures have immediately been applied.

Source: Anonymous (2000) Les actions conduites par les Services régionaux de la protection des végétaux en 1999 – Surveillance phytosanitaire du territoire français.
Le Dossier ; encart de Notre Alimentation, no. 26, Avril 2000. Ministère de l'Agriculture et de la Pêche, p I & II.

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

2000/095 First report of *Bactrocera cucurbitae* in Gambia

EPPO has recently been informed by the IPPC Secretariat that *Bactrocera cucurbitae* (EPPO A1 quarantine pest) now occurs in Gambia. This is the first report of the melon fruit fly in this country and also in West Africa.

Source: **FAO, IPPC Secretariat, 2000-04.**

Additional key words: new record **Computer codes:** DACUCU, GM

2000/096 *Rhynchophorus ferrugineus* occurs in Oman

It is recalled that in the Near East region, the red palm weevil, *Rhynchophorus ferrugineus* (EPPO Alert List) first appeared in the United Arab Emirates in 1985, and that it then spread to several countries of the region. In 1993, it was first reported in Oman (new record, according to the EPPO Secretariat). In all countries where it has been introduced, *Rhynchophorus ferrugineus* has proved to be very destructive to palm trees.

Source: Abdallah, F.F.; Al-Khatri, S.A. (1999) Research higlights – The effectiveness of trunk injection and fumigation for the control of the red palm weevil, *Rhynchophorus ferrugineus* Oliver, in date palm.
Arab and Near East Plant Protection Newsletter, no. 29, December 1999, Arab Society for Plant Protection, Aleppo (SY) and FAO Near East Regional Office, Cairo (EG), p 27.

Additional key words: new record, detailed record **Computer codes:** RHYCFE, AE, OM

2000/097 Details on Bayoud disease in Mauritania

Bayoud disease of date palm caused by *Fusarium oxysporum* f. sp. *albedinis* (EPPO A2 quarantine pest) has recently been detected from the Adrar area, northwest Mauritania. Extensive surveys will be carried out to determine the extent of the disease in the country.

Source: Sidra, H. (1999) Disease and pest outbreaks - Bayoud disease on date palm in Mauritania.
Arab and Near East Plant Protection Newsletter, no. 29, December 1999, Arab Society for Plant Protection, Aleppo (SY) and FAO Near East Regional Office, Cairo (EG), p 30.

Additional key words: detailed record **Computer codes:** FUSAAL, MR

2000/098 Phytosanitary status of stone fruits, citrus and olives in Palestine

The phytosanitary status of stone fruits, citrus and olives was studied in Palestine. 1500 samples from commercial orchards, varietal plots and nurseries were collected in January 1999 and tested (ELISA, immunoprinting, mechanical inoculation, graft transmission and molecular assays). 900 stone fruit trees were tested (500 plum trees (*Prunus domestica*), 200 almond (*P. dulcis*), 100 apricot (*P. armeniaca*), 50 peach (*P. persica*), and 50 cherry (*P. avium*)). Result showed that 18.7 % of the tested trees were infected by at least one virus. The main types of infection found were: apple chlorotic leaf spot trichovirus in cherry (27.5%), prunus necrotic ringspot ilarvirus in peach (26.7 %) and prune dwarf ilarvirus in almond (13 %). Plum pox potyvirus (EPPO A2 quarantine pest) and apple mosaic ilarvirus were not detected. 140 citrus trees (*C. sinensis*, *C. limon*, *C. reticulata* etc.) were tested for the presence of citrus tristeza closterovirus (EPPO A2 quarantine pest), citrus psorosis, citrus variegation, citrus vein enation ?virus and *Spiroplasma citri* (EU Annexes). Citrus tristeza closterovirus was found in 16.3 % of the tested samples. However, infection was limited to the Western area of the West Bank. Citrus psorosis was also found in the same area on 10.5% of the tested samples (*C. sinensis*). *Spiroplasma citri* and other diseases included in this study were not detected. Concerning olive trees, two thirds of the 22 tested samples showed infections of probable viral origin.

Source: Jarrar, S.A. (1999) Research highlights – Sanitary status of stone fruits, citrus and olives in Palestine.
Arab and Near East Plant Protection Newsletter, no. 29, December 1999, Arab Society for Plant Protection, Aleppo (SY) and FAO Near East Regional Office, Cairo (EG), p 26-27.

Additional key words: detailed record, absence **Computer codes:** CSTXXX, PLPXXX, IL

2000/099 Detailed situation of *Erwinia amylovora* in Croatia in 1999

The NPPO of Croatia has recently informed the EPPO Secretariat of the situation of *Erwinia amylovora* (EPPO A2 quarantine pest) in 1999. Fireblight was first found in Croatia in 1995 in the eastern part of the country in Osije[illegible]ko-baranjska county and Vukovarsko-srijemska county (see EPPO RS 96/004). The disease then spread towards the west in 3 other counties: Brodsko-posavska, Po[illegible]e[illegible]ko-slavonska and Viroviti[illegible]ko-podravska. Eradication measures were taken to limit the spread of the disease. Regular monitoring programmes and official control measures were conducted. In 1998, a 'phytosanitary corridor' of 10 km large (buffer zone) was established, including the north, middle and south part of the region of Slavonia. In 1999, the official monitoring programme started in spring and continued throughout the growing season. Results showed that the disease did not spread towards the east frontline of this buffer zone nor into the buffer zone. In the eastern part of the country where fireblight is already present, control measures were applied using the Maryblyt predictive model. Fruit growers were also informed, through seminars, of disease symptoms and necessary prophylactic measures. Due to these prophylactic measures and the adverse weather conditions, no symptoms of fireblight were seen in 1999 during the monitoring programme.

Source: **NPPO of Croatia, 2000-04.**

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

2000/100 Details on the situation of several quarantine pests in Hungary in 1999

The NPPO of Hungary has recently informed the EPPO Secretariat of the situation of several quarantine pests in 1999 (the 1998 situation was presented in EPPO RS 99/057).

- *Ophiostoma novo-ulmi*: was observed on 2 places (0.1 ha). Production sites of propagating material are free from this pathogen.
- *Cryphonectria parasitica* (EPPO A2 quarantine pest): occurred on 7 sites (45 ha). The infested area did not increase (see EPPO RS 99/057). Production sites of propagating material are free from it.
- *Diabrotica virgifera* (EPPO A2 quarantine pest): as already reported in EPPO RS 2000/031, it continued to spread towards the north. In 1999, pheromone and yellow sticky traps caught 9304 beetles in 12 counties. Larval damage was noted in Csongrád and Békés counties, but did not reach economic levels.
- *Erwinia amylovora* (EPPO A2 quarantine pest): was found in 9 counties, on 60 sites covering a total of 466.7 ha (9.3 ha of private gardens and 457.4 ha of orchards) and corresponding to 35708 infected trees (situation is rather similar to 1998, see EPPO RS 99/058). One nursery was found infected at Alsótekeres, in Fejér county. All other nurseries were found free from fireblight and are subject to regular phytosanitary inspections.
- *Globodera rostochiensis* (EPPO A2 quarantine pest): infested soils and crops were found on 31 isolated areas (339.5 ha) which were placed under quarantine.
- *Helicoverpa armigera* (EPPO A2 quarantine pest): occurred on maize crops in 2 isolated places (133.5 ha) in Érsekvadkert and Vanyarc (Nógrad county).
- *Puccinia horiana* (EPPO A2 quarantine pest): was observed under glasshouses in 3 places (0.3 ha) in Kiskunmajsa, in 1 place (0.01 ha) in Bácsalmás (Bács-Kiskun county), and in 1 place (0.35 ha) in Keszthely (Zala county).
- *Xanthomonas vesicatoria* (EPPO A2 quarantine pest): was observed in 1 place (0.7 ha) on *Capsicum annuum* plants in Dombiratos (Békés county) and in 1 place in Budapest on stored *C. annuum* seeds.

Source: **NPPO of Hungary, 2000-05.**

Additional key words: detailed record

Computer codes: CERANU, DIABVI, ENDOPA, ERWIAM, HELIAR, HETDRO, PUCCHN, XANTVE, HU

2000/101 Details on Texas pepper begomovirus in Costa Rica

In 1997, severe leaf malformation and yellow mottle were observed on *Capsicum frutescens* cv. Tabasco and *C. chinense* cv. Habanero, on several farms in Perez Zeledon county, in Costa Rica. Levels of infection varied among farms, from 25 to 75 %. *Bemisia tabaci* (EPPO A2 quarantine pest) populations were present in affected fields, and preliminary studies showed that it could transmit the disease. Molecular analysis showed that the causal agent is a strain of Texas pepper begomovirus (EPPO Alert List). It is suggested that this virus may be more widespread in Central America than previously thought. Samples of *Capsicum frutescens* cv. Tabasco collected from farms in Honduras (near Tocoa, Santa Rita, El Progresso) showing symptoms of a viral disease were found infected by a virus which presented high sequence similarity (98 %) with Texas pepper begomovirus. It is concluded that Texas pepper begomovirus is a new threat for capsicum production in Central America.

Source: Lotrakul, P.; Valverde, R.A.; De la Torre, R.; Sim, J. (2000) Occurrence of a strain of Texas pepper virus in Tabasco and Habanero pepper in Costa Rica. **Plant Disease, 84(2), 168-172.**

Additional key words: detailed record **Computer codes:** CR

2000/102 Bean calico mosaic begomovirus is a distinct species

Several begomoviruses have been found causing diseases on bean crops in the Americas. Bean golden mosaic geminivirus (EPPO A1 quarantine pest) isolates from Puerto Rico, Dominican Republic and Guatemala have been completely sequenced and belong to one species. Similarly, bean dwarf mosaic begomovirus from Colombia has been sequenced and is considered as a distinct species. It has been shown that bean golden mosaic virus from Brazil is distinct from bean dwarf mosaic begomovirus, and all other bean golden mosaic isolates from the Caribbean. A fourth whitefly-transmitted geminiviridae infecting beans was discovered in Sonora, Mexico, in 1986. This virus was called bean calico mosaic begomovirus. Biotic, molecular and phylogenetic studies showed that it is a clearly distinct begomovirus species. The virus was purified and Koch' postulates were completed. The experimental host range of bean calico begomovirus includes *Malva parviflora*, several *Phaseolus* species, *Nicotiana benthamiana* and tobacco (*N. tabacum*). It was also found that *Bemisia tabaci* biotype B efficiently transmitted this virus. Phylogenetic studies showed that it is closely related to squash leaf curl begomovirus.
Note: this paper mainly focused on taxonomy and no details were provided on the significance of the disease caused by bean calico mosaic begomovirus in the field.

Source: Brown, J.K.; Ostrow, K.M.; Idris, A.M.; Stenger, D.C. (1999) Biotic, molecular, and phylogenetic characterization of bean calico mosaic virus, a distinct begomovirus species with affiliation in the squash leaf curl virus cluster.
Plant Disease, 89(4), 273-280.

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

2000/103 First report of oleander leaf scorch (*Xylella fastidiosa*) in Florida (US)

In spring 1998, oleander plants (*Nerium oleander*) in Orlando, Florida (US) showed chlorotic mottling along leaf edges becoming necrotic as the disease progressed. Scorched leaves died and prematurely fell. Affected plants showed a general decline and mortality was observed. Analysis (PCR, culturing on periwinkle wilt agar medium) showed the presence of *Xylella fastidiosa* (EPPO A1 quarantine pest). In this study, Koch' postulates were also verified. Oleander leaf scorch caused by *X. fastidiosa* had previously been reported in California and Texas (EPPO RS 99/104), but this is the first report in Florida.

Source: Wichman, R.L.; Hopkins, D.L. (2000) First report of oleander leaf scorch caused by *Xylella fastidiosa* in Florida.
Plant Disease, 84(2), p 198.

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

2000/104 Epidemiological studies on grapevine Pierce's disease (*Xylella fastidiosa*) in California, US

Strains of *Xylella fastidiosa* (EPPO A1 quarantine pest) causing grapevine Pierce's disease can infect numerous other plant species without necessarily causing disease. However, these plant species could play an important role in the epidemiology of the disease. In coastal California (US), it has been observed that the incidence of grapevine Pierce's disease is constantly highest along the margins of vineyards adjacent to riparian habitats which harbour overwintering populations of insect vectors, in particular *Graphocephala atropunctata*. Previous studies have already showed that plants such as *Artemisia douglasiana*, *Echinochloa crusgalli* and *Rubus procerus* could carry bacterial populations. A list of perennial plants on which *Graphocephala atropunctata* was found, and which are commonly occurring in riparian habitats in California was compiled. These plants were inoculated in the field (mechanical inoculation) or in the laboratory (using infective *G. atropunctata*). Results showed that populations of *X. fastidiosa* were highest in most plant species within 3 to 6 weeks after inoculation and decreased over the next 3 to 4 months. It was found that the following plant species could support systemic populations of *X. fastidiosa* which survived throughout the year: *Acer macrophyllum*, *Aesculus californica*, *Rubus ursinus*, *Quercus agrifolia*, *Sambucus mexicana*, *Genista monspessulana*, *Vinca major*, *Quercus lobata* and *Vitis rupestris*.

Source: Purcell, A.H.; Saunders, S.R. (1999) Fate of Pierce's disease strains of *Xylella fastidiosa* in common riparian plants in California.
Plant Disease, 83(9), 825-830.

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

2000/105 Relationships between Asian isolates of citrus greening bacterium

Citrus greening bacterium (EPPO A1 quarantine pest) occurs in many parts of Asia and Africa. The Asian and African organisms are transmitted by different vectors (respectively *Diaphorina citri* and *Trioza erytreae*, both EPPO A1 quarantine pests), and show different climatic preferences. The Asian organism produces severe symptoms under cool (22 to 24°C) and warm temperatures (27 to 30 °C), whereas the African organism induces severe symptoms only under cool conditions. The names Candidatus *Liberobacter asiaticum* and Candidatus *Liberobacter africanum* have recently been proposed to designate these pathogens. Relationships between several citrus greening isolates from Asia (Japan, Philippines, Indonesia and Thailand) have been studied by comparing sequences of 16S rDNA and of 16S/23S intergenic region. A comparison with known sequences of isolates from other parts of Asia (China, India, Nepal) and Africa was also included in this study. Results showed that sequences of 16SrDNA were identical among all isolates from Japan, Philippines, Indonesia and Thailand, and very similar (98.8 % to 100% similarity) to published sequences of Thai, Nepalese and Indian strains, but less similar to an African isolate (97.5 %). Comparison of sequences of 16S/23S intergenic region gave similar results: all studied isolates presented identical sequences, which were also very similar to published sequences of Indian and Chinese strains (99.2 %), but less similar to the African isolate (85.2%). It is concluded that several isolates from Japan, Philippines, Indonesia, Thailand and Nepal constitute one strain of *L. asiaticum*, which is similar to Indian and Chinese strains but distinct from the African isolate (*L. africanum*).

Note: The studied isolates from Japan originated from Iriomote and Okinawa islands (Ryukyu Archipelago). In Japan, the disease was thought to be present only in the southern part of the small island of Iriomote. But this study has showed that it is present at least in 4 locations on Okinawa island. The authors noted that this may cause a problem, because *D. citri* occurs there and Okinawa island is one of the major citrus-producing area of Japan.

Source: Subandiyah, S.; Iwanami, T.; Tsuyumu, S.; Ieki, H. (2000) Comparison of 16S rDNA and 16S/23S intergenic region sequences among citrus greening organisms in Asia.
Plant Disease, 84(1), 15-18.

Additional key words: genetics, detailed record **Computer codes:** LIBEAS, JP

2000/106 PCR technique to detect citrus greening bacterium (*Liberobacter asiaticum*)

A rapid and efficient PCR technique has been developed in Taiwan to detect citrus greening bacterium (EPPO A1 quarantine pest) in citrus samples from Asia. This method could detect in 6 hours the Asian form of citrus greening bacterium (*L. asiaticum*) in citrus samples from various Asian countries but gave negative result with one sample from South Africa (infected by the other form of citrus greening: *L. africanum*). So according to these first results the PCR primer pair used in this PCR technique is probably specific to *L. asiaticum*.

Source: Hung, T.H.; Wu, M.L.; Su, H.J. (1999) Development of a rapid method for the diagnosis of citrus greening disease using the polymerase chain reaction. **Journal of Phytopathology, 147(10), 599-604.**

Additional key words: new detection method **Computer codes:** LIBEAS

2000/107 *Cacopsylla pyri* is a vector of pear decline phytoplasma

In Italy, studies were done on *Cacopsylla pyri* which is the most commonly found psyllid in pear orchards and a suspected vector of pear decline phytoplasma (EPPO A2 quarantine pest). This insect has 4-5 generations per year and overwinters as the adult stage in pear orchards. In 1997/1998, groups of adult *C. pyri* were caught every month from March to October in orchards showing a high incidence of pear decline (70-80 %). Insects were tested by PCR/RFLP and used to inoculate young pear seedlings. Results showed that *C. pyri* can transmit pear decline phytoplasma throughout the vegetation period. Similar experiments were carried out to determine whether the phytoplasma was retained in the vector during the winter period. Results showed that insects caught during winter 1998/1999 carried the pathogen, but plants exposed to insects during the winter period (November to March) were not infected. However, these insects were able to transmit the pathogen in April, as soon as the growing season starts. The authors concluded that *C. pyri* is indeed a vector of pear decline phytoplasma. The pathogen is not transmitted by *C. pyri* during winter to dormant plants but can be retained in the vector, keeping its infectivity.

Source: Carraro, L.; Osler, R.; Loi, N.; Ermacora, P.; Refatti, E. (1999) Problemas relacionados con las infermedades de los frutales producidas por fitoplasmas y transmitidas por psílidos. Situación actual del pear decline, european stone fruit yellows y el apple proliferation, en Italia. **Phytoma-España, no. 114, 159-162.**

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

2000/108 Irradiation as a quarantine treatment against *Rhagoletis mendax* and *R. pomonella*

For quarantine treatments, prevention of adult emergence is used as a criterion to assess the efficacy of irradiation against fruit flies. This criterion gave satisfactory results for tropical fruit flies that do not diapause, but cannot be used for *Rhagoletis* species which must be brought out of diapause by lengthy and generally unreliable procedures. *Rhagoletis* species are known to diapause as phanerocephalic pupa. Laboratory studies were done on *Rhagoletis mendax* and *R. pomonella* (both EPPO A1 quarantine pests) to determine whether prevention of this stage could be used as a criterion to assess irradiation efficacy. Results showed that prevention of phanerocephalic pupa could be used as a satisfactory criterion. Irradiation of 3rd instar larvae in fruits (apples and blueberries) at doses of 58 Gy and 24 Gy for *R. pomonella* and *R. mendax*, respectively, prevented the appearance of the phanerocephalic stage (at the 99% level, required in quarantine treatments).

Source: Hallman, G.J.; Thomas, D.B. (1999) Gamma irradiation quarantine treatment against blueberry maggot and apple maggot (Diptera: Tephritidae). **Journal of Economic Entomology, 92(6), 1373-1376.**

Additional key words: quarantine treatment **Computer codes:** RHAGME, RHAGPO

2000/109 Experiments on different types of traps to capture *Bactrocera dorsalis*

In 1997 and 1998, experiments were conducted in a guava orchard in Hawaii (US) to compare the effectiveness of Ladd and McPhail traps to capture *Bactrocera dorsalis* (EPPO A1 quarantine pest). Ladd traps, which have been essentially designed for *Rhagoletis pomonella*, mimicks fruit and foliage (flat yellow polyethylene panel with a red sphere), and attracts females searching for oviposition sites. McPhail traps were baited with a liquid hydrolysed protein bait which attracts fruit flies searching for proteins. Results showed that the attractiveness of both types of traps varied over the seasons. In 1997 and 1998, McPhail traps were much more attractive to *B. dorsalis* than Ladd traps in spring. In addition, greater numbers of immature females were captured in McPhail traps. The authors concluded that McPhail traps are a better option for growers than Ladd traps to monitor and control populations of *B. dorsalis* in guava orchards in spring. However, further studies are needed for better understanding of fluctuations of *B. dorsalis* populations over the seasons and to test other types of traps with different combinations of attractants.

Source: Cornelius, M.L.; Duan, J.J.; Messing, R.H. (1999) Capture of oriental fruit flies (Diptera: Tephritidae) by protein-baited traps and fruit-mimicking visual traps in a guava orchard.
Environmental Entomology, 28(6), 1140-1144.

Additional key words: traps **Computer codes:** DACUDO

2000/110 Definition of Quarantine Risk Groups in New Zealand

The NPPO of New Zealand has categorized exotic plant pests into 3 quarantine groups based on the risk presented by these pests to New Zealand. Phytosanitary measures required will be commensurate to the risk faced (the greater the risk, the stronger the measures).

Risk Group 3: pests presenting the greatest risk.
It is considered that, if introduced into New Zealand, the following pests would cause:
1) major disruption in export markets for a number of significant commodities; and/or
2) significant economic impact on national production of these commodities; and/or
3) potentially significant adverse effects on the environment.
To prevent entry of these pests, phytosanitary measures will include for example a pre-export treatment (in accordance with a New Zealand standard) under an official bilateral quarantine agreement between New Zealand and the exporting country. If these pests are intercepted, the consignment will be returned or destroyed, and trade will be suspended until the cause of non-compliance is identified and corrected.

Anastrepha fraterculus
A. ludens
A. obliqua
A. serpentina
A. striata
A. suspensa
Bactrocera aquilonis
B. carambolae
B. cucumis
B. cucurbitae
B. curvipennis
B. dorsalis
B. facialis
B. frauenfeldi
B. jarvisi
B. kirki
B. latifrons
B. melanotus
B. neohumeralis
B. papayae
B. passiflorae
B. philippinensis
B. psidii
B. trilineola
B. trivialis
B. tryoni
B. xanthodes
B. zonata
Ceratitis capitata
C. rosa
Rhagoletis pomonella

(So far, it may be noted that this list of pests includes only fruit flies.)

Risk Group 2 pests

If introduced the following pests would have a negative impact on export markets, national production, environment (as above), but are likely to affect a smaller number of crops or commodities.

For these pests, phytosanitary requirements may include pre-export treatments (officially declared by the exporting country). If these pests are intercepted, the consignment will be treated (if treatment is available), returned or destroyed. The exporting country is immediately informed.

Bacteria

Clavibacter michiganensis subsp. *sepedonicus*
Pantoea stewartii pv. *stewartii*
Spiroplasma citri
Xanthomonas axonopodis pv. *citri*
Xanthomonas fragariae
Xylella fastidiosa

Fungi

Guignardia citricarpa
Gymnosporangium asiaticum
G. japonicum
G. juniperi-virginianae
Monilinia fructigena
Phomopsis asparagi
Puccinia asparagi
Synchytrium endobioticum
Tilletia controversa
T. indica

Insects

Aleurocanthus woglumi
Anastrepha distincta
Bactrocera tsuneonis
Bemisia tabaci
Carposina niponensis (= *C. sasakii*)
Conogethes punctiferalis
Conotrachelus nenuphar

Cryptophlebia leucotreta
Cylas formicarius
Euscepes postfasciatus
Leptinotarsa decemlineata
Liriomyza huidobrensis
L. sativae
L. trifolii
Lymantria dispar
Prostephanus truncatus
Thrips palmi
Trogoderma granarium
Tetranychus kanzawai

Nematodes
Radopholus citrophilus

Viruses
Plum pox potyvirus
Potato Andean latent tymovirus
Potato Andean mottle comovirus
Potato black ringspot nepovirus
Potato mop-top mopovirus
Potato T trichovirus

Risk Group 1 pests
These pests have less impact than the others but they are still classed as 'unwanted'. For the moment, no list of pests is given. The phytosanitary requirements for these pests may include: testing and/or treatment prior to export, and inspection or testing on arrival. If these pests are intercepted, the consignment will be treated (if possible), or re-sorted, or returned or destroyed.

It is expected that these risk groups will be up-dated regularly, and available on Internet.

Source: Breach, J. (2000) Registers of quarantine Risk Groups 2 and 3 pests. **PhytoZone, no. 5, summer 2000, MAF Biosecurity, Wellington, NZ, p 4.**

Additional key words: quarantine **Computer codes:** NZ

2000/111 EPPO report on selected intercepted consignments

The EPPO Secretariat has compiled the intercepted consignment reports for 1999 from Hungary and for 2000 received since the previous report (EPPO RS 2000/090) from the following countries: Austria, Cyprus, Czechia, Denmark, France, Finland, Ireland, Netherlands, Norway, Poland, Portugal, Sweden, Switzerland, United Kingdom. When a consignment has been re-exported and the country of origin is unknown, the re-exporting country is indicated in brackets. When the occurrence of a pest in a given country is not known to the EPPO Secretariat, this is indicated by an asterisk (*).

The EPPO Secretariat has selected interceptions made because of the presence of pests. Other interceptions due to prohibited commodities, missing or invalid certificates are not indicated. It must be pointed out that the report is only partial, as many EPPO countries have not yet sent their interception reports.

• 1999 Interceptions in Hungary

Pest	Consignment	Type of commodity	Country of origin	C. of destination	nb
Acarus	*Fagopyrum esculentum*	Stored products	China	Hungary	1
	Lens culinaris	Stored products	Slovakia	Hungary	1
Agrobacterium tumefaciens	Unspecified fruit trees	Plants for planting	Germany	Hungary	1
Lasioderma serricorne	*Nicotiana tabacum*	Stored products	Bangladesh	Hungary	1
	Nicotiana tabacum	Stored products	Tanzania	Hungary	1
Spongospora subterranea	*Solanum tuberosum*	Seed potatoes	Netherlands	Hungary	1
Tribolium	*Theobroma cacao*	Stored products	Ghana	Hungary	1
	Triticum aestivum	Stored products	Yugoslavia	Hungary	1

Wood

Pest	Consignment	Country of origin	C. of destination	nb
Scolytidae	Unspecified wood	Romania	Hungary	2
	Unspecified wood	Ukraine	Hungary	3
Scolytus	Unspecified wood	Romania	Hungary	1

• 2000 Interceptions

Pest	Consignment	Type of commodity	Country of origin	C. of destination	nb
Ambrosia	*Helianthus annuus*	Stored products	Hungary	Poland	1
	Zea mays	Stored products	Hungary	Poland	7
Ambrosia, Iva	*Hordeum vulgare*	Stored products	Ukraine	Poland	1
Bemisia tabaci	*Euphorbia pulcherrima*	Cuttings	Italy	Sweden	1
	Euphorbia pulcherrima	Cut flowers	USA	United Kingdom	1
	Nomaphila stricta	Aquarium plants	Singapore	Denmark	1
	Solidago	Cut flowers	Israel	Ireland	2
	Solidago	Cut flowers	Netherlands	Ireland	1
	Trachelium	Cut flowers	Israel	United Kingdom	1
	Unspecified plants	Aquarium plants	Singapore	France	1
Cadra cautella	*Theobroma cacao*	Stored products	Togo	Poland	1
Chrysanthemum stunt viroid	*Dendranthema*	Plants for planting	Brazil	United Kingdom	1
Chrysanthemum B carlavirus	*Dendranthema*	Cuttings	Netherlands	Poland	1
Ciborinia camelliae	*Camellia japonica*	Plants for planting	Italy	United Kingdom	1
	Camellia japonica	Plants for planting	Italy	Switzerland	2
Clavibacter michiganensis **subsp. *sepedonicus***	*Solanum tuberosum*	Ware potatoes	Denmark	Norway	1
	Solanum tuberosum	Ware potatoes	Germany	Czechia	1
	Solanum tuberosum	Ware potatoes	Germany	Netherlands	1
	Solanum tuberosum	Ware potatoes	Germany	Poland	1
Cuscuta	*Medicago sativa*	Seeds	Hungary	Poland	1
	Trifolium resupinatum	Seeds	Germany	Poland	1
Frankliniella hemerocallis	*Hemerocallis*	Plants for planting	USA	United Kingdom	1
Globodera rostochiensis	*Solanum tuberosum*	Ware potatoes	Belgium	Czechia	1
	Solanum tuberosum	Ware potatoes	Cyprus	Norway	1
Impatiens necrotic spot tospovirus	*Streptocarpus*	Plants for planting	Germany	Sweden	2
	Streptocarpus	Plants for planting	Netherlands	Sweden	1
Iva	*Helianthus annuus*	Stored products	Ukraine	Poland	1
Iva xanthifolia, Ambrosia	*Helianthus annuus*	Stored products	Ukraine	Poland	1
Leptinotarsa decemlineata	*Lactuca sativa*	Vegetables	France	United Kingdom	1
	Lactuca sativa	Vegetables	France	Ireland	1
	Lactuca sativa	Vegetables	Italy	Norway	1
	Petroselinum crispum	Vegetables	Italy	United Kingdom	3
	Raphanus sativus	Vegetables	Germany	United Kingdom	1
Liriomyza huidobrensis	*Bupleurum*	Cut flowers	Israel	Ireland	1
	Diascia	Plants for planting	Portugal	United Kingdom	1
	Gypsophila paniculata	Cut flowers	Israel	United Kingdom	1
	Primula obconica	Plants for planting	Netherlands	Sweden	1

Pest	Consignment	Type of commodity	Country of origin	C. of destination	nb
Liriomyza	*Brassica pekinensis*	Vegetables	Thailand	Denmark	1
	Ocimum basilicum	Vegetables	Thailand	Denmark	2
	Spinacia oleracea	Vegetables	Cyprus	Denmark	1
Liriomyza (*suspect *sativae* or *trifolii)	*Solidago*	Cut flowers	Israel	United Kingdom	1
Meloidogyne	*Rosa*	Plants for planting	Denmark	Norway	3
Mites	*Papaver somniferum*	Stored products	Czechia	Poland	1
Paracolopha morrisoni	*Phyllostachys aureosulcata* cv. *spectabilis*	Plants for planting	Belgium	United Kingdom	1
Penicillium	*Lycopersicon esculentum, Citrus sinensis, C. limon*	Fruits and vegetables	Spain	Poland	1
***Phthorimaea operculella* (suspected)**	*Solanum tuberosum*	Ware potatoes	Morocco	Poland	1
Rhizopertha dominica	*Hordeum vulgare*	Stored products	Czechia	Poland	1
	Hordeum vulgare	Stored products	Slovakia	Poland	1
	Triticum aestivum	Stored products	Czechia	Poland	4
	Zea mays	Stored products	Slovakia	Poland	1
Sitophilus oryzae	*Hordeum vulgare*	Stored products	Czechia	Poland	2
	Triticum aestivum	Stored products	Czechia	Poland	3
	Zea mays	Stored products	Slovakia	Poland	2
Thrips palmi	*Solanum melongena*	Vegetables	Suriname*	Netherlands	1
Trialeurodes vaporariorum	*Abutilon*	Pot plants	Netherlands	Norway	1
Tribolium	*Triticum aestivum*	Stored products	Slovakia	Poland	1
	Zea mays	Stored products	Slovakia	Poland	2

- **Fruit flies**

Pest	Consignment	Country of origin	C. of destination	nb
Bactrocera	*Syzygium jambos*	Thailand	France	1

- **Wood**

Pest	Consignment	Type of commodity	Country of origin	C. of destination	nb
Bursaphelenchus xylophilus	Coniferae	Packing material	Canada	Finland	1
	Coniferae	Packing material	China	France	1
	Coniferae	Packing material	USA	Finland	
Grub holes >3 mm	Coniferae	Packing material	Canada	Finland	3
	Coniferae	Packing material	China	Finland	1
	Coniferae	Packing material	Taiwan	Finland	2
	Coniferae	Packing material	USA	Finland	3
Monochamus	*Pinus*	Wood and bark	Russia	Poland	1
Monochamus, Trypodendron	*Pinus*	Wood	Ukraine	Poland	1

- **Bonsais**

One consignment of bonsai plants of *Serissa* and *Ulmus* from China was intercepted by United Kingdom because of the presence of *Helicotylenchus dihystera* and *Tylenchorhynchus.*

Source: EPPO Secretariat, 2000-05.