EPPO

Reporting

Service

Paris, 1998-02-01 **Reporting Service 1998, No. 2**

CONTENTS

98/022 New data on quarantine pests

By browsing through the literature, the EPPO Secretariat has extracted the following new data concerning quarantine pests.

New geographical records

A survey on fruit flies was carried out in south-west Nicaragua from June 1994 to March 1995, over and area of 350 km². No *Bactrocera* sp. was trapped. *Ceratitis capitata* (EPPO A2 quarantine pest) was caught in high numbers at nearly all sites in the dry season, attacking coffee berries and *Citrus* fruits. *Toxotrypana curvicauda* was widespread throughout the year, attacking papaya. Ten species of *Anastrepha* were found, occurring mainly during the rainy season, but only two were trapped frequently and reared from collected fruit. *Anastrepha obliqua* (EPPO A1 quarantine pest) was the second most abundant fruit fly species and its preferred hosts were *Mangifera indica*, *Spondias mombin* and *Psidium friedrichsthalianum*. *Anastrepha striata* was also trapped and attacked *P. friedrichsthalianum* and *P. guajava*. The EPPO secretariat had previously no data on the occurrence of *A. obliqua* and *A. striata* in Nicaragua. Review of Agricultural Entomology, 85(12), p1499 (11784).

Xiphinema rivesi (EPPO A2 quarantine pest) was observed in an apple orchard in Swat, Pakistan. The EPPO Secretariat had previously no data on the occurrence of this nematode in Pakistan. Nematological abstracts, 66(4), p 255 (1900).

Detailed records

Bemisia tabaci (EPPO A2 quarantine pest) and bean golden mosaic geminivirus (EPPO A1 quarantine pest) are present in Mato Grosso do Sul, in Brazil. Variations of disease incidence and vector population fluctuations were studied during 3 years. The highest disease incidence reached 70 % the first year, was less than 16 % the second year, and around 35 % the third year. It was observed that the whitefly populations reached a peak slightly before the disease reached its highest incidence. Review of Agricultural Entomology, 85(12), p 1486-87 (11680).

Ceratitis capitata (EPPO A2 quarantine pest) and *Anastrepha fraterculus* (EPPO A1 quarantine pest) are present in the Antinaco-Los Colorados valley, in the Province of La Rioja, in Argentina. Review of Agricultural Entomology, 86(1), p 74 (604).

Colletotrichum acutatum (EU Annex II/A2) was observed on strawberry in the state of Saõ Paulo in Brazil. Review of Plant Pathology, 76(12), p 1297 (9974).

During 1991-95, surveys were carried out in Slovenia on grapevine yellows on cultivars Chardonnay, Pinot Blanc and Limberger, grown in 14 locations in the 3 grapevine-growing regions. The percentage of infected vines differed according to the locations, ranging from 2 to 38 %. Preliminary results showed that the disease is caused by grapevine bois noir phytoplasma. *Scaphoideus titanus*, the vector of grapevine flavescence dorée (EPPO A2 quarantine pest) was not found in these regions. Review of Plant Pathology, 77(1), p 81 (589).

Liriomyza trifolii (EPPO A2 quarantine pest) is present in Haryana, India on castor bean (*Ricinus communis*), and also on cotton, sunflower, cowpea, cucumber, celery, chrysanthemum, capsicum, rape and mustard (*Brassica juncea*). Review of Agricultural Entomology, 85(12), p 1504 (11820).

Premnotrypes vorax (EPPO A1 quarantine pest) is considered as an important pest of Colombian potato crops. Studies are carried out on the use of entomopathogenic nematodes (*Steinernema* sp.). Review of Agricultural Entomology, 86(1), p 85 (676).

Ralstonia solanacearum race 3 (EPPO A2 quarantine pest) affecting potatoes has been found in Chile in the early 80s, in the Metropolitan region. The bacterium is now also present in soils of other regions and affects tomatoes. Review of Plant Pathology, 77(1), p 40 (295).

Severe symptoms of tomato spotted wilt tospovirus (EPPO A2 quarantine pest) were recorded on capsicum in Dalmatia (Croatia) in summer 1995. This is the first report of this virus in this region of Croatia. Review of Plant Pathology, 76(12), p 1287 (9890).

Xanthomonas arboricola pv. *pruni* (EPPO A2 quarantine pest) is present in the Buenos Aires province in Argentina. During studies done between 1990 and 1994 in this region, the disease had a moderate to low intensity on European plums (*Prunus domestica*) and peaches *(P. persica*), but Japanese plums (*P. salicina*) were severely attacked (with the exception of one cultivar 'Soledad'). Review of Plant Pathology, 76(12), p 1295 (9955).

Source: **EPPO Secretariat, 1998-01.**

Additional key words: new records, detailed records

Computer codes: ANSTFR, ANSTST, BEMITA, BNGMXX, CERTCA, COLLAC, LIRITR, PREMVO, PSDMSO, TMSWXX, XANTPR, XIPHRI, AR, BR, CL, CO, HR, IN, NI, PK, SL

98/023 News from the Diagnostic Centre of the Dutch Plant Protection Service

The EPPO Secretariat has extracted the following items from the 1996 Annual Report of the Diagnostic Centre of the Dutch Plant Protection Service.

1) *Ralstonia solanacearum* race 1, biovar 4 was found in a glasshouse in 1993 in *Curcuma longa* originating in Thailand. Imports of such material were visually inspected but the bacterium was not found. However, a survey of imported lots planted in glasshouses for flower production found several cases of infection. Due to these findings, all imports will be tested for the presence of latent infections of *R. solanacearum*.
It can be noted that in this Annual Report, many details are given on the testing methods used and studied for the detection of *R. solanacearum* race3 biovar 2 on potatoes.

2) After a century of absence, the oak processionary caterpillar *Thaumetopoea processionea* has been found again in the Netherlands. It was rediscovered in the vicinity of Reusel (Noord-Brabant) in 1987, and was later found in many other places in the province of Noord-Brabant, Limburg, Zeeuwsch-Vlaanderen and Zeeland. It is also noted that recent outbreaks of this pest have been noted in Belgium (particularly in Antwerp province), Germany (in the south-west), in Austria (near Vienna), and in parts of Hungary. This pest is a defoliator of common oak (*Quercus robur*), but also causes serious problems on human health (allergic reactions due to urticating hairs of the caterpillars).

3) A root disease of alder (*Alnus glutinosa*) caused by an unusual form of *Phytophthora cambivora* is reported from the Netherlands in a few locations. Diseased trees are declining, and the stem base show distinct tarry spots. A similar disease was reported from United Kingdom (EPPO RS 96/041). Further studies are being carried out on this fungus.

4) In the search of plants which could be used in rotation to reduce populations of *Meloidogyne chitwoodi* (EPPO A2 quarantine pest), preliminary studies carried out on various cultivars of the following species showed that:
- *Agrostis tenuis*, *Phleum pratense* are poor hosts
- *Cichorium intybus*, *Festuca rubra* are poor or very poor hosts
- *Dactylis glomerata*, *Festuca arundinacea*, *Lolium perenne*, *Poa pratensis* are very poor hosts
- *Medicago sativa* is recorded from non-host to poor host.

5) A petunia plant (Petunia hybrida, Surfinia 'purple') has been found infected by a variant of chrysanthemum stunt viroid (EPPO A2 quarantine pest). In addition, details are given on an RT-PCR method which has been developed for routine testing of chrysanthemum for the presence of chrysanthemum stunt viroid.

Source: **Annual Report 1996, Diagnostic Centre, Plant Protection Service, Wageningen, Netherlands, 114 pp.**

98/024 Second International Bacterial Wilt Symposium

The Second International Bacterial Wilt Symposium took place in Gosier, Guadeloupe, on 1997-06-22/27. Many papers and posters were presented on the following subjects: diversity, diagnosis, pathogenicity, host resistance, biological control and epidemiology, disease management. The EPPO Secretariat has extracted the following information.

1) Genetic diversity of *Ralstonia solanacearum* (EPPO A2 quarantine pest) race 3 in Western Europe was determined with molecular techniques. 22 strains from the Netherlands, 4 from United Kingdom, 1 from Sweden and 3 from France were examined. In addition, three race 3 strains and three race 1 strains from outside Europe were included in the study for comparison. Race 1 could clearly be separated from race 3. But within race 3, only a small variation was observed. No relation was found between geographical origin of race 3 strains and their profiles. The existence of a small variation could indicate that the potato material which has been responsible for the introduction of the pathogen into various European countries contained several clonal lines of race 3. (van der Wolf, J.M. *et al*. Genetic diversity of *Ralstonia solanacearum* race 3 in Western Europe determined by AFLP, RC-PFGE and PCR with repetitive sequences. p 15).

2) In Japan, the genetic diversity of *R. solanacearum* was studied. The bacterium was isolated from various host plants (pumpkin, *Perilla*, *Strelitzia*, strawberry, statice (*Limonium sinuatum*) and solanaceous crops). Two races and four biovars have been identified. Race 1 (biovars 1 and 4) is the most common race, race 3 (biovar 2) has been found in potatoes in Nagasaki. (Tsuchiya, K.; Horita, M. Genetic diversity of *Ralstonia solanacearum* in Japan. p 17)

3) In Pakistan, 40 isolates of *R. solanacearum* were isolated in various provinces from wilted chilli, tomato, potato plants and diseased potato tubers. Preliminary studies showed that 37 isolates from the semi-tropical tomato, chilli and potato-growing areas belonged to biovar 3, and that 3 isolates from potatoes grown in the north West Frontier Province (cool, humid and hilly area) belonged to biovar 2. (Burney, K.; Ahmad, I. Biovars of *Ralstonia solanacearum* in Pakistan. p 21)

4) Bacterial wilt in Réunion island is caused by strains of either race 1 (biovar 3) or race 3 (biovar 2) of *R. solanacearum*. Symptoms caused by strains of race 1 are exclusively observed in lowlands (at altitudes lower than 1000 m). Race 3 (biovar 2) strains are recovered from almost all wilted potato plants growing on the hills (at altitudes over 1000 m). (Nicole, J.F. *et al*. A tentative explanation of the geographical distribution, on Réunion island of bacterial wilt caused by either biovar 2 or biovar 3 of *Ralstonia solanacearum*. p 62)

5) In 1991-93, fields surveys were done in Sri Lanka on potato, tomato, capsicum and aubergine (*Solanum melongena*) grown at 28 locations in the hilly part of the island, to detect *R. solanacearum*. Biovar 2 was only found on potatoes grown in the wet areas at 1860 m altitude. Biovar 3 was found in potato, tomato, aubergine and capsicum in both highlands and lowlands. Biovar 4 was observed only in potato fields where biovar 3 was also detected. (Kelaniyangoda, D.B. Field survey and identification of biovar type of *Ralstonia solanacearum* in solanaceous crops grown in the hill country of Sri Lanka. p 95.)

6) Field experiments were conducted in Nepal in 1995 and 1996 to determine the effects of latent tuber infection and soil infestation by *R. solanacearum* race 3 on the incidence of potato brown rot. Two sources of seed potatoes were used: pre-basic seed potatoes (free from the pathogen); and farm-saved seed potatoes (15 to 19 % were latently infected). Three different soils were compared: a non-infected soil, and 2 naturally infected soils where potatoes (affected by the disease) had been grown 7 or 18 months prior to the experiment. Differences in disease incidence with seed-health status were highly significant for 1995 and 1996. In infested plots with a 7-month break between successive potato crops (irrespective of seed-health status), differences in disease incidence (average 48.2 % in 1995 and 63.2 % in 1996) with different levels of soil infestations were significant. However, in plots where an 18-month break between potato crops was in place, there was no significant difference in disease incidence (average 32.5 %) between non-infested and infested soils. (Pradhanang, P.M.; Elphinstone, J.G. The relative importance of latent tuber and soil infestation by *Ralstonia solanacearum* on the incidence of bacterial wilt of potato. p 114.)

Source: **Abstracts of papers presented at the Second International Bacterial Wilt Symposium, Gosier, Guadeloupe, 1997-06-22/27.**

Additional key words: genetics, detailed records **Computer codes:** PSDMSO, JP, LK, PK, RE

98/025 Phytosanitary incident with *Ralstonia solanacearum* in Morocco

The EPPO Secretariat was notified of two French interceptions of ware potatoes (7.560 t of cv. Diamant and 68.947 t of cv. Nicola) from Morocco infected by *Ralstonia solanacearum* (EPPO A2 quarantine pest). Laboratory tests including biological assays carried out in France confirmed the presence of the bacterium in the two lots. Following these interceptions, the Plant Protection Service of Morocco made further enquiries to identify fields where infected potatoes had been grown, and to trace back the origin of the seed potatoes used. For the potato lot of cv. Diamant, two production fields were identified at El-Jadida (south-west of Casablanca). For this cultivar, the seed potatoes used came exclusively from the Netherlands. Concerning the other lot of potatoes cv. Nicola, three production sites could be identified and were located in the region of Larache (approximately 200 km north of Rabat). For this cultivar, several countries including France, Ireland, Netherlands and Denmark had provided seed potatoes during the last growing season.
Considering the importance of this bacterium, the following measures have been taken by the Plant Protection Service of Morocco: 1) the five production sites have been placed under quarantine, 2) cultivation of potential host plants of *R. solanacearum* is prohibited on these fields, 3) the phytosanitary status of these five fields is currently checked by testing volunteer plants and so far, the bacterium has not been found, 4) a national survey will be carried out in potato production fields with a particular intensity in production sites for export.

Source: **Plant Protection Service of France, 1997-12.**
Plant Protection Service of Morocco, 1997-12.

Additional key words: phytosanitary incident **Computer codes:** PSDMSO, MA

98/026 Moko disease (*Ralstonia solanacearum* race 2) is not present in Jamaica and its presence in Malawi is doubtful

The EPPO Secretariat has been informed that according to the official authorities of Jamaica, Moko disease of banana, caused by *Ralstonia solanacearum* (EPPO A2 quarantine pest) race 2, has never been found in this country. The record in the 2nd edition of Quarantine Pests for Europe is therefore erroneous.
In addition, doubts were expressed also on the occurrence of the disease in Malawi, as according to plant pathologists it has definitely not been seen in recent years. The single record is rather old and could not be verified. The record in the 2nd edition of Quarantine Pests for Europe can therefore be considered dubious.

Source: Dr Black, NRI, personal communication.

Additional key words: absence **Computer codes:** PSDMSO, JM, MW

98/027 Studies on plant to plant transmission of *Clavibacter michiganensis* subsp. *sepedonicus*

The spread of potato ring rot (*Clavibacter michiganensis* subsp. *sepedonicus* – EPPO A2 quarantine pest) is essentially due to infected seed potatoes and contaminated potato handling equipment. In Denmark, a seed certification programme had been implemented by 1986, but the disease was sporadically found in seed potatoes from 1988 to 1994. As disease incidence could not be related to known sources of inoculum, other means of transmission were envisaged, such as transmission from plant to plant, insect vectors. Field trials were conducted in Denmark over a period of three years on plant-to-plant transmission. Healthy and infected seed potatoes were planted 35 cm apart. To study whether transmission could occur through leaves or roots, a subsurface barrier was placed between healthy and infected seed tubers in one treatment of the experiment. Indirect immunofluorescence antibody staining (IFAS) with monoclonal antibodies was used to detect the presence of the bacterium at harvest (in samples of stem and progeny tubers). In the treatment with subsurface barrier, none of the plants grown from the healthy seed tubers was found infected. In the other experiment without subsurface barrier, 2 plants (out of 368) grown from healthy seed tubers were infected at harvest (0.5%). The author concluded that very little, if any, plant-to-plant transmission (probably through soil) may occur in the field. He also pointed out that in Denmark, since his study was initiated, legislation and recommendation for potato ring rot control were re-evaluated. The required prophylactic measures were strengthened, and in particular it is now prohibited for all seed potato growers to share production equipment with ware potato growers (this was only required in the past for the growers involved in the production of the first four generations of seed potatoes), and equipment must be disinfected if shared between seed potato growers. As a result of these more stringent measures, no ring rot was found in seed potatoes in the harvests of 1995 and 1996.

Source: Mansfeld-Giese, K. (1997) Plant-to-plant transmission of the bacterial ring rot pathogen *Clavibacter michiganensis* subsp. *sepedonicus*.
Potato Research 40(2), 229-235.

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

98/028 Outbreak of *Clavibacter michiganensis* subsp. *michiganensis* in Southern Italy

In June 1997, severe symptoms of bacterial canker were observed in several fields of tomato in Puglia and Basilicata (Southern Italy). The causal agent was identified as *Clavibacter michiganensis* subsp. *michiganensis* (EPPO A2 quarantine pest) on the basis of morphological, serological characters and pathogenicity tests. The disease was found in Foggia, San Severo, Lucera, Minervino Murge, Montalbano Ionico, Piticci in more than 100 ha with an incidence of approximately 50 %. Although this bacterium has been reported in other places in Italy, this is the first time it is observed in Puglia and Basilicata (with the exception of a very limited case 15 years ago). It was noted that only tomato cv. Rebecca was infected, and that the young plants used in the infected fields came from the same nursery. This led to the assumption that this outbreak is linked with the use of a contaminated seed lot.

Source: Cariddi, C. (1997) [Severe infections of *Clavibacter michiganensis* subsp. *michiganensis* in tomato field plants in Apulia and Basilicata (Southern Italy)]
Informatore Fitopatologico, no. 12, 42-46.

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

98/029 *Xanthomonas translucens* pv. *translucens* is present in Iran

Bacterial leaf streak of barley (*Xanthomonas translucens* pv. *translucens* – EPPO A2 quarantine pest) was observed in the south-eastern, central and western regions of Iran. The disease was even present in the irrigated barley fields of the driest areas. The EPPO Secretariat had previously no data on this bacterium in Iran.

Source: Alizadeh, A.; Barrault, G.; Sarrafi, A.; Rahimian, H.; Albertini, L. (1995) Distribution and characteristics of bacterial leaf streak of barley (*Xanthomonas campestris* pv. *hordei* in Iran). Abstract of a poster presented at the International Workshop on barley leaf blights, 1993-03-01/03, Aleppo (SY).
Rachis. Barley and Wheat Newsletter, 14(1-2), 94-95.

Additional key words: new record **Computer codes:** XANTTR, IR

98/030 *Erwinia amylovora* is suspected in Ukraine but not confirmed

The Plant Protection Service of Ukraine informed the EPPO Secretariat that in 1997 symptoms resembling those of fireblight (*Erwinia amylovora* – EPPO A2 quarantine pest) were observed in Ukraine. Necrosis on twigs, shrivelled fruit, cankers were observed in the field. Several samples were taken to the laboratory, and preliminary results showed that two samples seemed to present the characteristics of *Erwinia* and further tests are being carried out on these two samples. The Plant Protection Service stressed that it is too early to conclude that *E. amylovora* is present in Ukraine. In 1998, further samples will be taken and tested to clarify the situation.

Source: **Plant Protection Service of Ukraine, 1997-12**.

Additional key words: record awaiting confirmation **Computer codes:** ERWIAM, UA

98/031 Studies on the *Erwinia amylovora* population in Israel

In Israel, fireblight (*Erwinia amylovora* – EPPO A2 quarantine pest) was detected for the first time in 1985 in a young pear orchard at Rosh Pinna in the upper Jordan Valley (EPPO RS 459, 1986). The disease was then observed in all pear-growing areas of the country as well as in apple and quince orchards. In 1994, a severe outbreak was also reported on loquat. The origin of fireblight in Israel is unclear, but the authors pointed out that in 1964 and again in 1982 severe outbreaks were reported in Egypt, and in 1984 fireblight was found in Cyprus. Studies were carried out in Israel on a collection of strains isolated from different varieties of pear, apple, loquat and quince isolated from various places in the country. These strains were characterized in respect to degree of virulence on several hosts, serological and molecular characters. Results showed that the population of *E. amylovora* in Israel is homogeneous. In addition, the Israeli strains were compared by RAPD with strains isolated from neighbouring countries (Egypt, Cyprus, Greece), and the amplification patterns obtained were indistinguishable. The authors pointed out that these results are in line with previous studies which showed that *E. amylovora* strains from fruit trees are homogeneous (but distinct from strains isolated from *Rubus* (EPPO RS 96/100)).

Source: Manulis, S.; Kleitman, F.; Dror, O.; David, I.; Zutra, D. (1998) Characterization of the *Erwinia amylovora* population in Israel. **Phytoparasitica, 26(1), 39-46.**

Additional key words: genetics **Computer codes:** ERWIAM, IL

98/032 Update on the situation of *Cryphonectria parasitica* in Germany

In 1996, an outbreak of *Cryphonectria parasitica* (EPPO A2 quarantine pest) was found in Germany at one site in Rheinland-Pfalz on an area of about 0.4 ha. Infected chestnut trees were felled and destroyed. A detection survey was set up in a surrounding buffer zone of approximately 40 ha. In August 1997, the monitoring of chestnut stands in the near vicinity of the felled area showed the presence of two further chestnut trees attacked by the disease. Both trees were immediately felled and destroyed. Around the site of the felled area of the previous year, a concentric felled area of 10 m depth was newly established at the end of October 1997. The wood cut from this area was exclusively used as firewood. In addition, all chestnuts and oaks were felled in a working strip of approximately 15-20 m. This area is thus only covered with a loose layer of Douglas fir and pine. The former infection of 1996 is considered as eradicated.
In the 1998 growing season, further observations will be carried out by the plant protection service by visual inspection of the site. It is envisaged that these inspections will continue for a further 5 years.

Source: **Plant Protection Service of Germany, 1998-01**.

Additional key words: detailed record **Computer codes:** ENDOPA, DE

98/033 *Phytophthora boehmeriae*: a new disease of cotton found in Greece

A new disease of cotton (*Gossypium hirsutum*) was observed for the first time in Greece in August 1993 in Larissa (at first localized in an area of 20 ha) and Volos countries, and in August and September 1995 in Trikala and Phthiotis counties. The disease is a severe boll rot. Initially, localized spots appear and progressively coalesce to cover the whole cotton boll. Infected tissues turn almost black. Infection is generally restricted to the lower half (or two-thirds) of cotton plants. *Phytophthora boehmeriae* was isolated from diseased plants. Colony morphology, growth rate, features of asexual and sexual structures, maximum growth temperatures were examined. The pathogenicity of the Greek isolates was confirmed by artificial inoculation of detached cotton bolls. In addition, the analysis of α-esterase isozyme revealed a unique pattern for *P. boehmeriae* when compared to *P. cactorum* and *P. parasitica*.

P. boehmeriae was first described in 1927 by Sawada as a new species on *Boehmeria nivea* (ramie – a fibre plant), in Formosa (Taiwan). This fungus is also reported to cause brown rot on citrus fruits in Argentina, root rot of *Pinus patula* in Australia, and cotton boll rot in China. Paper mulberry (*Broussonetia papyrifera*) is also reported as a host in China.
The geographical distribution of the fungus is the following:
EPPO region: Greece
Asia: China, Japan, Taiwan
South America: Argentina
Oceania: Australia (Queensland, New South Wales)
Chinese papers report that: 1) oospores of *P. boehmeriae* can overwinter in the soil and act as the primary infection source of cotton boll rot (Zheng *et al*., 1992); 2) sporangia or oospores can be detected on seeds from infected bolls and appear to be able to transmit the disease to plants (Zhang *et al*., 1995).

The authors stressed that this is the first report of *Phytophthora boehmeriae* in Europe, and that this disease could be a serious threat to cotton-growing countries.

Source:

Phytophthora boehmeriae boll root: A new threat to cotton cultivation in the Mediterranean region.
Phytoparasitica, 26(1), 20-26.

Zhang, X.Z.; Ling, P.L.; Ma, P., Chen, X.H. (1995) Studies on cotton seed-borne pathogen of *Phytophthora* boll rot and its lethal temperature.
Acta Phytophylactica Sinica, 22(1), 67-69 (abstract).

Zheng, X.B.; Lu, J.Y.; He, H., Wang, T.L., Wang, H.Y. (1992) Oospores of *Phytophthora boehmeriae* overwintered in soil as an infection source of cotton boll disease.
Acta Phytophylactica Sinica, 19(3), 251-256 (abstract).

Additional key words: new record **Computer codes:** PHYTBM, GR

98/034 *Aleurocanthus woglumi* is not present in Peru

The EPPO Secretariat has recently been informed by the Peruvian authorities that *Aleurocanthus woglumi* (EPPO A1 quarantine pest) has never been found in Peru. The only reference for the record appearing in the 2nd editions of Quarantine Pests for Europe was the CABI map (no other publication mentions *A. woglumi* in Peru), which is based on a personal communication made in 1969. This record is most probably erroneous, and *A. woglumi* can be considered as absent from Peru.

Source: Plant Protection Service of Peru, 1998-01.

Additional key words: absence **Computer codes:** ALECWO, PE

98/035 *Bactrocera dorsalis* found again in California (US)

In August 1997, *Bactrocera dorsalis* (EPPO A1 quarantine pest) has been found again in Los Angeles county, in California (US). This fruit fly has repeatedly been found and eradicated in California (EPPO RS 96/026). Quarantine measures have been applied immediately to prevent any further spread of *B. dorsalis* not only on citrus, but also on other types of fruits, nuts and vegetables.

Source: Rogers, J.; Redding, J.; (1997) USDA quarantines part of Los Angeles county, California, for Oriental fruit flies. USDA Press release.
APHIS Web site on INTERNET
http://www.aphis.usda.gov/lpa/press/1997/08/orentfly.txt

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

98/036 Economic evaluation of three alternative control methods against *Ceratitis capitata* in Israel, Palestinian Territories and Jordan

A study was done to evaluate 3 alternative control treatments against *Ceratitis capitata* (EPPO A2 quarantine pest) in Israel, Palestinian Territories and Jordan. Recognizing the importance of *C. capitata* in the Mediterranean Basin, it has been estimated that if no control measures were applied in Israel, Palestinian Territories and Jordan, the annual fruit losses would be 365 million USD per year. For comparison, it can be noted that the production value of host fruits of *C. capitata* in this region is estimated at 611 million USD per year. Under current control programmes, direct damage (yield loss and control costs) and indirect damage (environmental impact and market loss) reach approximately 192 million USD per year, and it is felt that this amount is likely to increase if the current control programmes are kept as such. The three alternatives are the following:

1) suppression using bait sprays, which is the currently used technique. Steiner traps are used and capture of a single fly triggers a treatment (aerial or ground bait spray).
2) Suppression using the sterile insect technique. In the first year, 2 or 3 bait applications are made to suppress the fruit fly populations before the release of sterile males. From year 2 or 3, suppression is maintained by constant release of relatively low numbers of sterile males (500-750/ha). However, with low levels of populations of fruit flies, multiple and dispersed outbreaks can still occur.

3) Eradication using the sterile insect technique. In this alternative, sampling and control methods are used extensively and intensively. During the first 2-3 years, bait spray applications are done and followed by weekly massive release of sterile males (500-1,500/ha). From the year 4, the main activities are intense trapping.

An economic evaluation of costs and benefits of the 3 alternatives was done. In conclusion, the last two control operations gave good economic returns compared with the current control bait suppression. In the medium term (9 years) the sterile male suppression technique gives the highest return, but in the long term eradication would bring the best results.

Source: Enkerlin, W; Mumford, J. (1997) Economic evaluation of three alternative methods for control of the Mediterranean fruit fly (Diptera: Tephritidae) in Israel, Palestinian Territories, and Jordan.
Journal of Economic Entomology, 90(5), 1066-1072.

Additional key words: control methods, eradication **Computer codes:** CERTCA

98/037 Studies on parasitoids of *Anastrepha* species in Mexico

In Mexico, the distribution of 5 species of parasitic Hymenoptera attacking larvae of 5 species of *Anastrepha* were examined in fruit tree canopy of 7 species. All studied sites were located in central Veracruz state. The following *Anastrepha* species were collected from various fruits: *Anastrepha alveata* (*Ximenia americana*), *A. fraterculus** (EPPO A1 quarantine pest - *Psidium guajava*), *A. ludens* (EPPO A1 quarantine pest - *Mangifera indica*, *Citrus sinensis*), *A. obliqua* (EPPO A1 quarantine pest - *Spondias mombin*, *S. purpurea*, *Mangifera indica*, *Tapirira mexicana*), *A. striata*** (*Psidium guajava*). The parasitoids attacking *Anastrepha* species were the following: *Doryctabracon areolatus* (on the 5 *Anastrepha* species), *D. crawfordi* and *Diachasmimorpha longicaudata* (*A. fraterculus*, *A. ludens*, *A. obliqua*, *A. striata*), *Utetes anastrephae* (*A. obliqua*), *Aganaspis pelleranoi* (*A. fraterculus*, *A. ludens*, *A. striata*).
The spatial and temporal distribution of the parasitoids varied with many factors (location within the tree canopy, number of fruit fly larvae in the fruits, fruit size, time during the fruiting period, competition among parasitoids etc.). The intention of this study was not to identify clear correlations between all these uncontrolled factors, but to get better knowledge on the *Anastrepha* parasitoids and provide directions for further studies in order to determine which parasitoids are best suited to particular climates, floras, seasons and pre-existing parasitoids species.

---

* detailed record which confirms earlier records (EPPO RS 96/092), although the Mexican Plant Protection Service had declared in 1992 that *A. fraterculus* records resulted from confusion with *A. obliqua*.

** the EPPO Secretariat had previously no data on *A. striata* in Mexico.

Source: Sivinski, J.; Aluja, M.; Lopez, M. (1997) Spatial and temporal distributions of parasitoids of Mexican *Anastrepha* species (Diptera: Tephritidae) within the canopies of fruit trees.
Annals of the Entomological Society of America, 90(5), 596-618.

Additional key words: new record, detailed record **Computer codes:** ANSTFR, ANSTLU, ANSTOB, MX

98/038 Studies on morphological variations in different populations of *Bemisia tabaci*

Whitefly taxonomy is traditionally based on morphological characters of the 4th instar (puparium). However the taxonomic status of *Bemisia tabaci* (EPPO A2 quarantine pest) is confusing because of the high variability of these characters. Biological differences among *B. tabaci* from various geographic locations have been used to characterize certain populations as biotypes. In addition, it has been recently proposed that the B biotype of *B. tabaci* is a different species, *B. argentifolii*, on the basis of different morphological features, induction of phytotoxic disorders, absence of off-springs in the laboratory when crossed with *B. tabaci*, differences in allozymes. A study was carried out to examine specific morphological traits in the 4th instar (anterior submarginal setae, anterior and posterior wax fringes, dorsal setae, posterior submarginal setae, caudal setae and tracheal folds) of 17 well characterized populations of *B. tabaci* biotypes from different locations (including biotype A, 'B or *B. argentifolii*' and several others). The conclusion was that morphological characters of the 4th instar are not useful alone to classify individuals from *B. tabaci* or *B. argentifolii* populations. The authors concluded that *B. tabaci* and *B. argentifolii* represent a complex comprising highly cryptic sibling species. They felt that further studies involving many characters (e.g. morphology of all stages, disease induction, ovipositional preferences, virus transmission host preference, biochemical and molecular characters) may provide useful information on the taxonomy of *B. tabaci*.

Source: Rosell, R.C.; Bedford, I.D.; Frohlich, D.R.; Gill, R.J.; Brown, J.K.; Markham, P.G. (1997) Analysis of morphological variation in distinct populations of *Bemisia tabaci* (Homoptera: Aleyrodidae).
Annals of the Entomological Society of America, 90(5), 575-589.

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

98/039 Proposed name for Australian grapevine yellows: Candidatus *Phytoplasma australiense*

In South Australia, a phytoplasma was detected in naturally infected grapevines cv. Chardonnay showing symptoms of grapevine yellows. Molecular studies showed that the Australian grapevine yellows phytoplasma could be classified as a representative of a new subgroup within the aster yellows group. A name has been proposed for the Australian grapevine yellows: Candidatus *Phytoplasma australiense*.

Source: Davis, R.E.; Dally, E.L.; Gundersen, D.E.; Lee IngMing; Habili, N. (1997) 'Candidatus *Phytoplasma australiense'*, a new phytoplasma taxon associated with Australian grapevine yellows.
International Journal of Systematic Bacteriology, 47, 262-269 (abstract).

Additional key words: taxonomy, grapevine yellows

98/040 Changes in RPPOs

- **COSAVE**

Since January 1998, the Presidency of COSAVE has been transferred to Paraguay, and M. Edgar Benitez is replacing M. Morales Valencia as President of the Steering Committee. Dr Ricardo Sgrillo is Technical Secretary.

Ing. Edgar Benitez
President of the Steering Committee, COSAVE
Edificio de la Dirección de Extensión Araria, Km. 11
Ruta Martiscal Estrigarribia, 1^{e} Piso – Bloque B
San Lorenzo, Paraguay
Tel/Fax: 00595 21 574343

Dr Ricardo Sgrillo
Technical Secretary COSAVE
Chefe-Divisao de Assuntos Internacionais
Ministerio da Agricultura
Anexo 307 B
Brasilia
Brazil

- **JUNAC is now called Comunidad Andina**

The name of JUNAC (Junta del Acuerdo de Cartagena) has been replaced by Comunidad Andina.

M.C.A. Wandemberg
Secretaria General de la Comunidad Andina
Paseo de la Republica no. 3895
Casilla Postal 18-1177
Lima San Isidro
Peru

- **New Executive Secretary of NAPPO**

M. Ian McDonell is now the Executive Secretary of NAPPO, as Dr Bruce Hopper retired.

Source: **Secretariat of the IPPC, 1998-01.**
EPPO Secretariat, 1997-01.

98/041 Seed Health Testing : progress towards the 21st Century

The book 'Seed Health Testing : progress towards the 21st Century' (edited by J.D. Hutchins and J.C. Reeves) has recently been published by CABI. It is based on selected papers present at the second International seed Testing Association (ISTA) – Plant disease Committee symposium, held in Cambridge in August 1996. The book is divided into five sections. The first discusses new and priority seed-borne disease from the different geographical regions of the world (including for example the problem of *Ralstonia solanacearum* in Europe). The second addresses policy issues and is by authors from seed testing organizations, commerce and government. Section three describes new technical development in seed health testing. The EPPO Secretariat has particularly noted several papers giving details on testing methods for *Tilletia indica* and *Xanthomonas oryzae* pv. *oryzae*. Section four contains a group of papers evaluating new methods in comparative tests, and the last section concerns quality assurance in routine seed health testing and certification.
This book can be obtained from CABI at a price of £ 49.95

CABI	Tel: +44 1491 832111
Wallingford,	Fax: +44 1491 826090
Oxon OX10 8DE	E-mail: cabi@cabi.org
United Kingdom	

Source: **EPPO Secretariat, 1998-01.**