EPPO

Reporting

Service

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CONTENTS

99/054 Surveys on *Clavibacter michiganensis* subsp. *sepedonicus* and *Ralstonia solanacearum* in Germany

The NPPO of Germany has recently informed the EPPO Secretariat of the results of surveys carried out for *Clavibacter michiganensis* subsp. *sepedonicus* and *Ralstonia solanacearum* (both EPPO A2 quarantine pests) on the 1997 potato harvest and part of the 1998 harvest.

- ***Clavibacter michiganensis* subsp. *sepedonicus***

Official tests (IF, and in some laboratories IF and PCR) were done in German länder for latent infections in seed and ware potatoes. In addition, visual inspections were also carried out. The number of infested lots found in 1997/1998 was twice as high as in 1996. The origin of these infestations is not known.
1997 harvest: 13,953 samples were tested (10,987 seed potatoes - 2,966 ware potatoes) and 23 positive cases were found on seed potatoes and 41 on ware potatoes.
1998 harvest (in part): so far, 13,800 samples have been tested (10,476 seed potatoes - 3,324 ware potatoes) and 18 positive cases were found on seed potatoes and 28 on ware potatoes.
Phytosanitary measures are being applied aiming at the eradication of the disease.

- ***Ralstonia solanacearum***

Concerning the 1997 harvest, 13,029 samples were tested in the laboratory following the EU protocol, and additional visual inspections were done. *R. solanacearum* was only found in 2 cases (ware potatoes) at harvest time. In Bayern, the bacterium was found in 2 water samples in a small river and in 1 sample of *Solanum dulcamara*. Tests were done in this river, because it received liquid waste from a potato factory which had processed some infected potatoes in 1996. Strict phytosanitary measures are applied to control the bacterium and prevent any further spread, and it is expected to eradicate it in a near future.

Source: **NPPO of Germany, 1999-03.**

Additional key words: detailed record **Computer codes:** CORBSE, PSDMSO, DE

99/055 Surveys on potato ring rot and brown rot in Finland

In Finland, systematic surveys for *Clavibacter michiganensis* subsp. *sepedonicus* (potato ring rot - EPPO A2 quarantine pest) started in the 1980s. At the beginning, only visual inspections were done, but since 1994 most inspected samples are also tested in the laboratory for latent infections. In addition, surveys are now also done for *Ralstonia solanacearum* (potato brown rot - EPPO A2 quarantine pest) every year on seed and ware potatoes. These surveys are carried out in the most important potato-growing areas in Finland. Results for the Finnish potato production, as well as for potato imports in 1997 and spring 1998, are the following.

- ***Clavibacter michiganensis* subsp. *sepedonicus***

  Sampling and laboratory testing followed the EU Directive 93/85.

  Ware potato production (including industrial potatoes): In total, 1905 samples were collected, inspected and tested. After biological tests (on aubergine), *C. michiganensis* subsp. *sepedonicus* was found in 68 samples (from 42 different farms, i.e. 12 % infested farms which is similar to previous years). However, it is noted that the most important potato-growing area which is located in Northern Ostrobothnia (Pohjois-Pohjanmaa, on the west coast) is practically free from the disease. In addition, ring rot has not been found for many years in the 'high grade area', and its incidence is very low in the food industry potato production.

  Seed potato production: In total, 1443 samples were tested (including pre-basic material: 78 samples), and 1081 samples were also visually inspected in seed potato farms. No ring rot was found.

  Imported potatoes: during summer 1997 and spring 1998, 262 samples of ware and seed potatoes imported from EU countries were inspected and tested. *C. michiganensis* subsp. *sepedonicus* was found in 2 samples of industrial potatoes from Sweden.

- ***Ralstonia solanacearum***

  Finnish potato production: 139 ware potato samples (from 134 farms) and 60 seed potato samples (from 58 farms) were tested in the laboratory and **no** *Ralstonia solanacearum* was found.

  Imported potatoes: 262 samples of imported potatoes were tested and **no** *R. solanacearum* was found.

Source: **NPPO of Finland, 1999-04**.

Additional key words: detailed record, absence **Computer codes:** CORBSE, PSDMSO, FI

99/056 Isolated finding of ring rot in Dutch potato crop

During a routine test carried out by the Dutch NPPO, bacterial ring rot (*Clavibacter michiganensis* subsp. *sepedonicus* - EPPO A2 quarantine pest) has been discovered in Dutch seed potatoes. It is the first time that this disease has been found in Dutch potatoes. An in-depth investigation into the cause of the outbreak has been carried out. All the information currently available suggests that this is an isolated infection.

In order to combat the disease each member state of the EU is carrying out research into the incidence of bacterial ring rot. Ring rot had not previously occurred in Dutch potatoes, but the disease was present in a number of other member states including Germany and Denmark. This had prompted the Netherlands to intensify its tests for ring rot in recent years. Approximately 7,500 samples of potatoes from the 1997 harvest were tested and found to be free from the disease. 7,100 samples from the 1998 harvest have so far been tested. The presence of ring rot in one sample of the Ottena race has been confirmed. This sample comes from a consignment of seed potatoes grown from own seed in the province of Overijssel close to the German border. All clonally related consignments have been tested and found to be free from ring rot. There is no evidence of any spread of the disease in the Netherlands.

The measures to eradicate the contamination and prevent the spread of the disease have been taken in accordance with the EU requirements. This means among other things that the contaminated consignment has been destroyed, that the other consignments of seed potatoes from the infected farm are no longer designated as seed potatoes, and that the contaminated land may not be used for growing potatoes for a period of three or four years.

Source: **NPPO of the Netherlands, 1999-04, updating the press release from the Dutch Ministry of Agriculture of 1999-01-12.**

Additional key words: isolated finding **Computer codes:** CORBSE, NL

99/057 Details on the situation of several quarantine pests in Hungary in 1998

The NPPO of Hungary has recently informed the EPPO Secretariat of the situation of several quarantine pests in 1998.

- *Ceratocystis ulmi*: its occurrence was observed on 1 place (0.1 ha). Production sites of propagating material are free from the fungus.
- *Cryphonectria parasitica* (EPPO A2 quarantine pest): is present on 6 sites (68 ha), the infested area did not increase (see EPPO RS 98/141). Production sites of propagating material are free from it.
- *Clavibacter michiganensis* subsp. *michiganensis* (EPPO A2 quarantine pest): was observed on 1 site in Borota (Bács-Kiskun county) on tomato plants (similar to last year, see EPPO RS 98/141).
- *Diabrotica virgifera* (EPPO A2 quarantine pest): a total of 1874 beetles were caught by pheromone and yellow sticky traps in 8 counties (south of Hungary). The spread continues towards the north. Approximately 11000 km² are infested. In the Szeged area (Csongrád county), larval damage on roots was noted in 1997 and 1998. However, larval damage has not reached economic levels (see also EPPO RS 98/198).
- *Globodera rostochiensis* (EPPO A2 quarantine pest): infested soils and crops were found on 22 isolated areas (274.12 ha) which were placed under quarantine. The situation is similar to 1997 (see EPPO RS 98/141).
- *Pseudomonas syringae* pv. *pisi* (EPPO A2 quarantine pest): was observed on 1 place (23 ha) in Tiszavasvári (Szabolcs - Szatmár - Bereg county) on pea seeds.
- *Puccinia horiana* (EPPO A2 quarantine pest): was observed in a single glasshouse (0.01 ha) in Bácslamás (Bács-Kiskun county).
- *Trogoderma granarium* (EPPO A2 quarantine pest): was observed in 4 stores in Miskolc, in Mezökeresztes (Borsod - Abaúj - Zemplén county), in Csongrád (Csongrád county) and in Tata (Komárom - Esztergom county). The pest was rapidly eradicated.
- *Xanthomonas vesicatoria* (EPPO A2 quarantine pest): was observed on 4 places (18 ha) in Csanádapáca (Békés county) and in Szeged (Csongrád county) on pepper seeds.

Source: **NPPO of Hungary, 1999-04.**

Additional key words: detailed records, eradication

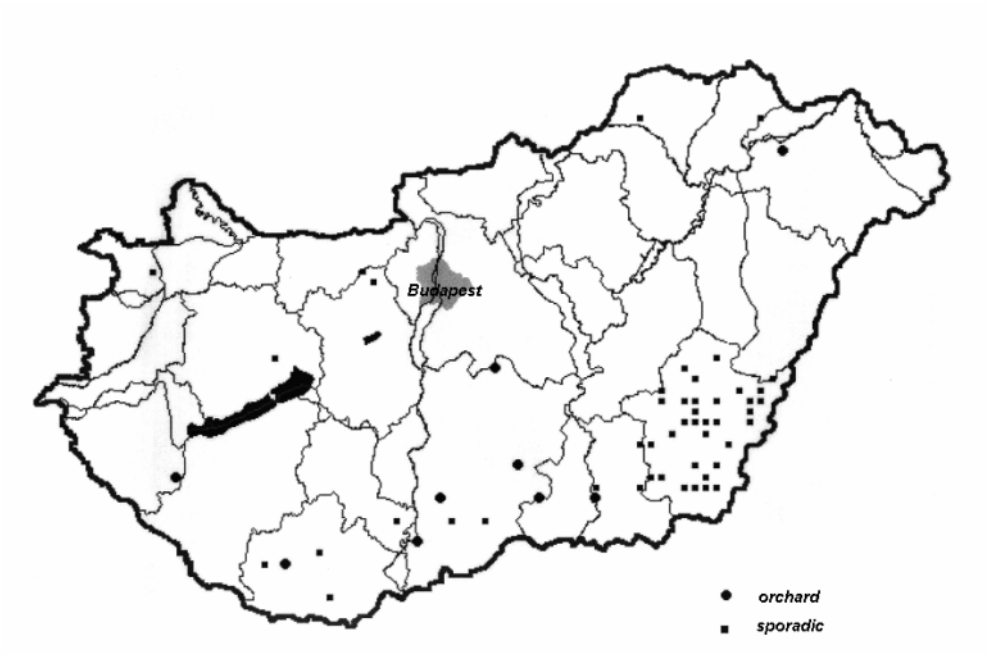
Computer codes: CERAUL, CORBMI, DIABVI, ENDOPA, HETDRO, PSDMPI, PUCCHN, TROGGA, XANTVE**,** HU

EPPO *Reporting Service*

99/058 Situation of *Erwinia amylovora* in Hungary in 1998

Erwinia amylovora (EPPO A2 quarantine pest) was introducted into Hungary in 1996 (see EPPO 96/106). In 1998, *E. amylovora* was found in 11 counties, on 58 locations, covering 651.4 ha (49 ha in gardens, and 602.4 ha in orchards) and corresponding to 21230 infected trees. Nurseries are free from the disease and are subjected to regular phytosanitary inspections.

Distribution of *Erwinia amylovora* in Hungary in 1998



Source: **NPPO of Hungary, 1999-04.**

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

99/059 First report of *Clavibacter michiganensis* subsp. *michiganensis* in Cyprus

The EPPO Secretariat has recently been informed by the NPPO of Cyprus of the first finding of *Clavibacter michiganensis* subsp. *michiganensis* (EPPO A2 quarantine pest) on tomatoes in Cyprus. In July 1998, symptoms of bacterial canker were observed in several tomato field crops in Eftagonia (Limassol district) and later in Odou (Larnaca district) and Pharmaca (Nicosia district). The incidence of infection ranged between 5 to 90 %. The tomato cultivars grown in the area were A178, A179 and Graciella. The latter cultivar had a lower infection rate. The causal agent was identified as *Clavibacter michiganensis* subsp. *michiganensis*. The identification was also confirmed by the Bacteriology Laboratory at the Benaki Phytopathological Institute, Athens, Greece.

Source: **NPPO of Cyprus, 1999-03.**

Additional key words: new record **Computer codes:** CORBMI, CY

99/060 First report of *Bactrocera zonata* in Egypt

Bactrocera zonata (EPPO A1 quarantine pest) is reported for the first time from Egypt. This fruit fly was recently found on guavas (*Psidium guajava*) and other fruits and vegetables. So far, *B. zonata* was known to occur only in Asian countries (although some adventive populations were reported from Mauritius).

Source: Taher, M. (1998) *Bactrocera zonata* (Saunders) in Egypt. Disease and pest outbreaks.
Arab and Near East Plant Protection Newsletter, no. 27, December 1998, FAO, p 30.

Additional key words: new record **Computer codes:** DACUZO, EG

99/061 *Bactrocera dorsalis* occurs in Java, Indonesia

Based on data from Drew and Handcock (1994), it had been considered that true *Bactrocera dorsalis* (EPPO A1 quarantine pest) did not occur in Indonesia, and that earlier records referred to *B. carambolae* and *B. papayae*. In a recent paper on pests and diseases of hot pepper (*Capsicum* spp.) in Java, *B. dorsalis* is considered as a major pest on this crop. It is noted that in Indonesia the major hosts of the oriental fruit fly are (besides hot pepper), banana (*Musa paradisiaca*), mango (*Mangifera indica*), orange (*Citrus sinensis*) and star fruit (*Averrhoa carambola*). This confirms the occurrence of *B. dorsalis* in Java, Indonesia.

Source: Drew, R.A.I.; Handcock, D.L. (1994) The *Bactrocera dorsalis* complex of fruit flies (Diptera: Tephritidae: Dacinae) in Asia.
Bulletin of Entomological Research Supplement Series, Supplement No.2, CABI, Wallingford, GB, 68 p.

Vos, J.G.M.; Frinking, H.D. (1998) Pests and diseases of hot pepper (*Capsicum* spp.) in tropical lowlands of Java, Indonesia.
Journal of Plant Protection in the Tropics, 11(1), 53-71.

Additional key words: confirmed record **Computer codes:** DACUDO, ID

99/062 *Unaspis citri* occurs in Yemen

In April 1998, during a survey on citrus pests carried out in the El-Mohamedeyn Valley (Hadramawt, Yemen), it was found that *Unaspis citri* (EPPO A1 quarantine pest) was widespread and heavily infesting leaves and branches of lime (*Citrus aurantifolia*). In some heavily attacked orchards, branches were killed and yield was severely reduced. Yield losses caused by *U. citri* were estimated in the El-Mohamedeyn Valley between 30-50 %. The author noted that this pest had been previously reported in 1988, also causing heavy infestations. The EPPO Secretariat had previously no information on the occurrence of this pest in Yemen.

Source: Salh Salem Korbel (1998) Spread of *Unaspis citri* in El-Mohamedeyn Valley along the Hadramount coast of Yemen. Disease and pest outbreaks.
Arab and Near East Plant Protection Newsletter, no. 27, December 1998, FAO, p 29.

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

99/063 *Pissodes nemorensis* present in Asia

Pissodes nemorensis (EPPO A1 quarantine pest) is present essentially in North America but has also been introduced into South Africa (according to Quarantine Pests for Europe (QPE) and Distribution Maps of QPE)). According to a recent Russian publication, it is also present on *Pinus koraiensis* and *P. funebris* in Primor'e Territory in the Far East of Russia, and in Hokkaido, Japan. The EPPO Secretariat had previously no information on the presence of *P. nemorensis* in Asia.

Source: Ler, P.A. (1996) [Key to the insects of the Far East of Russia. Vol III. Coleoptera]. Dal'nauka, Vladivostok (RU).

Additional key words: new records **Computer codes:** PISONE, JP, RU

99/064 Establishment potential of *Diabrotica virgifera* in the Netherlands

The establishment potential of *Diabrotica virgifera* (EPPO A2 quarantine pest) in the Netherlands has been investigated. It is recalled that in studies carried out in other European countries, it has been supposed that most mid and south-eastern European countries have suitable climatic conditions for the establishment of *D. virgifera*. In the Netherlands, the growing of maize became popular after the development of new cultivars and a stimulating EU legislation. The area increased from 77,000 ha in 1975 to 229,000 ha in 1994 (occupying one third of the Dutch arable lands, i.e. 7 % of the Netherlands surface). Maize is mostly cultivated on sandy soils in Noord-Brabant, Overijssel and Gelderland provinces.
Climatic data from 15 locations in the Netherlands and development models proposed by American scientists, have been used to assess the potential of the pest for establishment in the Netherlands. For comparison, calculations with climatic data from Hódmezövásárhely (an infested area in Hungary) have been included, and it is noted that these calculated data fitted very well with the situation observed in 1997. The following results (examples) have been obtained.

- Hatching of first larvae is expected around the: 29th June in Eindhoven (warmest location in the south), 15th July in Leuuwarden (in the north), compared to 19th May in Hódmezövásárhely (HU).
- 1st adults are expected around the: 3rd September in Eindhoven, 27th September in Leuuwarden, 8th July in Hódmezövásárhely (HU).
- 50% adult emergence is expected around: 13th October in Eindhoven, compared to 27th July in Hódmezövásárhely (HU).

In the Netherlands, maize ripes occurs in August or September, and the harvest is usually done around the 20th September. So even in the warmer places, emerging time of adults is later than harvesting time. In the northern part of the Netherlands, *D. virgifera* will have difficulties to find food, to complete its cycle and deposit eggs in the field (but may survive during very hot summers). In the south of the country, emergence will not be synchronized with maize flowering. However, it has been observed in the USA that populations were able to survive this asynchronization, but below economic levels. The authors pointed out that their calculations are preliminary, as only average air temperatures were used (and not soil temperatures). In addition, life parameters of *D. virgifera* may vary according to geographical regions and so far the exact origin of the populations introduced into Europe is not known.

Source: Wiard, A.C.M.; van der Burgt (1999) Indication for establishment potential of *Diabrotica virgifera virgifera* LeConte in the Netherlands.
IWGO Newsletter, 19(1), 23-27.

Additional key words: biology **Computer codes:** DIABVI, NL

99/065 First finding of *Colletotrichum acutatum* in Austria

The NPPO of Austria has recently informed the EPPO Secretariat that *Colletotrichum acutatum* (EU Annex II/A2) was found in Austria for the first time. It was detected by ELISA on imported strawberry plants in the regions of Burgenland and Steiermark (south-east of Austria). In order to control the disease and prevent any further spread, all plants in infested fields were destroyed. It was not possible to determine how the disease was introduced into Austria.

Source: **NPPO of Austria, 1999-04.**

Additional key words: new record **Computer codes:** COLLAC, AT

99/066 Situation of cherry little cherry 'closterovirus' in British Columbia, Canada

Cherry little cherry 'closterovirus' was first identified in British Columbia, Canada in 1933, at Willow Point in the West Kootenay's. The disease then spread in the Kootenay Valley, infesting virtually all cherry orchards and production dropped from 680 t in 1947 to 68 t in 1979. The disease appeared in the Okanagan Valley in 1969, and major outbreaks were observed in 1973 and 1977. In 1947, 'the little cherry control regulation' was set up under the authority of the British Columbia Plant Protection Act, to limit the spread of the disease (and in particular to protect at that time the Okanagan cherry industry). This regulation provides for a 'little cherry control area' which now includes: the Okanagan and Similkameen valleys (51st parallel north, 119th meridian east, 121st meridian west, Canada/US border south); the Kootenay region (Creston area). Surveys are carried out in this area and control programmes include the following aspects: use of virus-free planting material; elimination of infected trees, prohibition to grow or import ornamental flowering Japanese cherries (which are symptomless carriers of the pathogen); elimination of cherry seedlings in and near orchards, as well as wild bitter cherry (*P. emarginata*); control of the insect vector (apple mealy bug: *Phenacoccus aceris*). During surveys, trees are visually inspected and samples are collected for indexing on woody indicators (new diagnostic techniques are under development).
In the Okanagan valley, results were the following in 1995-96: 26 trees were found infested and destroyed in 1995, and 7 in 1996. However, a thorough survey has not been done in this region for many years. Disease is known to be established throughout the central Okanagan (Pencticton to Oyama) and continues to be found in new locations. The area south of Pencticton has not been surveyed during the last 10 years.
Surveys done in the Creston, Erickson, Wyndell, Canyon and Lister areas, showed the presence of the disease. In Creston: 80 trees were found infected in 1995 and 31 in 1996. However, in the Creston area the control programme has eliminated enough infected trees to allow considerable planting of new orchards (over 41 ha) and production which had fell to 27 t in the 1970s, reached 115 t in 1995.
It is stressed that surveys and control programmes have helped to keep incidence low in commercial orchards but have not eradicated the disease.

Source: Web site of the Ministry of Agriculture and Food, British Columbia, Canada.
http://www.agf.gov.bc.ca/croplive/cropprot/lcv.htm
http://www.agf.gov.bc.ca/croplive/cropprot/cpn191.htm

Additional key words: detailed record **Computer codes:** CRCLXX, CA

99/067 Pitch canker disease: *Fusarium circinatum* (*F. subglutinans* f.sp. *pini*)

Pitch canker disease is caused by a fungus previously called *Fusarium subglutinans* f.sp. *pini*. But recent taxonomic studies have described it as *Fusarium circinatum*, teleomorph: *Gibberella circinata* (Nirenberg & O'Donnell, 1998).

Pitch canker disease was first reported in North Carolina (US) in 1946. It was then introduced into California in 1986 where it has caused serious problems in natural stands of *Pinus* (mainly Monterey pine, *Pinus radiata*) and also in plantations of Christmas trees. It is present in many states in USA (Alabama, Arkansas, California, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Texas, Virginia). This fungus has also been reported in Haiti (1959), Mexico (1989), Japan (1990) and South Africa (1994, see EPPO RS 96/070). Considering the incidence and spread of pitch canker in Mexico, it has been suggested that Mexico could be a possible centre of origin of *Fusarium circinatum*.

In California, *Pinus radiata* is the most widely affected species. In south Africa, it causes a serious root disease on *P. patula* seedlings in forest nurseries. Many other pine species can be attacked (e.g. *P. canariensis*, *P. elliottii*, *P. echinata*, *P. halepensis*, *P. rigida*, *P. palustris*, *P. ponderosa*, *P. pungens*, *P. strobus*, *P. taeda*), as well as Douglas fir (*Pseudotsuga menziesii*). *P. brutia* and *P. thunbergiana* are reported to be resistant.

Symptoms are characterized by resinous exudation on the surface of shoots, branches, exposed roots and boles. Needles turn yellow to red and fall. The top of the tree and ultimately the entire tree may die.

The pathogen is associated with numerous insects. The following vector species have been identified: *Ips paraconfusus*, *I. mexicanus*, *Conophthorus radiata*, *Ernobius punctulatus*. Species like *Pityophthorus nitidulus*, *P. setosus*, *P. carmeli*, *Ips plastographus* are suspected to be vectors, as fungus spores are often found associated with them. **Seed transmission** has now been demonstrated in *Pinus radiata* (Storer *et al*., 1998), and it is stressed that it clearly represents a mechanism by which pitch canker can be transmitted over long distances and introduced into new areas.

So far, no effective control measures (fungicides or biological control agents) are available. In California, several measures are taken to prevent any further spread of the disease (disinfection of pruning tools, restrictions on the movement of wood (logs, chips, waste wood, firewood, logs) and on the movement of trees such as Monterey pine Christmas trees). It is reported that the fungus can survive in cut wood up to a year, and up to 8 weeks in the soil.

The use of resistant trees may be possible in the future, as recent experiments (Gordon, *et al*., 1998) have shown that resistance could be observed in some Monterey pines.

Source: Gordon, T.R.; Wikler, K.R.; Clark, L.; Okamoto, D.; Storer, A.J.; Bonello, P. (1998) Resistance to pitch canker disease, caused by *Fusarium subglutinans* f.sp. *pini*, in Monterey pine (*Pinus radiata*).
Plant Pathology, 47(6), 706-711.

Nirenberg, H.; O'Donnell, K. (1998) New *Fusarium* species and combinations within the *Gibberella fujikuroi* species complex.
Mycologia, 90(3), 434-458.

Storer, A.J.; Gordon, T.R.; Clark, L. (1998) Association of the pitch canker fungus, *Fusarium subglutinans* f.sp. *pini*, with Monterey pine seeds and seedlings in California.
Plant Pathology, 47(5), 649-656.

INTERNET
http://frap.cdf.ca.gov/pitch-canker/position_paper.html (Position paper. Transport, disposal and use of woody material infested with the pine pitch canker fungus)
http://frap.cdf.ca.gov/pitch-canker/pitchan.html (Pitch canker in California)
http://frap.cdf.ca.gov/pitch-canker/treenotes.html (Current status of pitch canker in California)
http://frap.cdf.ca.gov/pitch-canker/grinch_fungus.html ('Grinch' fungus threatens Christmas trees)
http://frap.cdf.ca.gov/pitch-canker/cal_ag.html (Pitch canker kills pines, spreads to new species and regions)
http://128.227.207.24/people/usps/mppdd/Forest/pitchc.htm (Pitch canker - by G.M. Blakeslee, University of Florida)
http://www.up.ac.za/academic/fabi/tpcp/diagnostics/pitchcanker.htm (South African Data Sheet on pitch canker)

Additional key words: biology **Computer codes:** GIBBSP

99/068 IPPC Secretariat Web site

The IPPC Secretariat has now developed its own web site which provides useful information on its aims and activities, and also on:
- International Plant Protection Convention (1979 version and revised text)
- List of signatories of the IPPC, list of countries which have now accepted the revised IPPC
- Agreed International Standards on Phytosanitary Measures (ISPMs 1 to 9)
- List of all Regional Plant Protection Organizations (addresses, members, official languages)
- Links with GPPIS (Global Plant and Pest Information System), World Trade Organization
- IPPC Secretariat (staff, standard-setting procedures, meetings, etc.)

IPPC	http://www.fao.org/ag/AGP/AGPP/PQ/
FAO	http://www.fao.org/
GPPIS	http://pppis.fao.org/

Source: IPPC Secretariat, FAO, 1999-02.

99/069 Volume 1 of revised EPPO Standards: guidelines for the efficacy evaluation of plant protection products is now available

With the publication of Volume 1, the whole set of revised EPPO standards 'guidelines for the efficacy evaluation of plant protection products' is now complete. These EPPO Standards provide an essential aid to all institutions, both private and governmental, involved in efficacy evaluation trials of plant protection products for registration purposes. More than 200 guidelines are included in 4 separate volumes (see below), covering a very large number of crops and all types of plant protection products. Volume 1 contains: an introduction; general guidelines, in particular nos. 135 (phytotoxicity), 152 (trial design and analysis) and 181 (trial conduct and reporting); miscellaneous guidelines (molluscicides, nematicides, rodenticides, side-effects on natural enemies); and a general index.

All revised guidelines are available as four separate paperback books, according to the topic concerned:

Volume 1: Introduction, general and miscellaneous guidelines, new and revised guidelines.
Volume 2: Fungicides, bactericides.
Volume 3: Insecticides, acaricides.
Volume 4: Herbicides, plant growth regulators.

Volume 2 appeared in 1997, Volumes 3 and 4 in 1998, and Volume 1 has just been published. The set of revised EPPO guidelines is on sale, either as a whole or as separate volumes. A special discount price of 240 EUR is offered for the complete set of four volumes. Otherwise, separate volumes can be ordered at the price of 80 EUR each. These prices apply separately to the English and French versions. The Plant Protection Services of EPPO member countries and regular subscribers to earlier versions of EPPO guidelines have already been informed individually by the EPPO Secretariat. For other interested persons, orders should be addressed to:

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Source: **EPPO Secretariat, 1999-04**

Additional key words: publication

99/070 New book: Catalogue of Palaearctic Coccoidea

A catalogue of Palaearctic Coccoidea by F. Kozár (Editor) has recently been published. This catalogue includes all families of the scale insects known in the Palaearctic region (including Europe, Asia and North Africa, about 70 countries in detail). The species number included is 2170 in 372 genera (this number is about one third of the total species number of the World). This catalogue contains detailed indexes for distribution and host plants. Scale insects are not only a very important pest group, but they are also very important targets of old and new biological control projects, and most of the old and new success stories of biological control are related with scale insects (cassava mealybug, San José scale, white peach scale, *Icerya* etc). Now Europe is under a strong invasion pressure of scale insects, on fruits, citrus, ornamentals, flowers etc. As the *Pulvinaria regalis* problems on ornamentals in The Netherlands, etc. This catalogue was written by specialists from different countries (see the contents below). In the species list there are also many dangerous pest species of worldwide distribution, some considered as quarantine pests in different countries of the World, so the catalogue has a wider interest than just the Palaearctic region. The manuscript with indexes has 526 pages.

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To order:

The price is 95 USD+5 USD for postage.

Bank account No. 1020500-04924296 ABN AMRO BANK RT (1133 Budapest Pozsonyi u. 77-79), or a check (in any currency) to Dr. F. Kozár by letter. Plant Protection Institute, Hungarian Academy of Sciences, 1525 Budapest Pf. 102, Hungary.

Source: Dr F. Kozár, Hungarian Academy of Sciences, Budapest (HU), 1999-04.

Additional key words: publication

99/071 EPPO report on selected intercepted consignments

The EPPO Secretariat has gathered the intercepted consignment reports received since the previous report (EPPO RS 99/052):
1) for **1998** from Hungary,
2) for **1999** from the following countries: Austria, Denmark, Estonia, France, Germany, Greece, Ireland, Italy, Netherlands, Norway, Switzerland, Portugal, 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.

Remainder from 1998

Pest	Consignment	Type of commodity	Country of origin	C. of destination	nb
Agrobacterium tumefaciens	Unspecified plants	Plants for planting	Poland	Hungary	1
Ambrosia sp.	*Zea mays*	Stored products	Poland	Hungary	1
Ceratitis capitata	*Citrus sinensis*	Fruit	Greece	Hungary	1
Ephestia elutella	*Coffea arabica*	Stored products	Kenya	Hungary	1
	Oriza sativa	Stored products	Egypt	Hungary	1
Globodera rostochiensis	*Solanum tuberosum*	Ware potatoes	Poland	Hungary	1
Laemophloeus ferrugineus	*Triticum aestivum*	Stored products	Belarus	Hungary	1
Oryzaephilus surinamensis	*Hordeum vulgare* (malt)	Stored products	Germany	Hungary	1
Plodia interpunctella	*Triticum aestivum*	Stored products	Ukraine	Hungary	1

Pest	Consignment	Type of commodity	Country of origin	C. of destination	nb
Rhizopertha dominica	*Triticum aestivum*	Stored products	Ukraine	Hungary	1
Spongospora subterranea	*Solanum tuberosum*	Seed potatoes	Netherlands	Hungary	1
Tribolium confusum	*Helianthus annuus*	Stored products	Romania	Hungary	1
Tribolium sp.	*Coffea arabica*	Stored products	Tanzania	Hungary	1
	Helianthus annuus	Stored products	Romania	Hungary	1
	Triticum aestivum	Stored products	Yugoslavia	Hungary	1
Tribolium sp., Laemophloeus ferrugineus	*Theobroma cacao*	Stored products	Côte d'Ivoire	Hungary	1

- **Wood**

Pest	Type of commodity	Country of origin	C. of destination	nb
Ips sexdentatus	Wood (trunk)	Ukraine	Hungary	1
Ips typographus	Wood (pulpwood)	Russia	Hungary	1
	Wood (trunk)	Slovakia	Hungary	1
Monochamus sp.	Wood (pulpwood)	Russia	Hungary	1
	Wood (pulpwood)	Ukraine	Hungary	1
Monochamus sp., Ips sexdentatus	Wood (pulpwood)	Belarus	Hungary	1
	Wood (pulpwood)	Russia	Hungary	1
	Wood (trunk)	Russia	Hungary	1
Scolytidae	Wood (pulpwood)	Belarus	Hungary	1
	Wood (trunk)	Romania	Hungary	1

1999 Interceptions

Pest	Consignment	Type of commodity	Country of origin	C. of destination	nb
Aleurotuberculatus jasmini	*Gardenia*	Plants for planting	Sri Lanka	United Kingdom	1
Aphids	*Dendrobium*	Cut flowers	Thailand	Germany	1
Asteromella	*Codiaeum*	Cuttings	Netherlands	United Kingdom	1
Bemisia tabaci	*Alocasia amazonica*	Plants for planting	USA	United Kingdom	1
	Aloysia triphylla (Lippia citrodora)	Plants for planting	Israel	Denmark	1
	Alternanthera	Aquarium plants	Singapore	France	3
	Anubias	Aquarium plants	Spain (Canary isl.)	France	1
	Dendranthema	Cut flowers	Israel	Ireland	1
	Echinodorus bleheri	Aquarium plants	Thailand	France	1
	Eustoma	Cut flowers	Israel	United Kingdom	1
	Eustoma	Cut flowers	Netherlands	United Kingdom	1
	Ficus carica	Plants for planting	Israel	United Kingdom	1
	Hibiscus sabdariffa	Cut flowers	Togo	France	1

Pest	Consignment	Type of commodity	Country of origin	C. of destination	nb
Bemisia tabaci	*Hygrophila*	Aquarium plants	Singapore	France	1
	Hygrophila polysperma	Aquarium plants	Singapore	France	1
	Hygrophila salicifolia	Aquarium plants	Singapore	France	2
	Hygrophila salicifolia	Aquarium plants	Singapore	United Kingdom	1
	Hygrophila stricta	Aquarium plants	Singapore	France	2
	Hypericum	Cut flowers	Israel	United Kingdom	1
	Hypericum androsaemum	Cut flowers	Ecuador*	United Kingdom	1
	Hypericum androsaemum	Cut flowers	Israel	United Kingdom	1
	Lobelia cardinalis	Aquarium plants	Spain (Canary isl.)	France	1
	Ludwigia	Aquarium plants	Singapore	United Kingdom	1
	Ocimum basilicum	Vegetables	Burkina Faso	France	1
	Rosa	Cut flowers	Israel	France	1
	Solidago	Cut flowers	Israel	Ireland	2
	Trachelium	Cut flowers	Israel	Ireland	3
	Trachelium	Cut flowers	Netherlands	Ireland	1
	Unspecified Acanthaceae	Aquarium plants	Malaysia	France	1
	Unspecified Acanthaceae	Aquarium plants	Singapore	France	1
Bemisia tabaci, Liriomyza huidobrensis	*Eustoma*	Cut flowers	Netherlands	United Kingdom	1
Ditylenchus dipsaci	*Narcissus*	Bulbs	France	Netherlands	1
	Narcissus	Bulbs	United Kingdom	Netherlands	4
Gamasidae (mites)	*Dendrobium*	Cut flowers	Thailand	Germany	1
Glomerella cingulata	*Archontophoenix*	Plants for planting	South Africa	United Kingdom	1
	Crowea exalata	Cuttings	Australia	United Kingdom	1
	Medinilla magnifica	Plants for planting	Netherlands	United Kingdom	1
Helicotylenchus dihystera	*Washingtonia robusta*	Plants for planting	South Africa	United Kingdom	1
Helicoverpa armigera	*Cucurbita*	Vegetables	Bangladesh	United Kingdom	1
	Pelargonium	Cuttings	Israel	United Kingdom	1
	Pelargonium	Cuttings	Netherlands*	United Kingdom	1
Hemiberlesia palmae, Fiorinia fioriniae, Pinnaspis buxi, Aleurotrachelus sp.	Palmae	Plants for planting	Sao Tomé e Principe	Portugal	1
Leptinotarsa decemlineata	*Lactuca sativa*	Vegetables	France	United Kingdom	4
	Petroselinum crispum	Vegetables	Italy	United Kingdom	1
Liriomyza huidobrensis	*Bupleurum*	Cut flowers	Netherlands	United Kingdom	2
	Dendranthema	Cut flowers	Netherlands	Ireland	1
	Dendranthema	Cut flowers	Netherlands	United Kingdom	1
	Dendranthema	Plants for planting	Netherlands	United Kingdom	1
	Gypsophila	Cut flowers	Netherlands	Ireland	1
	Hottonia palustre	Plants for planting	Netherlands	United Kingdom	1
	Primula obconica	Plants for planting	Netherlands	United Kingdom	1
Liriomyza sativae	*Ocimum basilicum*	Vegetables	Thailand	France	2
Liriomyza sativae, Bemisia tabaci	*Ocimum basilicum*	Vegetables	Thailand	United Kingdom	1

Pest	Consignment	Type of commodity	Country of origin	C. of destination	nb
***Liriomyza* sp.**	*Dendranthema*	Cut flowers	Spain (Canary isl.)	United Kingdom	1
	Hydrocotyle vulgaris	Plants for planting	Netherlands	United Kingdom	1
	Ocimum basilicum	Vegetables	Egypt	France	1
	Ocimum basilicum	Vegetables	Israel	France	2
	Ocimum basilicum	Vegetables	Thailand	Denmark	1
	Spinacia oleracea	Vegetables	Cyprus	Denmark	1
Liriomyza sp. (*probably *L. sativae* or *trifolii)	*Brassica rapa* var. *japonica* (mizuna)	Vegetables	South Africa	United Kingdom	1
	Ocimum , Coriandrum	Vegetables	Thailand	United Kingdom	1
Liriomyza sp. (*probably *L. trifolii)	*Aster*	Cut flowers	Netherlands	United Kingdom	1
Liriomyza trifolii	*Gypsophila*	Cut flowers	Israel	United Kingdom	1
Meloidogyne chitwoodi	*Solanum tuberosum*	Ware potatoes	Netherlands	United Kingdom	1
Monilia fructicola	*Prunus*	Fruit	South Africa	United Kingdom	1
Nematodes	*Cycas revoluta*	Plants for planting	Costa Rica	Germany	1
	Dracaena, Podocarpus, Phoenix, Raphis, Licuala	Plants for planting	Malaysia	Germany	1
	Raphis	Plants for planting	Malaysia	Germany	1
Parasaissetia nigra	*Eryngium*	Cut flowers	Thailand	France	2
Pestalotia	*Tillandsia balbisiana*	Plants for planting	Guatemala	United Kingdom	1
Pratylenchus crenatus	*Diospyros, Elaeagnus*	Plants for planting	USA	France	1
Pratylenchus zeae, Helicotylenchus, Hemicriconemoides	*Zoysia tenuifolia*	Plants for planting	Madagascar	France	1
Puccinia horiana	*Dendranthema*	Plants for planting	Germany	Portugal	1
	Dendranthema	Cut flowers	Netherlands	Estonia	1
Puccinia thaliae	*Canna*	Plants for planting	USA	United Kingdom	1
Ralstonia solanacearum	*Solanum tuberosum*	Ware potatoes	Egypt	Greece	3
	Solanum tuberosum	Ware potatoes	Egypt	Italy	5
	Solanum tuberosum	Ware potatoes	Egypt	United Kingdom	7
	Solanum tuberosum	Ware potatoes	Syria*	Greece	1
	Solanum tuberosum	Ware potatoes	(Syria)	Greece	1
***Septoria* sp.**	*Crowea saligna*	Cuttings	Australia	United Kingdom	1
Thrips palmi	*Dendrobium*	Cut flowers	Thailand	Germany	1
	Dendrobium	Cut flowers	Thailand	Netherlands	3
	Momordica	Vegetables	Bangladesh	United Kingdom	1
	Momordica	Vegetables	India	United Kingdom	1
	Orchidaceae	Cut flowers	Singapore	France	1
	Orchidaceae	Cut flowers	Thailand	France	1
	Solanum melongena	Vegetables	Thailand	France	1

Pest	Consignment	Type of commodity	Country of origin	C. of destination	nb
***Thrips sp.* (probably *T. palmi*)**	*Momordica*	Vegetables	Thailand	United Kingdom	3
Thysanoptera	Orchidaceae	Cut flowers	Singapore	France	1
	Solanum melongena	Vegetables	Thailand	France	2
Trophurus sp.	*Livistona, Podocarpus Raphis, Wallichia*	Plants for planting	Singapore	Germany	1
Tylenchorhynchus	*Roystonea regia*	Plants for planting	Egypt	France	1
Uromyces clignyi	*Cymbopogon citratus*	Vegetables	Israel	United Kingdom	1
Xanthomonas campestris* pv. *phaseoli	*Phaseolus vulgaris*	Vegetables	Tanzania	France	3

- **Fruit flies**

Pest	Consignment	Country of origin	C. of destination	nb
Bactrocera	*Psidium guajava*	India	France	1
	Psidium guajava	Thailand	France	3
	Syzygium jambos	Thailand	France	1
Tephritidae	*Mangifera indica*	Venezuela	United Kingdom	1
	Unknown fruit	Nigeria	United Kingdom	1

- **Wood**

One consignment of sawn wood (*Larix sibirica*) from Russia was intercepted by Austria because of the presence of *Monochamus* sp.

- **Bonsais**

Two consignments of bonsai (*Zelkova*) from China were intercepted by United Kingdom because of the presence of *Tinocallis takachihoensis.*

Source: EPPO Secretariat, 1999-04.