



ORGANISATION EUROPÉENNE ET MÉDITERRANÉENNE POUR LA PROTECTION DES PLANTES
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EPPO

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EPPO *Reporting Service*

94/021 EPPO/SI...Slovenia new EPPO Member Country

The Republic of Slovenia is from 1994-01 onwards a new EPPO Member. EPPO now has 34 Member Governments. The official delegate of Slovenia to EPPO will be:

Mrs. M. Ciraj
Chief Agricultural Inspector
National Agricultural Inspectorate
Parmova ul. 33
61000 LJUBLJANA
Slovenia

Tel.: 386 61 322 197 or 386 61 323643
Fax.: 386 61 115 320 or 386 61 313631

Source: EPPO Secretariat, Paris (1994-01)



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94/022 NL..International crop protection course

In 1994-10-04/12 the second course on modern crop protection will be held at Wageningen University in the Netherlands. Deadline for the course registration will be 1994-05-14. Application and more information can be obtained from:

International Training Centre (PHLO)
Wageningen Agricultural University
P.O. Box 8130
6700 EW WAGENINGEN
The Netherlands

Tel.: 31 8370 84092/3
Fax.: 31 8370 84763

Source: **Wageningen University**



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94/023

RU...The Russian Plant Quarantine Service

An article in *Zashchita Rastenii* reviews the present situation of the Russian Plant Quarantine Service, faced by the changing pattern of the Russian economy.

The Service now includes the Russian State Quarantine Inspection Service (Rosgoskarantin), to which are linked frontier and other quarantine stations (some with laboratories and/or fumigation sections); town or interregional quarantine stations; regional and interregional quarantine posts; frontier posts at sea and river ports, railway stations, airports, post offices and on roads; the Russian Plant Quarantine Research Institute, with its associated network of scientific institutions. The system is run by the centralized State Service and nationally funded. In spite of the prevailing economic problems, it is expanding. New stations have been created in the Yakut Autonomous Republic and Khakass autonomous region (in Siberia), the Evrey autonomous region (near the Chinese border in the Far East) and the Karachay-Cherkess and Adygei autonomous regions in the Caucasus. The station in Primor'e (in the Far East) has been developed to deal with the Asian gypsy moth problem (see below). Border points have risen in number from 68 to 108, with 106 more under consideration. There are now 26 laboratories and 6 fumigation sections. Total staff exceeds 1000. Local quarantine stations are now authorized to charge for their services.

The main flow of agricultural produce has shifted from the Ukrainian ports to Taganrog, Yeisk, Adler and Novorossiisk, on the Sea of Azov and Black Sea coasts of southern Russia. In 1992, over 25.3 Mt of agricultural imports were inspected at 64 frontier points, of which 0.053 Mt of seeds and 0.446 Mt of planting material, 1.5 times more than in 1991. In 1992, Russia exported 0.165 Mt of certified plant material and 4.8 Mt wood, 1.2 times more than in 1991. Fumigation of imported materials was much reduced (0.031 Mt instead of 0.196 Mt in 1991).

The type of work of the quarantine inspectors has changed, particularly in connection with the new ways in which plants are produced, marketed, imported and exported. Private markets handle planting material, fruits and vegetables, including those from quarantine areas. Agricultural products are bartered for industrial products, and these transactions are difficult to monitor. Whereas imports were previously handled by a few large state import agencies, there are now over 360 import agencies operating, and in addition private firms are making direct arrangements with suppliers in other countries.

There are many problems in nurseries producing planting material. Of the 550 in Russia, 30% have been found to harbour quarantine pests. According to current regulations, these nurseries should not be allowed to market planting material until the pest problem has been resolved. However, it is difficult to enforce these regulations in practice. Special attention is needed for nurseries which handle imported material. Last year, 13 M units of planting material were imported from 44 countries, including some little known from the quarantine point of view.



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94/024 RU/LEPTDE...Deregulation of Colorado beetle in Russia

Leptinotarsa decemlineata (A2 quarantine pest), the Colorado beetle, has been deleted from Russia's revised list of quarantine pests. The reason is the great increase in the area of distribution of the pest in Russia, which has changed from relatively restricted to almost ubiquitous in potato-growing areas. While action against spread of the pest will no longer be taken nationally, regional authorities may still impose restrictions in areas still free from the beetle.

Source: **Zashchita Rastenii no. 8, 21 (1993)**

94/025 RU/BURSXY...Risks of pine wood nematode for Russia

Bursaphelenchus xylophilus (EPPO A1 list), the pine wood nematode, is a quarantine pest for Russia. Although the related non-pathogenic species B. mucronatus occurs in Russia, B. xylophilus has not been recorded. The Russian Plant Protection Service considers that the nematode presents a risk of causing serious mortality in areas where mean July temperature exceeds 25°C. In Russia, this includes only a relatively small area around Astrakhan, northwest of the Caspian Sea. However, the Republics of Turkmenistan, Uzbekistan, Tadjikistan, Kyrgyzstan, and the southern part of Kazakhstan all fall in this danger zone. Slower disease development and reduced mortality can be expected where the mean July temperature is 20-25°C. In Russia, this includes most of the Don and Volga valleys, and a limited area along the Chinese frontier in the Far East. This zone also includes southern Ukraine, and central Kazakhstan. In all the rest of Russia, mean July temperature is less than 20°C and B. xylophilus is not expected to cause any damage, although it could still survive and spread.

The main species said to be at risk are Pinus sylvestris, Pinus koraiensis, Picea abies and Abies balsamea. The greatest risk of introduction by natural vector movement would be in the Far East, but the zones concerned have not yet been systematically surveyed. Some information is available from studies in countries importing wood from that zone. These have confirmed that B. mucronatus occurs. USDA has cited a Chinese report of B. xylophilus in wood from Russia.

The greatest potential impact of B. xylophilus is considered to be the problems its presence in Russia would create for Russian wood exports, rather than its direct effects on Russian forests.

Source: **O.A.Kulinin & N.V. Kolosova (1993) Zashchita Rastenii, no. 8, 22-24.**



EPPO *Reporting Service*

94/026

CORBMI...Seed testing method for *Clavibacter michiganensis* subsp. *michiganensis*

A reliable method for the detection of *Clavibacter michiganensis* subsp. *michiganensis* (EPPO A2 quarantine pest) has been reported from The Netherlands. The method is based on rapid screening of tomato seed lots by indirect immunofluorescence staining (IF) followed by dilution plating of IF positive seed lots and a further pathogenicity test on tomato seedlings. To extract the bacteria from the seeds, the seeds were either blended with a stomacher or soaked for 24-48 h at 4-6° C. Dilution platings were carried out on SCN, KTB and modified CNS media and it was found that the SCN medium was in general the more selective medium. The confirmation of suspected colonies with yeast dextrose carbonate medium, IF and a pathogenicity test were extremely reliable ($P > 0,95$). The authors recommended for routine testing of seed lots to screen tomato seedlots after soaking seeds for 24 h at 4-6° C with IF, followed by plating of IF positive seed lots on modified CNS and SCM after soaking seeds for another 24 h.

Source: Franken, A.A.J.M.; Kamminga, G.C.; Snijders, W.; Van der Zouwen, P.S.; Birnbaum, Y.E. (1993) Detection of *Clavibacter michiganensis* ssp. *michiganensis* in tomato seeds by immunofluorescence microscopy and dilution plating.
Netherlands Journal of Plant Pathology 99, 125-137.



EPPO *Reporting Service*

94/027 GVFDXX...New potential vectors of grapevine flavescence
dorée MLO

Experiments carried out in France showed that grapevine flavescence doree MLO (EPPO A2 quarantine pest) can be found in several insect species which, therefore, must be considered as potential vectors of the disease. Four species of homoptera were identified to carry the causal agent of the disease: *Psylla pyricola*, *Zyginidia scutellaris*, *Muellerianella extrusa* and *Litemixia pulchripennis* gave a good attachment of the FD-MLO. The authors concluded that further studies are necessary to investigate if these new potential vectors are capable of feeding on and transmission of the MLO to suitable host plants.

Source: Lefol, C.; Caudwell, A.; Lherminier, J.; Larrue, J. (1993) Attachment of the flavescence dorée pathogen (MLO) to leafhopper vectors and other insects.
Annals of applied Biology 123, 611-622.



EPPO Reporting Service

94/028 ENDOPA...*Cryphonectria parasitica* found in the EU (DE)

Cryphonectria parasitica (EPPO A2 quarantine pest) has been found for the first time in Germany. The pathogen of *Castanea* spp. was found in Baden-Württemberg in two locations. The first disease focus found was an approximately 1 ha forest plot which showed severe infections. According to the owner of the plot first symptoms appeared 6 to 8 years ago. The second focus was found in a neighbouring community where a single tree was found to be infected. To eradicate or control the spread of the disease the infected trees were felled and used as fuel for the local population. Necrotic parts of the trees were burned immediately at the location. Further research is being conducted to determine the virulence of the isolates as well as their association to vegetative compatibility groups of the fungus.

Source: Seemann, D.; Unger, J.-G. (1993) Rindenkrebs der EBkastanie in der Bundesrepublik Deutschland.
Nachrichtenblatt des Deutschen Pflanzenschutzdienstes, 45, 120-122.

94/029 ENDOPA...EPPO Distribution List for *Cryphonectria parasitica*

Due to the new record of *Cryphonectria parasitica* (EPPO A2 quarantine pest) in Germany, and two new records communicated to the EPPO Secretariat by Czechoslovakia, Poland and Portugal during the last round of data validation, the distribution of this organism is as follows:

EPPO Distribution List: *Cryphonectria parasitica*

C. parasitica was introduced into North America from the Far East at the end of the nineteenth century and spread within the next five decades throughout all the main chestnut areas. In 1938, the pathogen was first discovered in Europe as an isolated focus near Genova, Italy. Once again, the fungus spread very rapidly and at the end of the 1960s most parts of southern Europe where chestnuts are cultivated were affected by the pathogen.

EPPO region: The fungus is considered to be of limited distribution only within the EPPO countries where it occurs. Austria, Belgium, Czechoslovakia, France, Germany (few reports), Greece, Hungary, Italy, Poland (few reports), Portugal, Spain, Switzerland (widespread), Tunisia, Turkey, USSR (Black Sea coast), Yugoslavia (widespread).

Asia: China, India, Japan, Korea Democratic People's Republic, Korea Republic, Taiwan, Turkey.

Africa: Tunisia.

North America: Canada, USA.

This distribution list replaces all previous published EPPO Distribution Lists on *Cryphonectria parasitica*!

Source: EPPO Secretariat, Paris (1994-01)



EPPO *Reporting Service*

94/030 ANSTOB..Behaviour of *Anastrepha obliqua*

Detailed studies on the behaviour of wild *Anastrepha obliqua* (EPPO A1 quarantine pest) populations were carried out in Mexico. The observations were carried out in a mixed orchard with a different vegetation of several fruit trees and bushes, thus providing a diversified agroecosystem. It was found that the fruit flies were amazingly adaptable in their behaviour to the different habitats within the orchard; the time of feeding and oviposition were adapted in relation to the environmental factors. Males and females of the fruit flies showed considerable differences in their habitat use. While females utilized mango trees for resting and feeding males developed strong sexual activities there and consequently used them for resting. In contrast, while males used plum trees (tropical plum = *Spondias purpurea*) only for feeding females utilized them for oviposition and feeding. Surprisingly, females did not oviposit on mango, which is regarded as one of the principal hosts, if plum trees were available.

Source Aluja, M.; Birke, A. (1993) Habitat use by adults of *Anastrepha obliqua* in a mixed mango and tropical plum orchard.
Annals of the Entomological Society of America 86, 799-812.



EPPO Reporting Service

94/031 **BEMITA/TMYLCX/MT...*Bemisia tabaci* and tomato yellow leafcurl geminivirus found in Malta**

EPPO has been informed by the Ministry of Agriculture and Fisheries of Malta that *Bemisia tabaci* (EPPO A2 quarantine pest) has been found in the country. The pest was found on both ornamental crops such as Poinsettia and edible plants such as tomatoes and marrows (*Cucurbita pepo*). Tomato yellow leafcurl geminivirus (EPPO A2 quarantine pest) has also been identified on tomato plants while the condition known as 'silverleaf' has been observed on marrows. Since the spread of the pest within the country is still limited every endeavour is being made by the authorities to contain it.

Source: Ministry of Agriculture and Fisheries, Malta (1993-12)

94/032 **BEMITA/GB...Update on *Bemisia tabaci* from the UK**

An overview on the occurrences of *Bemisia tabaci* (EPPO A2 quarantine pest) in the UK and multiple eradication campaigns carried out by the British Plant Protection Service was given at the Workshop on IPM in Greenhouse Ornamentals of the IOBC/WPRS held in Cambridge, UK in 1992-09-08/11. *B. tabaci* was found for the first time in the UK in 1943 when a population was detected in a Kent wood. The second occurrence of the whitefly was registered in the Royal Botanical Garden in Kew in 1980. Both outbreaks were only short-lived. The first commercial outbreaks were recorded in 1987 on poinsettia imported from the Netherlands. By 1991, 286 nursery outbreaks have been counted in England and Wales and 33 in Scotland. All these whitefly outbreaks have been eradicated. Investigations on the biotype of *B. tabaci* imported from the Netherlands showed it to belong to biotype B. Analysing trade patterns, it was found that infestations of *B. tabaci* in the UK can be traced from cuttings imported primarily from the Netherlands, but also from Germany, Israel, Denmark and Belgium.

Source: Baker, R.H.A.; Cheek, S. (1993) *Bemisia tabaci* in the United Kingdom.
IOBC/WPRS Bulletin, Vol. 16(8) 1993, 6-11.



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94/033 CACYMA...Spread of *Cacyreus marshalli* to the Spanish mainland

Cacyreus marshalli (EPPO A2 quarantine pest) which used to be present on the Balearic Islands only has successfully spread to the Spanish mainland. The pest of Pelargonium, which had been added to the EPPO A2 list in 1993-09, can now be found in the provinces of Alicante, Castellon, Valencia, Murcia and Logrono.

Experiments on the control of this pest showed that several compounds such as *Bacillus thuringiensis*, diflubenzuron, flufenoxuron, hexaflumuron, lambda-cyhalothrin, alpha-cypermethrin and benfuracarb are effective against *C. marshalli*. Infestations in commercial crops were satisfactorily controlled, limiting distribution to garden and house plants. The Plant Protection Service of Spain assures EPPO that the incidence of the pest can be effectively controlled and that the phytosanitary status of nursery material of pelargoniums from infested areas is good.

Source: Ministry of Agriculture and Fisheries, Madrid (1993-12)



EPPO *Reporting Service*

94/034 **CERTCA..Baiting of *Ceratitis capitata***

Experiments carried out in the USA revealed that the addition of ammonia to baiting traps for *Ceratitis capitata* (EPPO A2 quarantine pest) increases the efficacy of these traps significantly. Trimedlure traps additionally equipped with a plastic vial containing a cotton wick with 2 ml of saturated ammonium carbonate solution caught 23% more male *C. capitata* flies than those with trimedlure only.

Source: Liquido, N.J.; Teranishi, R.; Kint, S. (1993) Increasing the efficiency of catching Mediterranean fruit fly males in trimedlure-baited traps with ammonia.
Journal of Economic Entomology. 86, 1700-1705.



EPPO *Reporting Service*

94/035 **FRANOC...Quarantine Treatment of cuttings infested by**
Frankliniella occidentalis

In order to exclude *Frankliniella occidentalis* (EPPO A2 quarantine pest) from infested planting material experiments have been carried out in the UK to control the pest by a fumigation treatment with methyl bromide. All life stages of Western flower thrips were assessed in respect to their susceptibility to methyl bromide and it was found that the thrips can be successfully controlled with a standard fumigation of 4 h achieving a concentration time product of 54 mg l-1 h, the same treatment which is used to exclude *Liriomyza trifolii* (EPPO A2 quarantine pest) and *Spodoptera littoralis* (EPPO A2 quarantine pest) from chrysanthemum cuttings. Possible phytotoxic effects of the fumigation treatment on thrips infested cuttings were, however, not included in this investigation.

Source: Mcdonald, O.C. (1993) Susceptibility of western flower thrips
Frankliniella occidentalis to fumigation with methyl bromide.
***Annals of applied Biology* 123, 531-537.**

94/036 **FRANOC...Damage threshold levels of *Frankliniella***
***occidentalis* in ornamentals**

Experiments were carried out in Switzerland to establish damage threshold levels for *Frankliniella occidentalis* (EPPO A2 quarantine pest) in different ornamental crops. Blue sticky traps were used at a rate of 1 trap/100 m² in order to monitor the *F. occidentalis* populations. Three damage threshold levels were evaluated accordingly and were mainly dependent on plant species and temperatures:

Saintpaulia and Streptocarpus had a low damage threshold level of < 10 thrips/trap/week.
Chrysanthemum, Gerbera, Impatiens, Rosa and Sinningia had a medium threshold level of 18-30 thrips/trap/week.
Begonia and Poinsettia had a high damage threshold level of > 40 thrips/trap/week.

Source: Frey, J.E. (1993) Damage threshold levels for western flower thrips,
Frankliniella occidentalis on ornamentals.
IOBC/WPRS Bulletin, Vol. 16(8) 1993, 78-81.



EPPO *Reporting Service*

94/037 **HYPHCU...Chemical control of *Hyphantria cunea* in Turkey**

Experiments were carried out in Turkey to control *Hyphantria cunea* (EPPO A2 quarantine pest) which has been an important pest in the hazelnut plantations of the East Black Sea region since 1982. Multiyear experiments showed that endosulfan, triflumuron, diflubenzuron and *Bacillus thuringiensis* were the most efficient control agents against the pest.

Source: Isik, M.; Yanilmaz, A.F. (1992) Studies on natural enemies and control measures of the fall webworm (*Hyphantria cunea*) in hazelnut plantation in Samsun.
Turkish Plant Protection Research Annual No. 22-23, 1992, 55-58.



EPPO *Reporting Service*

94/038 **RHAGCO...Host status of stone fruits for *Rhagoletis completa***

Studies carried out in California (US) investigated the time period in which stone fruit orchards are normally free from *Rhagoletis completa* (EPPO A1 quarantine pest; under revision) and the host preferences of the fruit fly. It was found that the "pest-free period" for *R. completa* starts in spring and ends at the beginning of July. Laboratory and field experiments revealed that peaches and nectarines are only poor hosts for the fruit fly and that plums are not accepted as a host while walnuts are the preferred host for *R. completa*.

Source: Yokoyama, V.Y.; Miller, G.T. (1993) Pest-free period for walnut husk fly and host status of stone fruits for export to New Zealand. *Journal of Economic Entomology* 86, 1766-1772.



EPPO *Reporting Service*

94/039 **HETDPA..Virulence of *Globodera pallida* populations in the Netherlands**

Populations of *Globodera pallida* (EPPO A2 quarantine pest) were collected from 392 infected fields in the north-eastern part of The Netherlands and were subjected to a variety test in order to analyze the resistance of the 7 starch potato cvs. used in the Netherlands. It was found that 33 populations expressed a relatively high virulence to all cvs. and especially to the cvs. "Producent", "Elles" and "Darwina". The authors feared that the selection pressure of these cvs. on *G. pallida* populations will push the nematode populations to similar virulence properties.

Source: Van der Burgt, A.M.; Schouten, H.J.; Mulder, A. (1993) Resistance of potato varieties to field populations of the potato cyst nematode *Globodera pallida* in the northeastern part of the Netherlands.
Netherlands Journal of Plant Pathology 99, 189-195.



EPPO *Reporting Service*

94/040 **PUBLICATION...A European Compendium on Plant Protection**

An encyclopedia on plant protection, called HYPP (Hypermédia pour la Protection des Plantes), in a computer-accessible form is currently being developed by a consortium of 9 plant protection institutions from 7 European countries. Research institutes in Belgium, Germany, France, Italy, Portugal, Spain and the UK have developed, with the financial support of the CEC, a CD-ROM (Compact Disk-Read Only Memory)-based compendium of plant protection which includes information on pests, diseases, weeds and crops on approximately 20 000 pages of text. Additionally, about 5 000 pictures and 1 000 drawings of the organisms are included in the plant protection encyclopaedia. A unique feature of HYPP is its multilingual structure; menu and information can be retrieved in six languages: English, French, German, Italian, Portuguese and Spanish and an attached dictionary provides translations of the glossary. Hardware requirements to install HYPP are simple; needed is only a PC (preferably a 386 or 486) with VGA screen and a CD-ROM disk drive. The release of HYPP is envisaged for 1994-05. Further information can be obtained from:

ACTA (Association de Coordination Technique Agricole) France
Guy Waksman
ACTA Informatique
149, rue de Bercy
F-79595 PARIS Cedex 12
France

Tel.: 33 (1) 40 04 50 30
Fax.: 33 (1) 40 04 50 11

Source: ACTA, Paris (1994-01)