



ORGANISATION EUROPÉENNE ET MÉDITERRANÉENNE POUR LA PROTECTION DES PLANTES
EUROPEAN AND MEDITERRANEAN PLANT PROTECTION ORGANIZATION

EPPO

Reporting Service

Paris, 1992-02-01

Report No. 520

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520/01 EPPO...New information network of EPPO

The EPPO Bulletin Board Service **INFOEPPO**, an information Network accessible by computer, is on line since 1992-01-06.

In **INFOEPPO** you can find the newest information about Plant Quarantine, the Reporting Service and urgent News flashes like the recent interception of pine wood nematodes in "Kiln-dried" wood from Canada which had been in **INFOEPPO** since 1992-01-07.

The **INFOEPPO** is accessible by dialing

+ 33 (1) 40 50 62 83

A manual for operating in **INFOEPPO** is currently under preparation.

Source: EPPO Secretariat, Paris (1992-01)

520/02 EPPO....Joint WMO/EPPO/NAPPO Symposium on Practical Applications of Agrometeorology in Plant Protection

The proceedings of the "Joint WMO/EPPO/NAPPO Symposium on Practical Applications of Agrometeorology in Plant Protection" have been published now in the Bulletin OEPP/EPPO Bulletin 21 (3), 355-700. They cover 42 scientific papers about forecasting, monitoring and evaluating the occurrence of plant pests. Several papers from American, European and Australian scientists are devoted to the field of Pest Risk Analysis, in particular:

HOPPER, B.E. Ecological aspects of pest risk assessment.

SUTHERST, R.W.; MAYWALD, G.F.; BOTTOMLEY, W. From CLIMEX to PESKY, a generic expert system for pest risk assessment.

ROYER, M.H.; YANG, X.B. Application of high resolution weather data to pest risk assessment.

BAKER, C.R.B. The validation and use of a life-cycle simulation model for risk assessment of insect pests.

ROBERTS, W.P. Using weather records and available models to predict the severity of fireblight should it enter and establish in Australia.

The Bulletin OEPP/EPPO Bulletin can be ordered from:

Blackwell Scientific Publications
P.O. Box 88
Oxford OX2 0NE
England

Source: EPPO Secretariat, Paris (1992-01)



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520/03 ES/CACYMA....New pest on Mallorca

On the island of Mallorca (ES) a new pest has been recorded causing serious damages on *Pelargonium*. The pest was identified as *Cacyreus marshalli* Butler, 1898 (Lycaenidae: Polyommatainae) originating from South Africa where it is widespread on Geraniaceae. The butterfly was detected at the end of 1989 and has since affected 99% of the pelargoniums on Mallorca.

Damage is primarily due to the feeding activities of the larvae on the flowers of the plant; feeding on leaves is only of minor importance.

Chemical control has proved to be difficult because the larvae enter and live within the plant. However, the pest is most susceptible to control measures during the egg stage when masses of yellow eggs can be seen on leaves and flowers.

According to the authors the butterfly represents a serious threat to the *Pelargonium* production of the other Balearic Islands as well as the whole Mediterranean area.

Source: Sarto i Monteys, V.,; Maso, A. (1991) Confirmacion de *Cacyreus marshalli* Butler, 1898 (Lycaenidae: Polyommatainae) como nueva especie para la fauna europea.
Boletin de Sanidad Vegetal Plagas 17, 173-183.



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520/04 TMSWXX...Occurrence of tomato spotted wilt virus in Portugal

The Plant Protection Service of Portugal has informed EPPO that tomato spotted wilt virus (potential EPPO A2 organism) has been found on plants grown under glass in two locations of the southern part of Portugal (Algarve). The Plant Protection Service of Portugal has implemented measures to eradicate the disease.

Source: CNPPA, Lisbon (1992-01)

520/05 TMSWXX...Host plants of tomato spotted wilt virus in The Netherlands

The Plant Protection Service of The Netherlands has prepared a list of plants on which tomato spotted wilt virus (potential EPPO A2 organism) has been found in The Netherlands since 1989.

ORNAMENTALS

Achimenes
Adenium obesum
Aeschynanthus speciosus
Alstroemeria
Anemone
Anthurium andreaeanum
Anthurium scherzerianum
Ardisia
Aster ericoïdes
Begonia
Bouvardia
Campanula isophylla
Centaurea montana
Chrysanthemum morifolium
Chrysanthemum frutescens
Cirsium japonicum
Clivia
Columnea 'Sanne'
Columnea 'Schonbrun'
Cyclamen
Dahlia
Dianthus
Fatsia japonica 'Variegata'
Ficus benjamini

Ficus elastica
Felicia fruticosa
Gaillardia
Gerbera jamesonii
Gloxinia sylvatica
Hippeastrum hybride
Impatiens walleriana
Impatiens
Iris hollandica
Kalanchoë blossfeldiana
Kalanchoë thyrsiflora
Limonium
Limonium sinatum
Lobelia erinus
Nerine
Pelargonium peltatum
Peperomia fraseri
Peperomia rotundifolia
Philodendron tuxla
Primula acaulis
Rudbeckia nitida
Senecio 'Candy'
Spathiphyllum

VEGETABLES, FRUIT, ARABLE CROPS

potato (*Solanum tuberosum*)*
endive (*Cichorium endiva*)
pepper (*Capsicum annuum*)
red chicory (*Cichorium intybus*)
chilli (*Capsicum annuum*)
French bean (*Phaseolus vulgaris*)
tomato (*Lycopersicon esculentum*)

* ware potatoes growing next to a glasshouse with Impatiens plants infected by tomato spotted wilt virus

WEEDS

Galinsoga ciliata
Polygonum lapathifolium ssp. *lapathifolium*
Solanum nigrum
Sonchus oleraceus
Taraxacum officinale

Source: Plant Protection Service, Wageningen (1991-11)



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520/06 CORBSE.....*Clavibacter michiganense* ssp. *sepedonicus*
present in Algeria

A survey has been carried out on bacterial pathogens of ware potatoes in Algeria. Samples of plants and tubers were collected in the coastal region near Alger and analysed by appropriate diagnostic tests.

On this basis, the presence of two bacterial diseases was reported for the first time in Algeria: ring rot due to *Clavibacter michiganense* ssp. *sepedonicus* (EPPO A2 organism) and black leg due to *Erwinia carotovora* ssp. *atroseptica*. However, *Pseudomonas solanacearum* (EPPO A2 organism) was not found.

Source: Nassan Agha, N.; Fettouche, F. (1991) Recherche des bactérioses de la pomme de terre dans le littoral algérois.
Bulletin OEPP/EPPO Bulletin 21 (4), 000-000.



EPPO *Reporting Service*

520/07 ERWIAM...*Erwinia amylovora* established in Egypt

Erwinia amylovora (EPPO A2 organism) is now established in Egypt. To control the disease streptomycin has been applied in orchards of several provinces which resulted in a 70% fireblight reduction in the treated orchards. However, strains of *E. amylovora* resistant to streptomycin have been increasingly found.

Experiments were conducted to test *Bacillus subtilis* strains, which showed *in vitro* activity against the fireblight bacterium, but in *in planta* experiments *B. subtilis* failed to control the disease.

Source: El-Goorani, M.A.; Hassanein, F.M. (1991) The effect of *Bacillus subtilis* on *in vitro* growth and pathogenicity of *Erwinia amylovora*.
Journal of Phytopathology 133, 134-138.

520/08 ERWIAM..*Erwinia amylovora* present in Turkey

It was reported at the 1991 Annual Meeting of the American Phytopathological Society in St. Louis (US) that *Erwinia amylovora* (EPPO A2 organism) has been present in Turkey since 1985.

Severe outbreaks of fireblight have been observed on pear and quince. Experiments on the control of the disease showed that a mixture of copper oxychloride and maneb gave a satisfactory result in controlling fireblight.

Source: Momol, M.T.; Yogen, O.; Basim, H.; Zachowsky, M.A.; Rudolph, K.; Purdy, L.H. (1991) Development of fire blight epidemics and control measures in pear orchards in Turkey.
Abstracts of the 1991 Annual Meeting of the American Phytopathological Society, *Phytopathology* 81, 1137-1138.

520/09 ERWIAM....Survey in Algeria does not find *Erwinia amylovora*

A survey was undertaken for the possible presence in the Alger region of fireblight, due to *Erwinia amylovora* (EPPO A2 organism), a dangerous disease of rosaceous pip fruit and ornamentals.

A total of 196 samples were carefully collected from seven pear orchards, which were regularly visited and represented a total area of 35,76 ha, with 150.033 trees. From this material 107 isolations were made. No strain of *E. amylovora* was found. However, 24 strains of *Erwinia* were obtained: 13 *E. chrysanthemi*, 9 *Erwinia*-like and 2 *E. carotovora carotovora*. The survey was limited to one area.

Source: Nassan Agha, N.; Anki, N. (1991) Recherche du feu bactérien dû à *Erwinia amylovora* sur poirier dans l'Algérois.
Bulletin OEPP/ EPPO Bulletin 21 (4), 000-000.

520/10 ERWIAM....Computerized warning system for *Erwinia amylovora*

A computerized warning system for the control of *Erwinia amylovora* (EPPO A2 organism) has been developed in France. It needs input of regional climatic data as well as weather forecasts. Additionally inputs on plant growth and development, as well as on observed fireblight activity of the area are necessary.

The system provides the user with a forecast of possible fireblight occurrence and delivers a proposal on the use of certain control measures.

Source: Jacquart-Romon, C.; Paulin, J.P; (1991) A computerized warning system for fire blight control.
Agronomie 11, 511-519.



EPPO Reporting Service

520/11 XANTVE...New semiselective medium for isolation of *Xanthomonas campestris* pv. *vesicatoria*

A new semiselective medium (CMC-E) for isolation of *Xanthomonas campestris* pv. *vesicatoria* (EPPO A2 organism) has been developed in the USA. In plating efficiency tests the CMC-E medium was more efficient than Tween medium B agar or nutrient agar. With the CMC-E medium *X. c.* pv. *vesicatoria* was successfully isolated from pepper seed, irrigation water and air samples.

The new medium is composed and prepared (for 1 liter of CMC-E) as follows:

- 1,5 g KH_2PO_4 ,
- 6,0 g K_2HPO_4 ,
- 0,2 g KCL,
- 1,0 g $\text{MgSO}_4 \cdot \text{H}_2\text{O}$,
- 1,0 g yeast extract,
- 2,0 g eosin Y,
- 0,4 g methylene blue,
- 5,0 ml stock solution of minor elements
- 1 drop of anti-bubble agent

all dissolved in deionized water in a Waring blender at low speed.

3,0 g agar and 26,0 g high-viscosity carboxymethyl cellulose sodium salt (CMC) are added to the solution in the blender which has to be set to high speed to prevent lumping.

The preparation must be sterilized at 121° C for 15 min..

2,0 g l⁻¹ gelatine are sterilized in separate 100 ml of the basal medium (without CMC and agar) and added to the medium immediately after the sterilization.

64 mg l⁻¹ cephalixin dissolved in 24 ml sterile distilled water at 80-90° C,

12 mg l⁻¹ 5-fluorouracil dissolved in 24 ml sterile distilled water,

100 mg l⁻¹ bacitracin dissolved in 20 ml sterile distilled water,

10 mg l⁻¹ neomycin sulfate dissolved in 10 ml sterile distilled water,

100 mg l⁻¹ cycloheximide dissolved in 2 ml ethanol and

1 ml tobramycin (concentration 0,4 mg ml⁻¹) are filter sterilized and aseptically added to the basal medium immediately after sterilization.

The resulting 1 l medium must be poured into the plates immediately to prevent clumping.

Source: Gitaitis, R.D.; Chang, C.J.; Sijam, K.; Dowler, C.C. (1991) A differential medium for semiselective isolation of *Xanthomonas campestris* pv. *vesicatoria* and other cellulolytic Xanthomonads from various natural sources.

Plant Disease 75, 1274-1278.



EPPO *Reporting Service*

520/12 CRONQU.....Taxonomic note on *Cronartium quercuum*

In the USA, experiments were carried out to compare strains of *Cronartium quercuum* (EPPO A1 organism) collected from sand pine (*Pinus clausa*) with *C. quercuum* f.sp. *virginianae* obtained from Virginia pine (*Pinus virginiana*).

The isozyme patterns of homogenized aeciospores showed that *C. quercuum* from sand pine and *C. quercuum* f.sp. *virginianae* from Virginia pine are identical and, therefore, should both be classified as *Cronartium quercuum* f. sp. *virginianae*.

Source: Powers, H.R., Jr.; Snow, G.; Lin, D.; Hubbes, M. (1991) Isozyme analysis as an indicator of synonymy of the causal agents of gall rust on sand and Virginia pine.
Plant Disease 75, 1225-1227.



EPPO *Reporting Service*

520/13

FRANOC/LIRITR...Occurrence of *Frankliniella occidentalis*
and *Liriomyza trifolii* in Ireland

Frankliniella occidentalis (EPPO A2 pest) and *Liriomyza trifolii* (EPPO A2 pest) are newly recorded from Ireland where they are mainly associated with plants and vegetables grown under glass.

Source: Dunne, R.; O'Connor, J.P. (1989) Some insects (Thysanoptera: Diptera) of economic importance, new to Ireland.
Irish Naturalists' Journal 23 (2), 63-65.



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520/14 LIRIHU/GB.....Interceptions of *Liriomyza huidobrensis* in the UK

During 1990, the Plant Protection Services of England and Wales, Scotland and Northern Ireland intercepted 29 consignments due to infestation by *Liriomyza huidobrensis* (EPPO A1 organism).

The intercepted consignments originated from The Netherlands, USA, Italy, Belgium, The Canary Islands (ES) and Malta.

Source: Ministry of Agriculture, Food and Fisheries, London (1992-01)

520/15 LIRIHU.....Distribution of *Liriomyza huidobrensis*

EPPO has been informed that *Liriomyza huidobrensis* (EPPO A1 pest) can be locally found in Belgium, France and Germany.

The new distribution list of *Liriomyza huidobrensis*:

EPPO region: Belgium, France, Germany, Italy (unconfirmed) Malta (unconfirmed), Netherlands, Spain (unconfirmed) and the United Kingdom.

North America: USA

Central America and Caribbean: Costa Rica, Dominican Republic

South America: Argentina, Brazil, Chile, Colombia, Peru and Venezuela

Source: EPPO Secretariat, Paris (1992-01)

520/16

LIRIHU/LIRITR.....Responses of *Liriomyza huidobrensis*
and *L. trifolii* to pesticides

In the United Kingdom, experiments were carried out in order to determine the applicability of different pesticides in eradication campaigns against *Liriomyza huidobrensis* (EPPO A1 pest) and *L. trifolii* (EPPO A2 pest).

Compared to a susceptible laboratory population field populations of *L. trifolii* showed resistance to the pyrethroids tested as well as some evidence of resistance to gamma-HCH. No evidence of resistance to organophosphates was observed in *L. trifolii*.

L. huidobrensis also showed resistance to the pyrethroids tested, but its response to gamma-HCH was similar to that of susceptible *L. trifolii*. Furthermore, *L. huidobrensis* showed an eight times higher tolerance to organophosphates than the susceptible *L. trifolii* population.

Source: Macdonald, O.C. (1991) Responses of the alien leaf miners *Liriomyza huidobrensis* and *Liriomyza trifolii* (Diptera: Agromyzidae) to some pesticides scheduled for their control in the UK.
Crop Protection 10, 509-513.



EPPO *Reporting Service*

520/17 BURSXY..*Bursaphelenchus xylophilus* found in "Kiln-dried"
wood from Canada

The French Ministry of Agriculture and Forestry has informed EPPO that a consignment of coniferous wood originating from Canada has been intercepted due to infestation by live *Bursaphelenchus xylophilus* (EPPO A1 organism). All intercepted packs of wood were marked "Kiln-dried"!

The French Phytosanitary Service stresses that the stamp "Kiln-dried" alone does not represent a sufficient guarantee for the absence of living pine wood nematodes, without adequate information on how the Kiln drying process was performed.

Source: Ministry of Agriculture and Forests, Paris (1991-12)

520/18 BURSXY....Influence of temperature on pine mortality caused
by *Bursaphelenchus xylophilus*

In Illinois (US) experiments were carried out to investigate the influence of temperature on the development of pine wilt in Scots pine (*Pinus sylvestris*) caused by *Bursaphelenchus xylophilus* (EPPO A1 organism).

4-6 year old pines were inoculated with pine wood nematodes then incubated at constant temperatures in a growth chamber for 8 weeks and finally placed in a greenhouse with a temperature range of 15-30° C for 10-12 weeks. At temperatures of 32° and 30° C pine wood nematode infection was greater, tree mortality higher and disease incubation shorter than at 25,23,18 and 11° C. Foliar symptoms also developed faster and more uniformly at the higher temperatures. 95% of all the trees died within the first 8 weeks when incubated at 32 or 30° C in contrast to trees incubated at 18,16, and 11° C which died later in the greenhouse.

The authors conclude that high-temperature stress predisposes Scots pine to lethal infections by *B. xylophilus*.

Source: Sikora, E.J.; Malek, R.B. (1991) Influence of temperature on
development of pine wilt in Scots pine.
Journal of Nematology 23, 188-193.

520/19 BURSXY.....Distribution and hosts of *Bursaphelenchus xylophilus* in China

In order to determine the distribution and host range of *Bursaphelenchus xylophilus* (EPPO A1 organism) in China a survey has been carried out covering 18 provinces and 669 samples of dead or dying coniferous trees.

The pine wood nematode was only found in the Jiangsu province around the cities of Nanjing and Zhenjiang. Several *Pinus* sp. were highly susceptible and *Pinus bungeana* was found to be extremely susceptible to the nematode.

Source: Yang, B.J.; Wang, Q.L. (1989) Distribution of the pine wood nematode in China and susceptibility of some Chinese and exotic pines to the nematode.
Canadian Journal of Forest Research 19, 1527-1530.

520/20 BURSXY.....Radiation of *Bursaphelenchus xylophilus*

In the USA experiments were carried out to measure the radiation sensitivity of *Bursaphelenchus xylophilus* (EPPO A1 organism) in woodchips in order to develop a disinfestation method for pine wood chips.

The radiation sensitivity was tested over a range of dose values with a cesium-137 irradiator. The lethal dose for pine wood nematodes lay in the range 6-8 kGy and is, therefore, economically unattractive for the disinfestation of woodchips.

Source: Eichholz, G.G.; Bogdanov, A.A.; Dwinell, L.D. (1991) Radiation sensitivity of pine wood nematodes in woodchips.
International Journal of Radiation Applications and Instrumentation. Part A, Applied Radiation and Isotopes 42, 177-179.