



ORGANISATION EUROPÉENNE ET MÉDITERRANÉENNE POUR LA PROTECTION DES PLANTES
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CONTENTS

- | | |
|-----------------------|--|
| 523/01..CN | - New Plant Quarantine Legislation in the Peoples Republic of China |
| 523/02..FI | - New plant health legislation in Finland |
| 523/03..ERWIAM/CH | - Situation of <i>Erwinia amylovora</i> in Switzerland |
| 523/04..ERWIAM/IT | - National network to monitor <i>Erwinia amylovora</i> in Italy |
| 523/05..XANTOR/XANTTO | - Reclassification of <i>Xanthomonas campestris</i> pv. <i>oryzae</i> and <i>Xanthomonas campestris</i> pv. <i>oryzicola</i> |
| 523/06..POSTXX/TMSWXX | - Tomato spotted wilt virus and potato spindle tuber viroid in Africa |
| 523/07..ENDOPA | - Movement of viral - like RNA in colonies of <i>Cryphonectria parasitica</i> |
| 523/08..ANTHGR | - Survival of <i>Anthonomus grandis</i> in winter |
| 523/09..ANSTSU | - Quarantine treatment against <i>Anastrepha suspensa</i> |
| 523/10..BEMITA | - Control of <i>Bemisia tabaci</i> with insecticides |
| 523/11..DACUDO | - Carambola fruit fly in French Guiana |
| 523/12..FRANOC | - Insecticide resistance of <i>Frankliniella occidentalis</i> |
| 523/13..HELIAM | - Insecticide resistance of <i>Helicoverpa armigera</i> |
| 523/14..LIRIHU | - <i>Liriomyza huidobrensis</i> present in Austria |
| 523/15..HETDGL | - Survival of <i>Heterodera glycines</i> in rockwool |
| 523/16..HETDPA/HETDRO | - Distribution of <i>Globodera rostochiensis</i> and <i>G. pallida</i> |
| 523/17..XIPHAM | - <i>Xiphinema americanum</i> present in Greece |
| 523/18..METHODOLOGY | - Standart method for measurement of leaf wetness duration |
| 523/19..METHODOLOGY | - Crop Growth Stage Key for crops and weeds |
| 523/20..PUBLICATION | - Laboratory Manual for the detection of fungi, bacteria and nematodes |



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523/01

CN...New Plant Quarantine Legislation in the Peoples Republic of China.

The Peoples Republic of China has issued a new animal and plant quarantine legislation. The new legislation was adopted at the 22nd Session of the Permanent Committee of the VIIth Peoples National Assembly on the 30th of October 1991. It has been officially promulgated by the 53rd decree signed by the president Yang Shangkun and came into effect on the 1st of April 1992.

Source: Dai Gang (1992) Nouvelle loi sur la quarantaine des plantes et des animaux.
Beijing Information 30, No. 13, 24-26.



EPPO *Reporting Service*

523/02

FI....New plant health legislation in Finland

Finland has issued a new Plant Material Law and Statute concerning plant material for further cultivation in Finland. The Plant Material Law concerns nursery stock plants, ornamentals and vegetables for further cultivation in commercial production and has the purpose to promote the supply of healthy, high-quality plant material of horticultural plants suited to Finnish growing conditions and the provisions of sufficient information about plants to those who buy or otherwise utilize them.

The new Plant Material Law (663/91) came into force on 1992-04-01 and applies to the sale and importation of horticultural plant material and to the production of such for trading purposes.

Source: Plant Quarantine Service, Helsinki (1992-04)



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523/03 **ERWIAM/CH...Situation of *Erwinia amylovora* in Switzerland**

Erwinia amylovora (EPPO A2 organism) has been found again in Switzerland in 1991 in the same geographical area as in the previous year. In the area of Lake Constance several fireblight infections on *Cotoneaster* were found. For the first time *E. amylovora* has been found in a commercial pear orchard. Diseased plants were uprooted and destroyed. The rest of Switzerland as well as all surveyed nurseries were still free from the pathogen.

Source: Grimm, R. (1992) Feuerbrandsituation in der Schweiz. Bericht aus Feld und Labor.
 Phytomedizin 22, No. 1, p. 17

523/04 **ERWIAM/IT...National network to monitor *Erwinia amylovora* in Italy.**

In 1990, *Erwinia amylovora* (EPPO A2 organism) was observed for the first time in Italy (see also Reporting Service 511/04). The fireblight foci were located in Southern Italy. In order to monitor the disease area and to detect a possible spread into the more northern main fruit cultivating regions, a nationwide system is currently build up which consists out of regional monitoring networks. Each network includes several protocolled indicator plants, groups of experts which visit these indicator plants twice a year as well as collect and analyse suspect plant material and diagnostic centres where the collected material is analyzed and registered.

Source: Stafani, E.; Bazzi, C.; Mazzucchi, U; (1992) Aufbau eines nationalen Überwachungssystems für den Feuerbrand in Italien.
 Phytomedizin 22, No. 1, p. 16



EPPO *Reporting Service*

523/05

XANTOR/XANTTO...Reclassification of *Xanthomonas campestris* pv. *oryzae* and *Xanthomonas campestris* pv. *oryzicola*.

Scientists from the Laboratory of Microbiology and Microbial Genetics of the University of Ghent and the International Rice Research Institute in Manila have reclassified the causal agents of bacterial blight, *Xanthomonas campestris* pv. *oryzae*, and bacterial leaf streak, *Xanthomonas campestris* pv. *oryzicola*, of rice (both EPPO A1 organisms) as pathovars of *Xanthomonas oryzae*.

The reclassification to *Xanthomonas oryzae* pv. *oryzae* and *Xanthomonas oryzae* pv. *oryzicola* is based on phenotypic, genotypic and chemotaxonomic data.

Source:

Swings, J.; Van den Mooter, M.; Vauterin,; Hoste, B.; Gillis, M.; Mew, T.W.; Kersters, K. (1990) Reclassification of the causal agents of bacterial blight (*Xanthomonas campestris* pv. *oryzae*) and bacterial leaf streak (*Xanthomonas campestris* pv. *oryzicola*) of rice as pathovars of *Xanthomonas oryzae* (ex Ishiyama 1922) sp. nov., Nom. rev. *International Journal of Systematic Bacteriology* **40**, 309-311.



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523/06

POSTXX/TMSWXX...Tomato spotted wilt virus and potato spindle tuber viroid in Africa

Tomato spotted wilt virus has been recorded to be present in Nigeria and Zaire. Potato spindle tuber viroid has been reported as tomato bunchy top occurring on tomato in South Africa, Ivory Coast and Nigeria.

EPPO Distribution List: Tomato spotted wilt virus

EPPO region: Austria, Belgium, Bulgaria, Czechoslovakia, Denmark, France, Germany, Greece, Ireland, Italy, Netherlands, Norway, Poland, Spain (including Canary Islands), Sweden, Switzerland, UK, USSR, Yugoslavia.

Asia: Afghanistan, China, India, Japan, Nepal, USSR.

Africa: Madagascar, Mauritius, Nigeria, Senegal, South Africa, Tanzania, Uganda, Zaire, Zimbabwe.

North America: Canada, Mexico, USA (including Hawaii).

Central America and Caribbean: Jamaica, Puerto Rico.

South America: Argentina, Bolivia, Brazil, Chile, Guyana, Uruguay.

Oceania: Australia, New Zealand, Papua New Guinea.

This list replaces all previous EPPO Distribution Lists for tomato spotted wilt virus!

EPPO Distribution List: Potato spindle tuber viroid

EPPO region: Poland, Turkey, USSR. Found but eradicated in the Commonwealth Potato Collection held in Scotland (UK), in the 1970s.

Asia: China, India, Japan, Turkey (EPPO country), probably other countries.

Africa: Ivory Coast, Nigeria, South Africa.

North America: Canada (but reported absent from seed potato crops in New Brunswick and Prince Edward Island), USA.

South America: There are unconfirmed records for Argentina and Brazil and the situation in other countries remains uncertain.

Oceania: Australia, found in 1982 in germplasm collections in quarantine in New South Wales, Victoria and South Australia; eradicated.

This list replaces all previous EPPO Distribution Lists for potato spindle tuber viroid!

Source: Thottappilly, G. (1992) Plant virus diseases of importance to African Agriculture.

Journal of Phytopathology 134, 265-288.

EPPO Secretariat, Paris (1992-04)



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523/07

ENDOPA...Movement of viral - like RNA in colonies of *Cryphonectria parasitica*.

The occurrence of viral - like Double stranded RNA in *Cryphonectria parasitica* (EPPO A2 organism) which is responsible for the hypovirulence of certain *C. parasitica* strains has been studied in Utah, USA. It was found that the dsRNA moved from a hypovirulent strain to a virulent strain (in adjacent agar colonies) at a rate of 16 mm per 24 hours. This was 3-4 times faster than the colony growth rate during the same period.

Source: Martin, R.M.; Van Alfen, N.K. (1991) The movement of viral - like RNA between colonies of *Cryphonectria parasitica*.
Molecular Plant - Microbe Interactions 4, 507-511.



EPPO *Reporting Service*

523/08

ANTHGR...Survival of *Anthonomus grandis* in winter

In Texas, US, experiments were carried out to study the survival of *Anthonomus grandis* (EPPO A1 pest) in winter. Compared was the survival rate of prereproductive and postreproductive boll weevil females.

Females were paired with mates and then provided with an artificial diet for 36 d before they were enclosed in overwintering cages without food. It was found out that females which laid eggs during the 36 d feeding period died within 7 weeks of absence of food while females that never laid eggs during the feeding period had a high survival until the following spring.

Source: Palmer, J.O.; Cate, J.R. (1992) Overwintering survival of prereproductive and postreproductive boll weevils (Coleoptera: Curculionidae) in Central Texas.
Environmental Entomology 21, 117-120.



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523/09

ANSTSU...Quarantine treatment against *Anastrepha suspensa*.

A new quarantine treatment against *Anastrepha suspensa* (EPPO A1 pest) in carambolas has been developed in the USA.

Infested carambolas were treated with hot air at a temperature of 47° C at an air flow rate of 0,75 m³s⁻¹. Probit 9 (99,9968% mortality estimate) was reached when the carambolas were subjected for about 65 minutes to the hot-air treatment. The treatment did not damage the fruit quality and is, therefore, considered more practicable than the vapor-heat treatment or the hot-water immersion treatment.

Source: Sharp, J.L.; Hallman, G.J. (1992) Hot air quarantine treatment for carambolas infested with the Carribbean fruit fly (Diptera: Tephritidae). *Journal of Economic Entomology* 85, 168-171.



EPPO *Reporting Service*

523/10

BEMITA...Control of *Bemisia tabaci* with insecticides.

Recently, *Bemisia tabaci* (EPPO A2 pest) has become a major pest in vegetable fields in Egypt. Studies were undertaken to compare the impact of different insecticides in low-rate and normal applications on populations of *B. tabaci* and their associated parasites and predators on cucumber.

Eggs of the cotton whitefly proved to be less susceptible to insecticides with a maximum reduction of 66%. Larvae and pupae treated with ethiofencarb, diafenthiuron and chlorpyrifos methyl were reduced by 67%, 50% and 68% (for larvae) and 68%, 69% and 75% (for pupae), respectively. However, all tested insecticides and dosage rates caused severe suppression of emergence of adult parasitoids as well as decreasing longevity of adult parasitoids.

Source: El-Ghany, A.; El-Sayed, M.; El-Ghar, G.E.S.A. (1992) The influence of normal and low-rate application of insecticides on populations of the cotton whitefly and melon aphid and associated parasites and predators on cucumber.
Anzeiger für Schädlingskunde, Pflanzenschutz, Umweltschutz 65, 54-57.



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523/11

DACUDO/FR...Carambola fruit fly in French Guiana

The discovery of the carambola fruit fly, *Bactrocera* sp., formerly known as a part of the *Dacus dorsalis* complex (EPPO A1 pest), in Suriname has led to considerable international activities to research the distribution of the pest in the region as well as to implement possible eradication campaigns.

Besides the international efforts concerning the pest in Suriname the French Government has made funds available which have permitted the establishment and conduct of a programme of detection of the carambola fruit fly in the French overseas department of French Guiana. The wide distribution of both the pest and its host plants, however, do not appear to offer, according to the French Plant Protection Service, a reasonable prospect of eradication.

Nevertheless, a mission from FAO to Suriname and French Guiana has been planned for 1992-04-11/17 and possibilities of eradication have been analyzed in collaboration with the plant protection services of the countries concerned.

Source: Ministère de l'Agriculture et de la Forêt, Paris (1992-04-15)



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523/12

FRANOC...Insecticide resistance of *Frankliniella*
occidentalis.

Over recent years, growers in the USA have reported the failure of chemical control programmes to control *Frankliniella occidentalis* (EPPO A2 pest). Laboratory experiments were conducted in California to detect a possible insecticide resistance in field populations of *F. occidentalis* to commonly used insecticides in ornamental production.

In this experiment field populations of western flower thrips showed high levels of resistance to several classes of insecticides, expressed as resistance ratios at LC₉₀ (compared to susceptible populations). Very high levels of resistance were observed to pyrethroids. Permethrin resistance ranged from 178-fold to 8716-fold and for bifenthrin a 138-fold to 1279-fold resistance were observed.

Methomyl resistance was moderate to high with a range between 41-fold to 378-fold resistance ratio and also a high resistance to abamectin was observed with a resistance ratio between 18-fold and 798-fold.

The resistance to chlorpyrifos was rather low with a 17-fold to 31-fold resistance ratio, but that might be due to the fact that this compound is hardly used in ornamental production because of its phytotoxic effect on most ornamentals.

Source: Immaraju, J.A.; Paine, T.D.; Bethke, J.A.; Robb, K.C.; Newman, J.P. (1992) Western flower thrips (Thysanoptera: Thripidae) resistance to insecticides in coastal California greenhouses.
Journal of Economic Entomology 85, 9-14.



EPPO *Reporting Service*

523/13

HELIAM...Insecticide resistance of *Helicoverpa armigera*.

In South India, experiments were carried out to assay the insecticide resistance of *Helicoverpa armigera* (EPPO A2 pest).

During the years 1989-90 high levels of resistance of *H. armigera* to cypermethrin were found, but no evidence for resistance to quinalphos or methomyl were observed. However, during the cropping season 1990-91 the tolerance of *H. armigera* to methomyl increased substantially while the tolerance to quinalphos increased slightly. Also a slight increase of resistance to endosulfan has been observed.

Source: Armes, N.J.; Jadhav, D.R.; Bond, G.S.; King, A.B.S. (1992) Insecticide resistance in *Helicoverpa armigera* in South India. *Pesticide Science* 34, 355-364.



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523/14

LIRIHU...*Liriomyza huidobrensis* present in Austria

It is reported that in the area of Vienna, AT, *Liriomyza huidobrensis* (EPPO A1 pest) has been found in large populations on cucumber, pepper, tomatoes, lettuce and small radish (*Raphanus sativus sativus*). The pest has been found only under glass. First preliminary results showed that *Dacnusa sibirica* and *Diglyphus* sp. controlled the leafminer rather sufficiently.

Source: Kahrer, A. (1992) Immer neue Problemschädlinge im Gemüsebau unter Glas.
Pflanzenschutz 1c/92, 4-5.



EPPO *Reporting Service*

523/15

HETDGL...Survival of *Heterodera glycines* in rockwool

In Florida, USA, experiments were carried out to study a possible migration, survival and reproduction of *Heterodera glycines* (EPPO A1 pest) in rockwool. Rockwool which is used as a substrate for growing plants was injected with *H. glycines*. The introduced nematodes spread to uninoculated rockwool slabs and the potential to survive and, in case of the presence of a host, to reproduce are similar to the conditions in soil or organic soil - less growing medium.

Source: Lehman, P.S. (1987) Migration, survival and reproduction of nematodes in rockwool.

Proceedings of the Florida State Horticultural Society 100, 350-355.



EPPO Reporting Service

523/16

HETDPA/HETDRO...Distribution of *Globodera*
rostochiensis and *G. pallida*

The EPPO Secretariat received the notification that *Globodera rostochiensis* and *G. pallida* (EPPO A2 organisms) are not present on the Azores (Portugal). The EPPO Distribution List for *G. rostochiensis* and *G. pallida* has to be revised accordingly.

EPPO Distribution List: *Globodera rostochiensis* and *G. pallida*

EPPO region: Both species present in Algeria, Austria, Belgium, Cyprus, Denmark, Faroe Islands, France, Germany, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal (excluding Azores), Spain (including Canary Islands), Sweden, Switzerland, Tunisia, UK (including Guernsey and Jersey), USSR, Yugoslavia.

Only *G. rostochiensis* present in Bulgaria, Czechoslovakia, Egypt, Finland, Hungary (one locality only), Lebanon, Morocco, Poland. Both species are present on the island of Crete, but only *G. rostochiensis* is present on the mainland of Greece.

G. rostochiensis was found in Israel on only two occasions in 1954 and 1965 in a small area in the Sharon region, and was successfully eradicated.

Asia: Both species present in India (*G. rostochiensis* present in only Kerala in the Nilgiri Hills), Japan, Malaysia and Pakistan. Only *G. rostochiensis* present in Lebanon (potential EPPO country) and Philippines.

Africa: Both species present in Algeria, Tunisia (actual or potential EPPO countries).

Only *G. rostochiensis* present in Egypt, Libya, Morocco (actual or potential EPPO countries), South Africa.

North America: Both species present in Canada (*G. rostochiensis* present only in Newfoundland and Vancouver Island).

Only *G. rostochiensis* present in Mexico, USA (Long Island, New York State, Delaware).

Central America and Caribbean: Only *G. rostochiensis* present in Costa Rica, Panama.

South America: Throughout the high Andean region: Argentina, Bolivia, Chile, Colombia, Ecuador, Peru, Venezuela. *G. pallida* apparently has a more northerly range than *G. rostochiensis*.

Oceania: Both species present in New Zealand.

Two outbreaks of *G. rostochiensis* have been reported in Australia, one in Western Australia (1986), the other in Victoria (1991); both are being subjected to an official eradication programme.

*This list replaces all previous EPPO Distribution Lists for *G. rostochiensis* and *G. pallida*!*

Source: EPPO Secretariat, Paris (1992-04)



EPPO *Reporting Service*

523/17

XIPHAM...*Xiphinema americanum* present in Greece

Xiphinema americanum (EPPO A2 organism) is present in Greece. It was found in several grapevine nurseries during a survey for nematodes conducted during the period 1985-1989.

Source: Vlachopoulos, E.G. (1991) Nematode species in nurseries of Greece.
Annales de l'Institute Phytopathologique Benaki 16, 115-122.



EPPO *Reporting Service*

523/18

METHODOLOGY....Standart method for measurement of leaf wetness duration

Among the recommendations of the Joint WMO/EPPO/NAPPO Symposium on Practical Application of Agrometeorology in Plant Protection (held in Firenze, IT, 1990-12-04/07) was that WMO should, given the importance of leaf wetness duration on the development of plant pests, formulate the specification for a standard method for the measurement of the leaf wetness duration.

Mr. R.R. Getz (US) has now prepared this for the Commission for Instruments and Methods of Observation of WMO, in the form of a 10-page 'Report on the Measurement of leaf Wetness'. This is available from the EPPO Secretariat on request.

Source: World Meteorological Organization, Geneva (1992-02)

523/19

METHODOLOGY...Crop Growth Stage Key for crops and weeds.

A universal crop growth stage key using a decimal code for the description of the growth stages of most agricultural crops and weeds has been proposed. The codes and scale are based on the decimal code for cereals. The newly proposed code will be known as the BBCH scale.

The scale gives growth stages of different crops (which go through a similar development) the same codes, thus making it easy to remember and use this code in practice.

The authors conclude that this scale could provide a framework in which more specific scales for individual crops could be constructed.

Source: Lancashire, P.D.; Bleiholder, H.; Van den Boom, T.; Langelüddeke, P.; Stauss, R.; Weber, E.; Witzemberger, A. (1991) A uniform decimal code for growth stages of crops and weeds. *Annals of Applied Biology* 119, 561-601.



EPPO *Reporting Service*

523/20

PUBLICATION...Laboratory Manual for the detection of
fungi, bacteria and nematodes

The Ministry of Agriculture, Fisheries and Food of Spain has published a laboratory manual for the detection of fungi, bacteria and nematodes. Excellent descriptions and photographs about material, procedures, test methods and last but not least the organisms make this book to a valuable tool for Spanish speaking scientists.

N. N. (1991) *Manual de Laboratorio. Diagnostico de hongos, bacterias y nematodes fitopatogenos.*

Ministerio de Agricultura Pesca y Alimentacion, Madrid 1991, 485 pp.; ISBN 84-7479-907-4

Source: EPPO Secretariat, Paris (1992-04)