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

EPPO

Reporting Service

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CONTENTS

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EPPO *Reporting Service*

93/021 FAO/IPPC...FAO establishes IPPC Secretariat

Due to the establishment of the IPPC Secretariat, FAO has published a press release which outlines the scope and goals of the IPPC Secretariat. In words of the FAO statement:

FAO has established a Secretariat of the International Plant Protection Convention (IPPC) to facilitate international trade, prevent the spread and introduction of plant pests to new areas and to promote control measures.
Quarantine measures can become barriers to trade and, therefore, should only be applied if they can be technically justified. The Uruguay Round of trade negotiations in the GATT has again highlighted the restrictive nature of quarantine actions.
"When other trade barriers disappear, it is tempting to use plant quarantine in an unjustified manner to restrict the free flow of goods", says Mr. Edouard Saouma, the Director General of FAO. "The establishment of the IPPC Secretariat will ensure that plant quarantine measures become more intelligible and relevant."
The Convention is an international agreement to which 98 countries already adhere.
At the request of the contracting parties in the GATT, the IPPC Secretariat, will work in close cooperation with Regional Plant Protection Organizations, to rectify many of the inconsistencies found in the implementation of Plant quarantine. The process to arrive at plant quarantine measures needs to be clearly understood by all and applied in the same manner to avoid trade disputes. Therefore, according to FAO, one of the first tasks will be to harmonize this process globally. Also, internationally recognized guidelines and recommendations need to be developed to keep trade restrictions to a minimum. The task of the Secretariat will be to facilitate this "harmonization" process, which will result in international standards that, if adopted by a country, will not be challengeable in the GATT.
The IPPC Secretariat is expected to play an important and vital role in international plant quarantine and trade-related issues. It is looking forward to assist member countries in the equitable implementation of the IPPC programme leading to a more transparent and mutually acceptable and beneficial trading climate.

Source: FAO (PR 92/38), Rome (1993-01)

93/022 INTERCEPTIONS...Interception report

The EPPO Secretariat regularly receives reports on interceptions of consignments in Member Countries, for various phytosanitary reasons. In the Reporting Service, we shall periodically give a view of what interceptions have recently been reported
During the month of January six countries have sent notifications of interceptions to EPPO.

Austria send an interception report for 1992 to EPPO. 43 consignments were intercepted in 1992. The only pests concerned were *Anarsia lineatella*, *Cydia molesta*, *Cacoecimorpha pronubana* and *Quadraspidiotus perniciosus* (all EPPO A2 pests), all in consignments from Italy.

During 1993-01 the Finnish Plant Quarantine Service intercepted consignments of chrysanthemum plants for planting originating from Tenerife (ES) which were infested by *Frankliniella occidentalis* (EPPO A2 pest). A consignment of *Senecio hybridus* (ornamental pot plants) from The Netherlands were intercepted due to *Liriomyza huidobrensis* (EPPO A2 pest).

Germany intercepted during the month of 1992-11 only three consignments due to pests. In all cases this concerned the infestation of *Gypsophila* cutflowers by *Liriomyza* spp.. One consignment originated from Ecuador and two from Israel.

Interceptions due to pests occurred in 1992-12 in The Netherlands on *Buxus* spp. infested by *Globodera* sp. from Poland, chrysanthemum plants for planting infested by *Liriomyza trifolii* from Israel and wooden packing material from China which was infested by *Cerambycidae* and *Scolytidae* spp.

Sweden intercepted during 1992-12 consignments of *Gypsophila* cutflowers from Colombia which were infested larvae of miners in and on stems.

Several consignments were intercepted in Switzerland during 1993-01, but none due to an infestation by a pest.

Source: EPPO Secretariat, Paris (1993-01)

93/023 TMSWXX/TOSPOX...Monoclonal antibodies specific to tospoviruses

At the 1992 Annual Meeting of the American Phytopathological Society a presentation about monospecific and cross-reactive monoclonal antibodies to tospoviruses (tomato spotted wilt tospovirus, impatiens necrotic spot tospovirus - potential EPPO quarantine pests) was given. A total of 63 monoclonal antibodies specific to the nucleocapsid (N) protein, the predominant determinant in the tospovirus genus, were developed. Three MAbs with different specificities were identified for each virus as well as two MAbs which reacted equally well with both viruses and which were cross-reactive and not mixtures. Additionally, other cross-reactive MAbs were identified which detected a strain of TSWV-like virus which causes peanut bud necrosis.

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Source: Hall, J.M. Moyer, J.W. (1992) Monospecific and cross-reactive monoclonal antibodies to tospoviruses.
Presentation at the 1992 APS/MPS Annual Meeting, Portland, OR, USA. Phytopathology 82, 1086.

93/024 TMSWXX/FRANOC...Replication of tomato spotted wilt tospovirus in cells of *Frankliniella occidentalis*

At the 1992 Annual Meeting of the American Phytopathological Society a report was presented which gave evidence of the replication of tospoviruses in cells of *Frankliniella occidentalis* (EPPO A2 pest). Immunocytochemical analyses for tomato spotted wilt tospovirus (potential EPPO A2 pest) encoded proteins in thrips were carried out and showed that an encoded non-structural protein of TSWV, an indicator of replication, is present in cells of thrips fed on TSWV-infected plants. In cells of larval thrips fed on plants infected with tomato spotted wilt tospovirus virions, viroplasm, dense masses and inclusions of fibrous paracrystalline material were observed with transmission electron microscopy.

Source: Ullman, D.E.; Westcot, D.M.; Cantone, F.; Sherwood, J.L.; German, T.L. (1992) Immunocytochemical evidence for tomato spotted wilt virus (TSWV) replication in cells of the Western flower thrips, *Frankliniella occidentalis*.
Presentation at the 1992 APS/MPS Annual Meeting, Portland, OR, USA. Phytopathology 82, 1087.

93/026 TMYLCX...Distribution of tomato yellow leaf curl virus

At the annual meeting of the EPPO Panel on Phytosanitary Regulations, an expert from Spain confirmed the presence of tomato yellow leaf curl geminivirus in his country. According to a statement from Spain, the virus is present in the province of Almeria and Spanish authorities are trying to limit the further spread within the country. Tomato yellow leaf curl geminivirus is one of a group of viruses transmitted by *Bemisia tabaci* (EPPO A2 pest), which are now beeing spread in the EPPO region by its vector.

A literature research carried out at the EPPO Secretariat revealed that tomato yellow leaf curl virus has the following distribution:

EPPO Distribution List: Tomato yellow leaf curl geminivirus

EPPO region: Cyprus, EC (ES, IT) Egypt, Israel, Lebanon, Tunisia and Turkey.

Africa: Cape Verde, Egypt, Ivory Coast, Senegal and Tunisia.

Asia: India, Iraq, Israel, Jordan, Lebanon, Philippines, Saudi Arabia, Taiwan, Thailand and Turkey.

Sources: Ministerio de Agricultura, Pesca y Alimentacion, Madrid (1993-02)
EPPO Secretariat, Paris (1993-02)

93/027 CORBMI...Control of *Clavibacter michiganensis* subsp. *michiganensis* by soil solarization

In Greece, experiments were carried out to control *Clavibacter michiganensis* subsp. *michiganensis* (EPPO A2 pest) through soil solarization. Soil mulching with transparent polyethylene films during a period of 1 - 2 months reduced drastically the development of *C. m. subsp. michiganensis* symptoms throughout the cropping season. Furthermore, it was found that the solarization did not affect *C. m.* subsp. *michiganensis* antagonistic bacteria.

Source: Tjamos, E.C.; Polymnia, A.; Panagopoulos, C.G. (1992) Control of bacterial canker of tomato by application of soil solarization. Presentation at the 1992 APS/MPS Annual Meeting, Portland, OR, USA. Phytopathology 82, 1076

93/028 CORBMI...Detection of *Clavibacter michiganensis* subsp. *michiganensis* in tomato seedlings

At the 1992 Annual Meeting of the American Phytopathological Society a technique was described to detect *Clavibacter michiganensis* subsp. *michiganensis* (EPPO A2 pest) in symptom-less tomato seedlings. Symptomless seedlings were surface sterilized, chopped in carbonate/bicarbonate buffer and the extract was used in an ELISA test utilizing monoclonal antibodies specific to the bacterium. With the technique, infected seedlings could be detected from commercial lots.

Source: Gharbi, A.G.; Nameth, S.T. (1992) The use of monoclonal-base serodiagnostic assays for detection of *Clavibacter michiganensis* subsp. *michiganensis* in symptomless tomato seedlings. Presentation at the 1992 APS/MPS Annual Meeting, Portland, OR, USA. Phytopathology 82, 1076.

93/029 CORBSE...Antagonistic bacteria to *Clavibacter michiganensis* subsp. *sepedonicus*

In Canada, experiments were conducted in order to isolate antagonistic bacteria to *Clavibacter michiganensis* subsp. *sepedonicus* (EPPO A2 pest) and to test their efficiency against ring rot of potato in field experiments.

Three isolates were found which gave a complete control during the first 2-3 weeks of plant growth in field experiments. The inoculation of potatoes with any of the three antagonists increased the plant stand by at least 50%. One antagonist, an isolate of *Arthrobacter protophormiae* proved especially successful and significantly reduced the number of plants and tubers with symptomatic or symptomless ring rot infections.

Source: Gamard, P.; De Boer, S.H. (1992) Effect of natural occurring antagonistic bacteria on the bacterial ring rot disease of potato. Presentation at the 1992 APS/MPS Annual Meeting, Portland, OR, USA. Phytopathology 82, 1108.

93/030 CORBSE...Symptom expression in *Clavibacter michiganensis* subsp. *sepedonicus*

Experiments were carried out in Colorado (US) in order to investigate the factors which affect symptom expression of *Clavibacter michiganensis* subsp. *sepedonicus* (EPPO A2 pest) in potato. Regression analyses of the bacterial ring rot symptom expression and environmental data showed, that as air and soil temperatures increase, the percentage of symptomatic plants increases and the length of the symptomless stage decreases. High solar radiation increased the number of symptomless days and low inoculum level infections favoured symptomless infections of potato.

Source: Van Buren, A.M.; Harrison, M.D. (1992) Factors affecting symptom expression of bacterial ring rot in the field in Colorado. Presentation at the 1992 APS/MPS Annual Meeting, Portland, OR, USA. Phytopathology 82, 1161.

93/031 PSDMSO...*Pseudomonas solanacearum* outbreak in the EC (UK)

British authorities have informed EPPO that brown rot of potato, caused by *Pseudomonas solanacearum* (EPPO A2 pest) has been found on a single farm in Oxfordshire, southern England. The disease was found in several potato cultivars grown in adjacent fields at this location. Inspections of surrounding farms have not revealed any further infection and the source of this isolated outbreak is unclear. The authorities are concerned about the occurrence of *P. solanacearum* under such climatic conditions. Strict measures to contain the disease have been applied on the farm and an eradication programme is being evaluated.

Source: Ministry of Agriculture, Fisheries and Food, UK (1993-01)

93/032 MONIFC...Detection of latent infections of *Monilinia fructicola* in plum fruits

In Canada, experiments were carried out to develop a detection method for latent *Monilinia fructicola* (EPPO A1 pest) in immature plum fruits. Plums were surface-disinfected, treated with paraquat and subsequently incubated at 95% relative humidity in 250 ml jars in light. As controls non-paraquat samples were incubated at 25° C in dark or light.

It was found that the paraquat treatment enhanced the *M. fructicola* development. 40% of the paraquat-treated fruits rotted after 5 days while non-paraquat-treated fruits rotted after 11 and 14 days, respectively.

Source: Northover, J.; Cerkauskas, R.F. (1992) Detection and control of *Monilinia fructicola* latent infections in plums.
Presentation at the 1992 APS/MPS Annual Meeting, Portland, OR, USA.
Phytopathology 82, 1069

93/033 PHIAGR...ELISA kit for *Phialophora gregata*

It was reported at the 1992 Annual Meeting of the American Phytopathological Society that an ELISA test method has been developed for the detection of *Phialophora gregata* (EPPO A1 pest) on soybeans. According to the authors the ELISA kit showed a strong specificity to *P. gregata* when tested against three *P. gregata* isolates, with little crossreaction to six soybean saprophytes, 16 pathogenic fungal isolates and healthy soybean leaves.

Address of authors: Pioneer Hi-bred International Inc.
P.O. Box 1004
Johnston, IA 50131
USA

Source: Jiang, X.Q.; Fleener, B.K.; Scholbrock, L.L.; Berry, J.A. (1992) ELISA diagnostic kit development for the detection of *Phialophora gregata* in soybean.
Presentation at the 1992 APS/MPS Annual Meeting, Portland, OR, USA.
Phytopathology 82, 1144.

93/034 ANARLI/LASPMO...Control of *Anarsia lineatella* and *Cydia molesta* by mating disruption

Field experiments were carried out in southern Italy during the years 1988-1991 in order to control *Anarsia lineatella* and *Cydia molesta* (EPPO A2 pests) by the mating disruption technique. The experiments were carried out in plots of 1 ha of nectarines.

It was found that the control programme with the mating disruption technique was as successful as the applied conventional control methods by insecticide application.

Source: Rotundo, G.; Viggiani, G. (1992) Experiences with mating disruption for controlling *Cydia molesta* and *Anarsia lineatella* in nectarine orchards of southern Italy.
IOPC/WPRS Bulletin 1992/XV/5, 61-64.

93/035 BEMITA...New geminiviruses transmitted by *Bemisia tabaci*

In the USA, experiments were carried out to detect and characterize *Bemisia tabaci* (EPPO A2 pest)-transmitted geminiviruses through polymerase chain reaction (PCR).

PCR methods were developed that allowed the amplification of viral DNA fragments from the two components, DNA-A or DNA-B, for previously undescribed geminiviruses. The technique resulted in the detection of 10 new geminiviruses from tomato from Mexico, Costa Rica and the Dominican Republic and the detection of geminiviruses from Sida sp. and Calopogonium sp. from Costa Rica; from soybeans from Puerto Rico; from Macroptilium lathyroides from the Dominican Republic and from cassava and a legume weed from Malawi. For four of these viruses names were proposed: sida golden mosaic geminivirus, macroptilium golden mosaic geminivirus, calopogonium golden mosaic geminivirus and soybean golden mosaic geminivirus.

Source: Rojas, M.R.; Gilbertson, R.L.; Russel, D.R.; Maxwell, D.P. (1992) Detection and characterization of whitefly-transmitted geminiviruses by use of polymerase chain reaction.
Presentation at the 1992 APS/MPS Annual Meeting, Portland, OR, USA.
Phytopathology 82, 1087.

93/036 BEMITA...Characterization of *Bemisia tabaci* populations

A report on the biotic characterization of *Bemisia tabaci* (EPPO A2 pest) populations based on esterase profiles, DNA fingerprinting, virus transmission and bioassay to key host plants was presented at the 1992 Annual Meeting of the American Phytopathological Society. Twenty populations of *B. tabaci* from North and Central America, the Caribbean basin, West and North Africa, the Middle East and Asia were thus characterized. Populations from Arizona (US), California (US), Florida(US), Puerto Rico, Antigua and Yemen had identical esterase and DNA profiles, vectored the ten candidate geminiviruses with high efficiency and induced phytotoxic disorders in the indicator plants. The authors concluded that these six populations of *B. tabaci* are genetically homogeneous and that a biologically and genetically identical biotype is present in several world regions.

Source: Brown, J.K.; Coats, S.; Bedford, I.D.; Markham; P.G.; Bird, J. (1992) Biotic characterization of *Bemisia tabaci* populations based esterase profiles, DNA fingerprinting, virus transmission and bioassay to key host plant species.
Presentation at the 1992 APS/MPS Annual Meeting, Portland, OR, USA.
Phytopathology 82, 1104.

93/037 DACUSP...*Bactrocera* spp. in Nauru

A survey carried out by the Plant Protection Service of the South Pacific Commission (SPC) in the Republic of Nauru (north-east of Australia) revealed that *Bactrocera xanthodes*, *B. fraunfeldi*, *B. cucurbitae* and *B. dorsalis* (EPPO A1 pests) are established in the country.

The SPC reported further that *B. cucurbitae* is now present in the Pacific in the following countries: Christmas Islands (Kiribati), Nauru, Guam, Northern Mariana Islands, Papua New Guinea, Solomon Islands and USA (Hawaii).

B. dorsalis is present in: Nauru, Taiwan and USA (Hawaii). Records of B. dorsalis from Papua New Guinea were attributed to a non-pest species of the Dorsalis complex.

Source: SPC, Ag Alert (1993-01)

93/038 DACUDO...Quarantine treatment for mangosteens infested by *Bactrocera dorsalis*

A joint Thai-Japanese project was carried out to study the possibilities of a cold temperature quarantine treatment for mangosteens (*Garcinia mangostana*) infested by *Bactrocera dorsalis* (EPPO A1 pest).

Infested mangosteens were stored at 5, 6 and 7° C for various time periods. At these temperatures, the probit 9 mortality (99, 9968%) of the *B. dorsalis* larvae was estimated to occur after approximately 19, 25 and 25, respectively. A confirmatory test showed that not a single larva out of 34 500 survived a cold storage of 13 d at 6° C.

Source: Burikam, I.; Sarnthoy, O.; Charensom, K.; Kanno, T.; Homma, H. (1992) Cold temperature treatmentfor mangosteens infested with the oriental fruit fly (Diptera: Tephritidae).
Journal of Economic Entomology 85, 2298-2301.

93/039 POPIJA...Soil moisture and soil texture preferences of *Popillia japonica*

Experiments in Ohio, US, were conducted in order to determine if the soil moisture content and the soil structure have any influence on oviposition of *Popillia japonica* (EPPO A1 pest).

It was found that in choice tests no eggs were laid when the soil moisture is lower than 5% and more eggs were laid the wetter the soil, up to field capacity. In non-choice tests Japanese beetles also laid fewer eggs in dry soils. Medium clay content in the soils also resulted in a higher oviposition.

Source: Allsopp, P.G.; Klein, M.G.; McCoy, M.L. (1992) Effect of soil moisture on oviposition by Japanese beetle and rose chafer (Coleoptera: Scarabaidae)

93/040 TROGGR...*Trogoderma granarium* not present in Germany

German authorities have informed EPPO that *Trogoderma granarium* (EPPO A2 pest) is not present in Germany. In the past, the pest had been introduced through imports into heated storage facilities of breweries or food processing facilities. In every case, however, the storage facilities were immediately fumigated and the pest had been eradicated by the German Plant Protection Service.

The German Ministry of Agriculture and Forestry stresses the fact that the climatic conditions in Germany make it impossible for *T. granarium* to survive outdoors.

Source: German Ministry for Agriculture and Forestry, Bonn (1993-01)