ARAB AND NEAR EAST
PLANT PROTECTION NEWSLETTER

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EDITORIAL

PUBLIC AWARENESS OF GENETICALLY MODIFIED PRODUCTS

All over the world there is a heated debate over the use of genetically modified products. Monitoring interviews on TV screens with common people in many countries, it becomes obvious that people's attitudes are not formed on the basis of scientifically factual information. The response is often "GMOs are bad" and that is that. It is important for many growers and members of the public to better understand the technology. Unfortunately, the scientific community is less vocal than the "Greens" and do not have equal political influence.

The anti-biotech group continues to promote that biotech crops would soon take over and destroy precious farmland and that the only people that benefit from such crops are the multinational giant companies. Though this is certainly a justified concern, they do not promote the benefits of genetically modified crops in the field (as for example the case of the use of Bt cotton in China), which include less pesticide use, higher yields and consequently a more environment-friendly and less costly production for the farmers. It is not by chance that the area planted to genetically modified crops worldwide increased from few hectares ten years ago to over 500 million hectares today. Very few know that the West Nile Virus vaccines that combat a serious disease in Africa today are gene technology products.

Because of the diversity of the gene technology products being developed, discussion about them needs to be individualized, looking in each case at the risks, benefits and acceptability of the application with regard to health, environmental, socio-economical and ethical aspects. In addition, there should be official regulations in place to properly deal with GMOs, which is still lacking in many developing countries.

Biotechnology has been used by farmers for many thousand years, through selection breeding, but genetic engineering permit significant advance upon traditional approach. To some, it is merely an advance over traditional practices, but to others it is a technology that permits "unnatural" developments.

Both views are valid, and people have the freedom to choose which position they adopt. But it is essential that people's attitudes are formed on the basis of scientifically factual information.

The Editorial Board

This page is an open forum for all members of the Arab Society for Plant Protection to express their views to further develop the plant protection profession and enhance its positive role in agricultural development in the Arab and Near East Region.

DISEASE AND PEST OUTBREAKS

EGYPT

Importation, Colonization and Establishment of *Coccophagus cowperi Gir.* (Hymenoptera: Aphelinidae) on *Saissetia coffeae* (Walk.) (Homoptera: Coccidae) in Egypt. The hemispherical soft scale, *Saissetia coffeae* (Walker) (Homoptera: Coccidae), is one of the most important pests attacking olive trees in Egypt. During the period 2001–2003, a total of about 300,000 individuals of the parasitoid *Coccophagus cowperi* Girault (Hymenoptera: Aphelinidae), obtained from India, was released at 35 sites for the biological control of *S. coffeae* on olive trees in Egypt. The maximum parasitism rates reached 53 and 62%, while average parasitism rates were 17.2 and 30.8% in the Marsy Mattrouh and El-Arish locations, respectively. These results indicate establishment of this parasitoid on this important economic plant in Egypt. (Shaaban Abd-Rabou, Plant Protection Research Institute, Dokki, Giza, Egypt. *Journal of Pest Science*, 78: 77-81, 2005).

IRAN

First Report of *Cucumber mosaic virus* in Banana from Iran. *Banana bunchy top virus* (BBTV), *Banana streak virus* (BSV) and *Cucumber mosaic virus* (CMV) cause widespread economic losses on banana (*Musa* sp.) throughout the world and have been reported on banana in different countries including Pakistan along its southeastern border with Iran. A survey was conducted from 2004–2005 to identify viruses infecting banana in greenhouses in different growing areas in northern Iran, Mazandaran Province (Sari, Babol, Behshahr, and Ghaemshahr cities). A total of 180 samples from seven banana-growing greenhouses with symptoms of mosaic, chlorosis, stunting, and fruit malformation were collected. All samples were tested for CMV with polyclonal antibodies using double–antibody sandwich enzyme-linked immunosorbent assay (DAS-ELISA) (CMV strain D subgroup I; provided by H. Lecoq, INRA, Avignion, France). For sap inoculation onto indicator test plants, selected ELISA-positive leaf samples were ground in chilled 0.01 M phosphate buffer, pH 7.0, containing 0.15% 2-mercaptoethanol. Chlorotic and necrotic local lesions developed on *Chenopodium amaranticolor* and *Vigna unguiculata* (cv. Mashad local) 10 and 12 days post-inoculation, respectively. *Cucumis sativus* and *Nicotiana rustica* also developed systemic mosaic symptoms. All indicator test plants were rechecked for the presence of CMV using DAS-ELISA. On the basis of serological tests and indicator host plants reactions, CMV was identified in 32% of samples including Sari (13.8%), Babol (2.7%), Behshahr (10%) and Ghahemshahr (5%), respectively. Fifty-five samples did not react with CMV antiserum but the presence of symptoms resembling BBTV and BSV emphasizes the need for further investigations to confirm the presence and identities of other viruses. (T. Ghotbi and K. Bananej, Plant Virus Research Department, Plant Pests and Disease Research Institute (PPDRI), Tehran, Iran. *Plant Disease*, 89: 914, 2005).

Incidence and Distribution of Viruses Infecting Iranian Vineyards. During February and September 2003, the incidence and distribution of viruses infecting grapevine (*Vitis vinifera*) in Iran was determined. A total of 238 symptomatic and 1314 asymptomatic leaf samples were collected from 56 different vineyards from 10 Iranian provinces and tested by enzyme-linked immunosorbent assay (ELISA) for the presence of *Grapevine fanleaf virus* (GFLV), *Grapevine fleck virus* (GFkV), *Grapevine virus A* (GVA), *Arabis mosaic virus* (ArMV), *Grapevine leafroll associated virus-3* (GLRaV-3), *Raspberry ringspot virus* (RpRSV) and *Tobacco ringspot virus* (TRSV). Viruses were found in almost all Iranian vineyards examined. The incidence of viruses in a decreasing order was: GFLV (11.1%), GFkV (8.6%), GVA (8.4%), ArMV (6.6%), GLRaV-3 (6.4%), RpRSV (2.8%) and TRSV (0.35%). GFLV, either alone or in mixed infection in 11.1% of the samples collected nationwide, was the most prevalent virus. In addition, 25 (20%) of 125 symptomatic leaf samples from the Orumeyeh district were shown to contain *Tomato ringspot virus*. Viruses other than GFLV and GVA are reported from grapevine for the first time in Iran. (F. Rakhshandehroo[1], R. Pourrahim[2], H. Zamani Zadeh[1], S. Rezarr[1] and M. Mohammadi[1,3]. (1) Department of Plant Pathology, College of Agriculture and Natural Resources, Science and Research Campus, Islamic Azad University, Tehran, Iran; (2) Division of Plant Virology, Plant Pest and Disease Research Institute, AREEO, Ministry of Agriculture, Tehran, Iran; (3) Department of Plant Pathology and Entomology, College of Agriculture, University of Tehran, Karaj, Iran. *Journal of Phytopathology*, 153: 480-484, 2005).

OMAN

First Report of Witches'-Broom Disease of Sesame (*Sesamum indicum*) in Oman. Sesame is the major oil seed crop in Oman. During 2004, disease symptoms were observed at Nizwa, 175 km south of Muscat. Symptoms included phyllody and excessive development of short shoots and internodes resulting in little leaves. Total genomic DNA was extracted from healthy and symptomatic plants with a modified cetyltrimethylammoniumbromide (CTAB) buffer method. DNA samples were assayed by polymerase chain reaction (PCR), with the 16S rDNA amplified using primers P1 and P7. Direct PCR products were used as template DNA for nested PCR with primers R16F2n and R16R2. Direct PCR products were analyzed by restriction fragment length polymorphism (RFLP) with four restriction enzymes, *Tru*9I, *Hae*III, *Hha*I, and *Rsa*I. DNAs from alfalfa and lime plants infected by witches'-broom phytoplasmas were used as positive controls and DNA from healthy plants and water were negative controls. The results showed the presence of a 1.8 kb product amplified with the direct PCR and a 1.2 kb product of the nested PCR from infected sesame and the positive controls. No PCR product was observed in the negative control. The PCR assay confirmed the presence of phytoplasma causing witches'-broom disease in sesame. The RFLP results showed the sesame phytoplasma to be most similar to the alfalfa phytoplasma, a member of 16SrII group. To our knowledge, this is the first report of a phytoplasma of the 16Sr II group causing witches'-broom disease on sesame in the Sultanate of Oman. (M.A. Al-Sakeiti, A.M. Al-Subhi, N.A. Al-Saady and M.L. Deadman, Department of Crop

Sciences, Sultan Qaboos University, Oman. *Plant Disease*, 89: 530, 2005).

MOROCCO

First Report of *Orobanche foetida* on Common Vetch (*Vicia sativa*) in Morocco. Broomrapes (*Orobanche* spp.) are obligate parasites that infect roots of dicotyledoneous plants. *Orobanche* spp. are particularly important in southern and eastern Europe, the Middle East, and north Africa. *O. crenata* causes severe damage to legume crops, *O. cumana* threatens sunflower, *O. ramosa* attacks potato, tobacco, tomato, and hemp, *O. aegyptiaca* is severe on legumes and vegetables, and other broomrapes such as *O. minor* are widespread on forage legumes. *O. foetida* Poir. is considered important as an agricultural parasite of faba bean (*Vicia faba*) and common vetch (*V. sativa*) crops in the Beja Region of Tunisia. Aside from that, it has never been found infecting crops, even where it is widely distributed in the western Mediterranean area (Portugal, Spain, Morocco, Algeria and Tunisia) parasitizing wild herbaceous leguminosae in the genera *Anthyllis*, *Astragalus*, *Ebenus*, *Lotus*, *Medicago*, *Ononis*, *Scorpiurus*, and *Trifolium*. In May 2004, we foud *O. foetida* commonly occurring in Morocco infecting wild leguminosae. It was not seen infecting legume crops such as faba beans, chickpeas, or lentils, even where *O. foetida* was abundant in the close proximity to the crop fields, or in the field itself. In these instances, we verified that *O. foetida* was infecting weeds such as *Scorpiurus* spp. and not the crop plants themselves by gently pulling out the plants and examining the roots. However, *O. foetida* was identified infecting common vetch (*V. sativa*) on a small farm in Taounate, Saiss Region, 50 km north of Fes. Infection of vetch plants was confirmed by digging up the plants to verify the attachment of the broomrape plant to the vetch roots. The level of infection was moderate (0.1 to 0.2 broomrape plants per vetch plant). The farmer stated that he had observed this problem only in the last 3 years. Morphology was typical of *O. foetida*, i.e., dark reddish plant, 20 to 50 cm tall, corolla 12 to 20 mm, dark, purplish-red, lower lip not ciliate, filaments inserted 3 to 7 mm above base of corolla, and stigma deep yellow at anthesis. Voucher specimens were deposited in the Herbarium of the University of Cordoba. To our knowledge, this is the first report of *O. foetida* infecting common vetch and it is relevant since it indicates the first introduction of this parasite into crops in Morocco. The spread of this new crop parasite population should be monitored because it could represent a further constraint for legume production in this area. (D. Rubiales[1], M. Sadiki[2] and B. Roman[3]. (1) CSIC-Instituto de Agricultura Sostenible, Cordoba, Spain; (2) IAV Hassan II, Rabat, Morocco; (3) CIFA-Alameda del Obispo, Cordoba, Spain. *Plant Disease*, 89:528, 2005).

LEBANON

First Report of a 16SrII Group Phytoplasma Associated with Shoot Proliferation of a Cactus (*Opuntia monacantha*) in Lebanon. In October 2003, during a survey to evaluate the incidence of phytoplasma diseases in Lebanon, symptoms suggestive of phytoplasma infection in *Opuntia monacantha* (Haworth) were observed in Saghbine, Bekaa Valley. Symptoms were excessive stem and shoot proliferation. Three symptomatic and as well as symptomless plants were collected and analyzed for the presence of phytoplasmas. Nucleic acids were extracted from 0.5 g of shoot tissue and tested using polymerase chain reaction (PCR) with universal phytoplasma primers (fU5rU3) for partial amplification of the ribosomal 16SrDNA. PCR resulted in amplification of an expected 881-bp rDNA fragment from the symptomatic but not from symptomless samples. For characterization, sequence of the amplified DNA was determined (Genbank Accession No. AY939815). The sequence showed a high similarity with several isolates of the 16srII group of phytoplasmas. The highest similarity has been observed with 16S rDNA of two isolates of cactus witches'-broom phytoplasma found in China and Mexico (Genbank Accession Nos. AJ293216 and AF320575, respectively) (99.8%) as well as faba bean phyllody phytoplasma (Genbank Accession No. X83432) (99.7%) and "*Candidatus Phytoplasma aurantifolia*" (Genbank Accession No. U15442) (99.3%). The presence of phytoplasmas was confirmed using nested-PCR with primers R16mF2/R1 and R16F2n/R2. The *Tru*9I digestion pattern of the amplified product R16F2n/F16R2 detected in *O. monacantha* was identical to the digestion pattern obtained from periwinkle infected by "*Ca. P. aurantifolia*" (subgroup 16SrII-B) and soybean phyllody phytoplasma (subgroup 16SrII-C), but different from the *Tru*9I digestion pattern observed for cleome phyllody phytoplasma (subgroup 16SrII-A) and tomato big bud phytoplasma (subgroup 16SrII-E). To our knowledge, this is the first report of an infection with a phytoplasma belonging to16SrII group in Lebanon. (E. Choueiri[1], R. Massad[1], F. Jreijiri[1], J. L. Danet[2], P. Salar[2], J. M. Bové[2] and X. Foissac[2]. (1) Lebanese Agricultural Research Institute, Tal Amara, Zahle, Lebanon; (2) UMR-GDPP, Institut National de la Recherche Agronomique et Université de Bordeaux, Villenave d'Ornon Cedex, France. *Plant Disease*, 89:1129, 2005).

TUNISIA

First Report of Diplodia Canker of Cypress Caused by *Diplodia pinea* f. sp. *cupressi* on Mediterranean Cypress in Tunisia. Symptoms of decline were observed on Mediterranean cypress trees (*Cupressus sempervirens* L.) in Tunisia in 2003 and 2004; disease specimens were vouchered as FIAF 38649. The declining, windbreak trees in the Cap Bon Region were 25 to 30 years old. Severity of symptoms varied among trees. Thus, areas of reddish, withered foliage alternated with areas that were still green. Other trees were completely withered. The bases of withered branches and tree trunks bore slightly sunken cankers with longitudinal bark cracks that oozed drops of resin. When the outer layer of a cankered area was scraped away, dark brown inner bark tissue was seen to extend up to several centimeters around the canker. Cross sections through cankers on trunks and branches revealed extensive darkened, wedge-shaped sectors in the wood. The affected bark bore numerous black pycnidia. Conidia were mostly smooth, ovoid, hyaline, and aseptate; a few were brown with a medial septum. The mean conidial dimensions (n = 100) were 27×11 µm; the extreme range was 19 to 31×8 to 13 µm. Isolates obtained from affected host tissue and conidia developed mainly floccose colonies that were white, then greyish green, and finally dark gray black on potato dextrose agar (PDA) at 25°C. Blackish pycnidial fructifications containing typical conidia were produced after 5 weeks on autoclaved cypress seeds placed on the colonies under light. Pathogenicity was tested using five 3-year-old potted Mediterranean cypress trees. These were inoculated by placing 3-mm-diameter plugs of

mycelium of isolate DF IMG86 (DAOM 234788) from the edge of a 15-day-old colony on PDA on 5-mm-diameter wounds made in the bark. The wounds were covered with cotton wool moistened with sterile water and wrapped in adhesive tape. Similar wounds on five control trees received a plug of sterile PDA. Symptoms occurred as early as the third week after inoculation. The leaves first became yellow and then turned amaranth red, after which they progressively withered. Two months after inoculation, cankers were clearly visible at the inoculation site. Isolates from these cankers were morphologically similar to those used for inoculation. The control plants did not show any disease symptoms and their wounds healed normally. Morphological, cultural, and pathological characteristics of the fungus isolated from cypress with decline symptoms were similar to those of the fungus referred to as *Diplodia pinea* f. sp. *cupressi* or *Sphaeropsis sapinea* f. sp. *cupressi*. Identification was confirmed by marker analysis by using intersimple sequence repeat polymerase chain reaction. Banding patterns for isolate DF IMG86 were produced using primers HYH(GY)(^7) and (CAG)(^5) and were identical to those for *Diplodia pinea* f. sp. *cupressi* isolates 94-3 (DAOM 229437) and 95-158 (DAOM 229439) and differed from those obtained for isolates of *Diplodia pinea* (*S. sapinea* A group), *D. scrobiculata* (*S. sapinea* B group), *Botryosphaeria obtusa*, and *B. stevensii*. To our knowledge, this is the first report of this pathogen in Tunisia. The development of *D. pinea* f. sp. *cupressi* on cypress windbreaks in the Cap Bon Region may be related to a drought that has afflicted Tunisia for the past 5 years. (M. Intini[1], A. Panconesi[1], M. L. Ben Jamâa[2], G. Stanosz[3] and D. Smith[3]. (1) Institute for Plant Protection, CNR, Via Madonna del Piano, Sesto Fiorentino, Firenze, Italy; (2) INRGREF, Ariana, Tunisia; (3) Department of Plant Pathology, University of Wisconsin, Madison. *Plant Disease*, 89: 1246, 2005).

First Report of *Cucurbit aphid-borne yellows virus* in Tunisia Causing Yellows on Five Cucurbitacious Species. Viruses, distributed worldwide on cucurbits, cause severe damage to crops. Virus surveys in 2003 and 2004 were made in all the major cucurbit-growing areas in Tunisia. Large populations of aphids (*Aphis gossypii* Glover) and severe yellowing symptoms of older leaves of cucurbits were observed in outdoor and under plastic-tunnel cultivation, suggesting the presence of *Cucurbit aphid-borne yellows virus* (CABYV, genus *Polerovirus*, family *Luteoviridae*). Leaf samples collected from symptomatic and asymptomatic plants of melon (*Cucumis melo* L.), cucumber (*C. sativus* L.), squash (*Cucurbita pepo* L.), watermelon (*Citrullus lanatus* L.), and ware cucurbit (*Ecballium elaterium* L. T. Richard) were screened for the presence of CABYV using enzyme-linked immunosorbent assay (ELISA) and reverse transcription - polymerase chain reaction (RT-PCR). Reference isolate, CABYV-N (GenBank Accession No. X76931) was provided by H. Lecoq (INRA-Monfavet Cedex, France). Sample extracts from fresh leaf tissues were tested using ELISA with an antiserum prepared against this isolate. In addition, total RNA was extracted from fresh leaf tissues using the Titan RT-PCR kit from Roche Diagnostics (Penzberg, Germany). Forward primer (5'-GAGGCGAAGGCGAAGAAATC-3') and reverse primer (5'-TCTGGACCTGGCACTTGATG-3') were designed with the available sequence of the reference isolate. ELISA tests demonstrated that 91 plants were positive among 160 plants tested with severe yellowing symptoms. All asymptomatic plants were negative. RT-PCR results yielded an expected 550 bp product that was amplified from the reference isolate. Of the 160 plants tested using ELISA, 106 plants were screened with RT-PCR including the 91 plants that were positive in ELISA. These 91 plants also were positive after RT-PCR amplification as were 12 more plants. This demonstrated that the RT-PCR test is more sensitive. No amplicons were produced from extracts of asymptomatic plants, RNA preparations of *Cucurbit yellow stunting disorder virus* (CYSDV), or *Beet pseudo yellows virus* (BPYV) positive controls provided by B. Falk (University of California, Davis). CYSDV and BPYV can induce similar yellowing symptoms in cucurbits. The results of the ELISA and RT-PCR tests showed that CABYV is widely distributed on five cucurbit species in the major growing areas of Tunisia including the northern, Sahel, central, and southern regions where it was detected, respectively, in 10 of 25, 11 of 21, 24 of 37, and 58 of 77 samples tested. CABYV was detected at the rates of 63 of 72 on melon, 10 of 21 on cucumber, 17 of 24 on squash, 10 of 25 on watermelon, and 3 of 18 on ware cucurbit. CABYV also seems to be widespread throughout the Mediterranean Basin, but to our knowledge, this is the first report of the occurrence of CABYV in Tunisia on different species of cucurbit and ware cucurbit. (M. Mnari Hattab[1], J. Kummert[2], S. Roussel[2], K. Ezzaier[1], A. Zouba[3] and M.H. Jijakli[4]. (1) Laboratoire de Protection des Végétaux, Institut National de la Recherche Agronomique de Tunis, 2049 Ariana, Tunisia; (2) Unité de Phytopathologie, Faculté Universitaire des Sciences Agronomiques, B5030 Gembloux, Belgium; (3) Pôle Régional de Recherche Développement Agricole 2260 Déguache, Tunisia; (4) Unité de Phytopathologie, Faculté Universitaire des Sciences Agronomiques, Belgium. *Plant Disease*, 89:776, 2005).

TURKEY

Wheat Stem Sawfly (*Cephus pygmaeus* L.) Damage; Impacts on Grain Yield, Quality and Marketing Prices in Anatolia. This study aimed to draw the attention of the all stakeholders attention to an underestimated insect pest of wheat in Southeastern Anatolia. The field studies were carried out in the experimental field of GAP Training, Extension and Research Center in Koruklu in 2003–2004 cropping season. It was found that the number of sawfly damaged spikes varied between 6 and 12% in durum wheat and 8 and 12% in bread wheat. Comparing healthy grains, grain weight spike^{-1} decreased significantly, giving 0.430 g less kernel weight in durum wheat and 0.385 g in bread wheat. Some of the grain quality characteristics of both sawfly damaged and healthy spikes were tested and it was found that protein content (%) in durum wheat, and 1000 kernel weight in bread wheat were reduced significantly, whilst, the SDS sedimentation value in bread wheat increased significantly for sawfly damaged grains. Grain yield losses by sawfly infestation were found to be 2.23% in durum wheat and 3.32% in bread wheat. Marketing price studies showed that sawfly damage reduced it significantly, resulting in \$ 0.016 kg^{-1} less price in bread wheat. But this was not serious for durum wheat. It was concluded that income loss, depending on grain yield loss, un-harvestable broken spikes and lower marketing price of sawfly damaged grains, could be no less than \$ 68.8 ha^{-1} in durum wheat and \$ 68.6 ha^{-1} for bread wheat. Therefore, some control methods are required for sawfly infestation, where damage is already over the economic threshold (10–15% stem cut by pest) especially in bread wheat. (I. Ozberk[1], A. Alti[1], A. Yucel[1], F. Ozberk[2]

and Y. Coskun[1]. (1) Faculty of Agriculture, The University of Harran, S.Urfa, Turkey; (2) GAP Training, Extension and Research Center, S.Urfa, Turkey. *Crop Protection*, 24: 1054-1060, 2005).

PAKISTAN

A Survey of Nematodes of Pomegranate Orchards in Balochistan Province, Pakistan. A survey of nematodes associated with pomegranate was conducted in the orchards in Balochistan province. The survey was restricted to 18 localities. In all, twelve nematode genera were recorded from the rhizosphere of pomegranate. The most dominant species was *Scutylenchus rugosus* followed by *Xiphinema basiri* and *Meloidogyne incognita*. Species diversity (H') varied and was highest in Piromal and lowest in Surab. (A. Khan[1], S.S. Shaukat[2] and I.A. Siddiqui[2]. (1) Crop Diseases Research Institute, University of Karachi, Pakistan; (2) Soil Biology and Ecology Laboratory, Department of Botany, University of Karachi, Pakistan. *Nematologia Mediterranea*, 33: 25-28, 2005).

YEMEN

Date Palm "Dubas" in Yemen. Date Palm Dubas (*Ommatissus lybicus*), is an insect that was introduced from Oman to Yemen in 2000 (Habrut area, El Mahara Governorate). In 2002, the insect was identified along the eastern coast/ El Mukalla, and kept moving south west until it reached El-Masila Valley in Dahsawees region in 2003. Towards the end of 2003, the pest reached the El-Som, Wadi El-Ain, Doan and Sah regions, Hadramout Governorate. By the end of 2004, it reached other areas of Hadramout Governorate such as Omad, Treem, Shbam, Gheel Ben Yemin, Gheel Bawazeer, Ridah and Kseear. It seems that the pest was disseminated by wind at the rate of 50-100km per each of the two generations per year. It was observed that the damage from the spring was higher than that from the fall generation as it coincides with flowering of the date palm. Consequently, the chemical spray of the spring generation gives higher return. The Ministry of Agriculture and Irrigation exerted great efforts to control this pest. Efforts were also made to identify the natural enemies of this pest and to develop appropriate management strategies. In addition, distribution maps for this pest in Yemen were made to inform all concerned about its potential damage. (M. Ali Hubaishan, J. Saeed Ba Saheeh and A. Miftah El-Zubairy, Faculty of Agriculture, Sanaa University, Yemen).

SYRIA

Scientific Visit to Slenfeh, Shouh and Bayar Mountains and Farnalok Forest in the North West of Syria. A scientific Visit to the Shardoob, Slenfeh, Shouh Mountain protectorate, Bayar Mountains in Lattakia Governorate was conducted during April 2005. Collected specimens were brought to the Entomology Laboratory, Faculty of Agriculture, Tishreen University for identification. A similar visit was conducted in May 2003 and findings were reported earlier (ANEPPNEL 37, 2003). This report includes only species reported for the first time. On oak trees, acari (*Aceria triflacis*), common froghopper (*Philaenus spumarius*), oak gall wasp (*Andricus* sp.), oak Agromyza leaf miner (*Agromyza viridula*), *Zygaena filipendulae*, and *Parnassius apollo* were observed. On pine trees, pine scale insect (*Leucaspis pini*), pine stem borer (*Monochamus galloprovincialis*), pine shoot beetle (*Tomicus destruens*), and pine processionary (*Thaumetopoea pityocampa*) were observed. On the Psyllids (*trioza urticae*), and common frog hopper were found. On Oleander, the scale insect *Aspitiodis hederae* was observed. On wild pistachio, *Thaumetopea processionea* and *Baizongia pistaciae* were observed. In general, infestation with the above pests was low (0.37%-8.88%). (Nabil Abo Kaf, Plant Protection Department, Faculty of Agriculture, Tishreen University, Lattakia, Syria).

RESEARCH HIGHLIGHTS

EGYPT

Utilization of El-Oshar Plant Extract as a Novel and Safe Approach in Controlling the Pumpkin Fly *Dacus ciliatus* Loew and the Peach Fruit Fly *Bactrocera zonata* Saunders (Diptera: Tephritidae) in Egypt. Different concentrations of ethanol El-Oshar (*Calotropis procera* Ait.) leaf extract were prepared to evaluate their insecticidal effects against the Pumpkin Fly, *Dacus ciliatus* Loew and the Peach Fruit Fly, *Bactrocera zonata* Saunders (Diptera: Tephritidae). Results showed that El-Oshar extract was effective on both examined flies. The concentration 2.5 ml/l has the highest mortality rate of 98.33% after 24 hours and 100% after 48 hours for *D. ciliatus* and 100% after 24 and 48 hours for *B. zonata*. LC_{50} was 1.404 and 1.361 ml/l, LC_{90} was 2.230 and 2.238 ml/l for the two flies, respectively, after 24 hours. Also LC_{50} was 0.934 and 0.986 ml/l, and the LC_{90} was 2.712 and 1.470 ml/l. after 48 hours for the tested flies, respectively. The slope values were 6.351 and 7.360 after 24 hours, 3.971 and 6.466 after 48 hours for *D. ciliatus and B. zonata*, respectively. Furthermore *Bactrocera zonata* was more susceptible than *Dacus ciliatus* to El-Oshar extract. The toxicity index was 96.63% and 100% after 24 hour and 94.72% and 100% after 48 hour for *Dacus ciliatus* and *Bactrocera zonata*, respectively. (Badr El-Sabah A. Fetoh[1], Gehad M. Mousa[1] and Tahany G. Mohamaden[2]. (1) Plant Protection Research Institute, ARC, Dokki, Giza, Egypt; (2) Central Agricultural Laboratory of Pesticides, ARC, Dokki, Giza, Egypt. *Presented at the 3rd International Conference on IPM Role in Integrated Crop Management and Impacts on Environment and Agricultural Products, November 26-29, 2005, Giza, Egypt*).

Predatory Behavior of Some Soil Mites Towards Root-Knot Nematode *Meloidogyne incognita* Infecting Sugarbeet Crop. Seven predacious soil mites were extracted from sugarbeet fields namely, *Proprioseiopsis messor* (Wainstein), *Cheyletus malaccensis* (Oudemans), *Cunaxa sp.*, *Glycyphagus domesticus* (De Geer), *Macrocheles monchaolska* (B & K), *Platyseius major* (Halbert) and *Uropoda misella* (Berlese). They were evaluated for their predacious activity on immature stages of root-knot nematode, *Meloidogyne incognita* (Kofoid & White) under laboratory and greenhouse conditions. In laboratory test, the data revealed that all tested soil mites (except *Cunaxa* sp.) fed on immature stages of *M. incognita*. These mites could be classified into three groups according to the prey type, *P. messor, C. malaccensis* and *P. major* were found to be predators on the juvenile larvae stage. One mite was a predator on the egg-masses stage and two mites were

predators on both juvenile larvae and egg-masses stages. The highest predation rate on juvenile larvae was achieved by *C. malaccensis* followed by *P. major*, and *P. messor*. However, the mite, *M. monchaolska* was ranked the first in predation of both juvenile larvae and egg-masses followed by *U. misella*. In the greenhouse test, the results indicated that addition of a mixture of two mites, *C. malaccensis and M. monchaolska* to soil of sugarbeet infected with *M. incognita* resulted in a significant reduction in all damage parameters of galls, larvae, females and egg-mass numbers/root and juvenile larvae in soil. The highest increase in root weight (75.0%) was obtained in the presence of the two mites followed by *M. monchaolska* alone (71.8%), then *C. malaccensis* (40.0%). (M.F. Maareg[1], I.M.A. Gohar[1] and G.H. Rady[2]. (1) Sugar Crops Research Institute, ARC, Egypt; (2) Plant Protection Department, Faculty of Agriculture, Moshtohor, Zagazig University, Egypt. *Presented at the 3rd International Conference on IPM Role in Integrated Crop Management and Impacts on Environment and Agricultural Products, November 26-29, 2005, Giza, Egypt*).

IRAQ

Factors Affecting the Efficiency of Pheromone Traps in Attracting the Adult Males of Pomegranate Fruit Worm *Ectomyelois ceratoniae* (Zeller) (Lepidoptera: Pyralidae). Field studies were conducted to evaluate the efficiency of pheromone traps for catching pomegranate fruit worm (PFW) *Ectomyelois ceratoniae* in order to determine the optimal timing for applied measures against (PFW). These studies were conducted in pomegranate orchards in Maiden, 20 Km south of Baghdad during 2001-2002. The results indicated that the most efficient catch was in the traps contained five virgin females hanged at 1.5 meters high, placed in the middle of the orchard and when the rate of one trap per 5 donums was used. Virgin females should be replaced every three days. (Nassir Abdul-Sahib Aubied Al-Jamali, State Board of Plant Protection, Abu-Ghraib, Baghdad, Iraq. *Presented at the 3rd International Conference on IPM Role in Integrated Crop Management and Impacts on Environment and Agricultural Products, November 26-29, 2005, Giza, Egypt*).

LIBYA

Population Density of the Sap Beetle (Nitidulidae) Associated with Date Palm Trees in Coastal Regions of Libya. A study was conducted to determine population density for sap beetles of the family Nitidulidae, associated with date palm trees in two coastal locations (Garaboli and Zawia), during the year 2002-2003. Food bait traps made locally were used to attract beetles, with four traps hanged in each field. Results showed that sap beetles are present all year round in date palm groves in the two locations studied. Total number 4,531 beetles, were caught in Garaboli and 34,234 beetles catched in the two locations in Zawia regions. Study of population densities showed that the most common beetle was *Carpophilus hemipterus,* followed by *C. dimidiatus, Urophorus humeralis,* and *Epuraea luteoulus.* Another four different beetles were recorded for the first time in Libya and these include *C. obsoletus, C. freemani, C. mutilatus* and *E. luteoulus.* Results also showed that *Carpophilus hemipterus* had three generations/year in Garaboli and two generations in Zawia region, while *Urophorus humeralis* had two generations in Zawia and Garaboli, *Epuraea luteoulus* had four generations in Garaboli and three generations in Zawia. Locally made food bait traps had a good effect on attraction and control of the sap beetles. (M.Z. Najla[1], H.M. Kerra[1], E.A. Edongali[1] and O.S. Abogila[2]. (1) Plant Protection Department, University of Al-Fatah, Libya; (2) Plant Protection Department, University of Omar Al-Moktar, El-Beida, Libya. *Presented at the 3rd International Conference on IPM Role in Integrated Crop Management and Impacts on Environment and Agricultural Products, November 26-29, 2005, Giza, Egypt*).

OMAN

The Effect of Pheromone, Kairomone and Food Bait on Attracting Adults of Red Palm Weevil *Rhynchophorus ferrugineus* in the Sultanate of Oman in Date Palm Plantations. Field trials were conducted in date palm plantations of Mahdha in Al-Dhahira Region in the Sultanate of Oman to evaluate the weevil attracting potential of three different attractants. These were ferrugineol-based aggregation pheromone leur, kairomone (ethyl acetate, 95% purity) and food bait (1kg of fermented date fruits + 5L water), used to monitor and mass trap red palm weevil (RPW) *Rhynchophorus ferrugineus* Olivier. Results indicated that a combination of pheromone + kairomone + food bait recorded significantly high mean cumulative weevil capture with 58.7% of total capture of weevils in all trials. The lowest mean cumulative weevil capture was recorded by kairomone only with 0.6%. The study also revealed that all trials caught more females than males except kairomone + bait which caught more males than females. In addition, another trial was conducted in date palm plantations of Buraimi in Al-Dhahira Region to compare three different kairomones applied in three different colour traps. The first kairomone was a commercial product from Chem Tica International of Costa Rica, with a releasing rate of 200-400 mg/day, the second one was locally made from fermented date fruit using ethyl acetate with a releasing rate of 400-600 mg/day and the third one was an absolute ethyl acetate with a releasing rate of 400-600 mg/day. Kairomones were used in a trap consisting of plastic bucket of Red, Blue and Orange colours containing ferrugineol-based aggregation pheromone leur and food bait. The results revealed that the commercial product was of a significantly higher mean cumulative weevil capture. However, the commercial kairomone captured more RPW adults compared to ethyl acetate and locally produced kairomone. In addition, results revealed that trap colour has significant effect on attracting red palm weevil adults, where red and orange colour traps attracted significantly more adults than blue colour traps. (F.F. Abdallah[1] and S. A. Al-Khatri[2]. (1) Plant Protection Research Institute, Agricultural Research Centre, Dokki, Giza, Egypt; (2) Plant Protection Research Centre, Rumais, Ministry of Agriculture and Fisheries, P.O. Box 50, P.C. 121, Muscat, Sultanate of Oman. *Presented at the 3rd International Conference on IPM Role in Integrated Crop Management and Impacts on Environment and Agricultural Products, November 26-29, 2005, Giza, Egypt*).

MOROCCO

An Hypoaggressive *Fusarium oxysporum* Isolate Induces Polyphenoloxidase Activity in the Date Palm seedlings Allowing their Protection Against the Bayoud Disease. This study was conducted with the aim to determine the

effect of hypoaggressive isolate of *Fusarium oxysporum* on polyphenoloxidase activity in the interaction of date palm with *Fusarium oxysporum albedinis*, the casual organism of the Bayoud disease. Biochemical analyses indicated that treatment of resistant (BSTN) and susceptible (JHL) date palm seedlings with the hypoaggressive (AHD) or aggressive isolate (ZAG) of *Fusarium oxysporum* was correlated with the ability of roots to enhance their defence responses. The maximum of polyphenoloxidase activity was revealed to be 5 times higher than in control after 15 and 20 days for ZAG treatment and 3 times after 30 and 40 days for AHD treatment in BSTN and JHL cultivars, respectively. When seedlings were firstly treated by the hypoaggressive isolate and then by the aggressive one, the polyphenoloxidase activity was enhanced within 10 days and reached similar values as obtained by ZAG isolate alone. These results show that polyphenoloxidase induced by the hypoaggressive isolate of *Fusarium oxysporum* could have an important role in the establishment of date palm resistance against the Bayoud disease. (M. El-Hassani[1], J.L. Verdeil[2] and I. El-Hadrami[1]. (1) Laboratoire de Physiologie Végétale, Equipe Biotechnologies et Physiologie Végétales, Department de Biologie, Faculté des Sciences Semlalia, Marrakech, Morocco ; (2) Laboratoire d`histocytologie, UMR 1098, CIRAD-amis, CIRAD, Montpellier, France. *Plant Pathology*, 4(2): 96-102, 2005).

PAKISTAN

Novel Indica Basmati Line (B-370) Expressing Two Unrelated Genes of *Bacillus thuringiensis* is Highly Resistant to Two Lepidopteran Insects in the Field. We report the first field trials of indica basmati rice expressing two *Bt* genes, *cry*1Ac and *cry*2A simultaneously. Different transgenic lines were sown under field conditions for two consecutive years (2001 and 2002). Artificial infestation of yellow stem borer (YSB, *Scirpophaga incertulas*) and natural infestation of rice leaf folder (RLF, *Cnaphalochrocus medinalis*) were studied. Transgenic lines showed up to 100% and 98% resistance against YSB at vegetative and flowering stages, respectively, with 98% additional resistant against RLF as compared with the control. Variation in some morphological characteristics, e.g., the average number of tillers, plant height and maturity, were also observed. Transgenic lines produced up to 59% more grains than control plants under artificially augmented conditions, while up to an 8% increase was recorded under natural infestations. All lines expressed high level of Cry proteins when compared with commercially released cultivars of *Bt* cotton, maize and potato. It was also observed that although toxin titer substantially decreased with increasing age of the plants, it remained well within the limits necessary to kill the target insects. It was also observed that the transgenic lines released *Bt* toxins from roots into Murashige and Skoog basal medium, hydroponic cultures and soil, which could be detected through sandwich ELISA. On the basis of these results these lines seem good candidates to be released as the first commercial cultivars of *Bt* indica basmati rice. (K. Bashir, T. Husnain, T. Fatima, N. Riaz, R. Makhdoom and S. Riazuddin, National Center of Excellence in Molecular Biology, 87-W, Canal Bank Road, University of the Punjab, Lahore, Pakistan. *Crop Protection*, 24: 870-879, 2005).

SUDAN

Integrated Management of Whitefly and Sunscald: the Major Tomato Yield Reducing Factors in Sudan. Tomato, *Lycopersicon esculentum* (Mill.) is popular vegetable crop in the Sudan. Whitefly (*Bemisia tabaci* Gen.) is a key pest of tomato as sap feeder and vector of damaging viruses. Sunscald is another major tomato yield-reducing factor in northern Sudan, especially during summer. A number of chemical insecticides are used for whitefly control. However, there is no universally ideal pesticide known for whitefly control, in addition to being expensive for poor farmers, who often harvest their fruits the next day after spray. Therefore, this study focused on development of a sustainable whitefly and sunscald management strategy for all year round tomato production. The effectiveness of some cultural practices and insecticides were assessed in two field experiments, conducted over two seasons. Treatments evaluated were staked (trelling), unstaked, staked+ grass cover, unstaked+ grass cover, unstaked+ mulch+ grass cover and unstaked+ mulch. In the second season the combined effect of cultural practices and chemical insecticide (Malataf) were evaluated. Results showed that, staking tomato significantly reduced whitefly infestation as well as losses caused by sunscald and fruit rotting. Staking tomatoes increased the yield of marketable tomatoes up to 95.3%. Losses caused by fungal diseases were significantly reduced in all staked plants. Integration of cultural practices with synthetic chemical insecticide increased the yield of marketable tomato fruit over control by 33%. This can be a solution to all the year round production of tomatoes. (F.L. Oji[1] and T.E. Ali[2]. (1) Agricultural Research Corporation, Hudeiba Research Station, P.O. Box 31, Ed-Damer, Sudan; (2) University of Khartoum, Faculty of Agriculture, Shambat, Sudan. *Presented at the 3rd International Conference on IPM Role in Integrated Crop Management and Impacts on Environment and Agricultural Products, November 26-29, 2005, Giza, Egypt*).

SYRIA

Barley Reaction to *Pyrenophora graminea* Based on the Fungus Movement. Systemic movement of *Pyrenophora graminea* in five barley genotypes was used to quantify the infection level of leaf stripe disease. The systemic movement of the fungus was slower in the resistant than in the susceptible genotypes and enabled easy differentiation among them. Significant correlations were found ($P = 0.001$) between relative *in vitro* value and both percentage yield loss ($r = 0.94$) and disease incidence ($r = 0.97$) obtained from the field experiment. *P. graminea* movement within barley plants can be a useful criterion when differentiating resistant from susceptible genotypes. (M.I.E. Arabi and M. Jawhar, Plant Pathology Division, P.O. Box 6091, AECS, Damascus, Syria. *Australasian Plant Pathology*, 34: 405-407, 2005).

Molecular Polymorphism and Morphometries of Species of the *Heterodera avenae* Group in Syria and Turkey. Molecular characterization of the three most common cereal cyst nematode species of the *Heterodera avenae* group *(H. avenae, H. filipjevi* and *H. latipons)*, originating from various locations in major cereal-cultivating areas in Syria and Turkey, showed distinct restriction fragment patterns of the ITS-rDNA following PCR amplification and RFLP digestion

with four endonucleases *(Hae* 111, *HillT* I, *Ita* I, and *Pst* I). Genetic dissimilarity within *H. avenae* group populations increased in comparison with *H. avenae* and other species; it was 0.164 with *H. filipjevi* and 0.354 with *H. latipons* populations. No intraspecific polymorphism was observed within *H. latipons* or *H. filipjevi* populations. Principal component analysis revealed contrasted correlations among 12 morphological parameters of cysts and juveniles of the three *Heterodera* species that separated them and distinguished differences within populations of *H. latipons.* Our results showed a clear separation of the three cyst nematode species on cereal using a conventional method for classification and molecular tests, and confirmed the congruence between genetics and morphological traits. (H. Abidou[1], S. Valette[2], J. P. Gauthier[2], R. Rivoal[2], A. El-Ahmed[1] and A. Yahyaoui[3]. (1) Faculty of Agriculture, Aleppo University, Aleppo, Syria; (2) INRA/AGROCAMPUS Rennes, UMR Biologie des Organismes et des Populations appliqué a la Protection des Plantes (BiO3P), BP 35327 Le Rheu, France; (3) ICARDA, P.O. Box 5466, Aleppo, Syria. *Journal of Nematology*, 37(2): 146-154, 2005).

A Method for Purifying *Cochliobolus sativus* Cultures Contaminated with Bacteria. A simple method was developed for purifying *Cochliobolus sativus* cultures contaminated with bacteria. In this method the contaminated fungal culture is scraped from the surface of the potato dextrose agar (PDA) growth medium. Small leaf pieces (approximately 0.5 cm) of a highly susceptible genotype of barley were placed on the scraped surface of PDA and incubated for 72 h. Disease symptoms of *C. sativus* were detected on the leaf pieces. Colonies that developed from these pieces on new PDA medium were free from bacteria. (M.I.E. Arabi and M. Jawhar, Plant Pathology Division, P.O. Box 6091, AECS, Damascus, Syria. *Journal of Phytopathology*, 153: 558-559, 2005).

TURKEY

Alternative Soil Solarization Treatments for the Control of Soil-borne Diseases and Weeds of Strawberry in the Western Anatolia of Turkey. Field experiments were conducted in the two cropping seasons between 2002 and 2004 to determine effects on soil-borne diseases, weeds and yield of strawberry of raised bed solarization (RBS), alone or with chicken manure (CM) amendment, methyl bromide (MB), TeloDrip (1,3-dichloropropene + chloropicrin), short RBS combined with reduced doses of metam sodium (MS) and TeloDrip. In both seasons, raised bed soil solarization (for 7 weeks) alone or with CM amendment (10 t/ha), MS (50 ml/m^2) after 2-week RBS, and MB (50 g/m^2) significantly reduced soil-borne diseases (caused by *Rhizoctonia* spp. and *Phytophthora cactorum*) while application of TeloDrip at a rate of 500 kg/ha and a half-dose after short solarization controlled the soil-borne diseases to a lesser extent in the 2003–2004 cropping season. All treatments provided effective control of four weed species; annual bluegrass (*Poa annua*), common purslane (*Portulaca oleracea*), redroot pigweed (*Amaranthus retroflexus*) and barnyardgrass (*Echinochloa crus-galli*) but not horseweed (*Conyza canadensis*). In the first year trial, total marketable yields from RBS with or without CM and 2-week solarization plus MS were equivalent to yields produced by MB treatment whereas only raised bed soil solarization and CM amendment led to the same increase of yield as MB in the second year. (S. Benlioglu, O. Boz, A. Yildiz, G. Kaskavalci and K. Benlioglu, Plant Protection Department, Faculty of Agriculture, Adnan Menderes University, 09100 Aydin, Turkey. *Journal of Phytopathology*, 153: 423-430, 2005).

TUNISIA

Simultaneous and RAPID Differentiation of Members of the *Tomato yellow leaf curl virus* complex by multiplex PCR. A multiplex PCR method was developed to identify simultaneously either single or multiple infections with members of the *Tomato yellow leaf curl virus* (TYLCV) complex. Several sets of species-specific primers, designed from sequenced genomes of TYLCV from the Mediterranean region (Sicily, Israel and Spain), were tested using plants infected with Egyptian and Tunisian isolates. The results show that this multiplex PCR is rapid, simple and a useful alternative to conventional tools such as PCR-RFLP or PCR-sequencing for typing virus isolates. Furthermore, this approach revealed evidence of recombination among Tunisian TYLCV genomes. (F. Gorsane[1,2], S. Gharsallah-Chouchene[1], M.K. Nakhla[3], I. Fekih-Hassan[1], D.P. Maxwell[3], M. Marrakchi[1] and H. Fakhfakh[1,2]. (1)Laboratoire de Génétique Moléculaire, Immunologie et Biotechnologie, Faculté des Sciences de Tunis, Campus Universitaire, 2092, ElManar, Tunis, Tunisia; (2) Faculté des Sciences de Bizerte, 7021 Zarzouna, Bizerte, Tunisie ; (3) Department of Plant Pathology, University of Wisconsin-Madison, Madison, WI 53706, USA. *Journal of Plant Pathology*, 87(1): 39-44, 2005).

YEMEN

The Effect of Mixed Cropping of Coriander with Onion and Chemical Spray in Reducing the Damage by Thrips and Increasing Production. A study was conducted during the period 2001-2004 in a farmers` field in Madooda- Seyoun region of Wadi Hadramout, to investigate the effect of planting coriander together with onion in repelling thrips (*thrips tabaci*). The study evaluated coriander density and spacing and the use of the insecticide cypermethrin in reducing thrips population on onion cv. Bafteem Mouhassan 2 and their effect on onions yield and quality. Results indicated that the best treatment was that of mixed planting with coriander and spraying with the insecticide only when thrips population exceeded the economic threshold, followed by insecticide treatment alone with least effect of mixed planting with coriander in rows, 5 m apart, and along the east-west direction. (Ahmad Omar El-Jreedy, Plant Protection Department, Seyoun Research Station, Hadramout, Yemen).

Evaluating Different Methods to Control the Root Knot Nematode in Onion Nurseries. The study was conducted during 2000-2002 in Seyoun. Results indicated that burning sheep waste at the rate of 20 kg/m² at the surface of the soil infested with root knot nematode was an effective control measure in onion nurseries. This treatment was significantly better than using Mocab 10 G at the rate of 20 g/m², and led to almost 100% elimination of root knot larvae at 0-15 cm soil depth. In the treated plot, the rate of infected seedlings was reduced from 100% (in the control plots) to 11.3%. The root knot index in the treated plots over the two seasons was 0.2, whereas it reached 2.7 and 2.5 in the control plots in the

first and second seasons, respectively. In addition, the treatment led to an increase in number of seedlngs of 188% and 88%, an increase of fresh weight of 354 % and 156%, in the two seasons, respectively. The treatments with ash at 6 kg/m² and Macob+ Carbudan at 4 or 2 g/m² were effective in reducing root knot nematode larvae numbers but did not have significant effect on the root knot index or onion seedlings density or vigor. The application of urea at the rate of 0.5 g/m² had a negative effect on onion seedlings growth without any effect on controlling the root knot nematode in the soil. (Abdullah Awad Bin Zaghyoun, Nematology Section, Plant Protection Department, Seyoun Agriculture Research Station, Yemen).

❖ ARAB SOCIETY FOR PLANT PROTECTION NEWS

9TH ARAB CONGRESS OF PLANT PROTECTION
19-22 November, 2006, Damascus, Syria

The Ninth Arab Congress of Plant Protection will be organized by the Arab Society for Plant Protection in collaboration with General Commission of Scientific Agricultural Research in Syria and will be held in Damascus during the period 19-22 November 2006.

CONGRESS PROGRAM:
The program of the Congress includes various sessions. Each session will include a number of contributed papers and posters. The congress will also organize symposia on selected topics important for the plant protection development in the Arab world. Arab and Foreign invited speakers will contribute to these sessions.

PAPER PRESENTATION SESSIONS:
The congress program will include contributed papers in the following areas: 1) Entomology and animal pests, 2) Fungal, bacterial and viral plant diseases, 3) Nematodes, 4) Weeds and parasitic flowering plants, 5) Pesticides, 6) Spiders and mites, 7) Rodents, 8) Use of biotechniques for pest control, 9) Integrated pest management, 10) Geographical distribution of diseases and insects of quarantine significance in the Arab countries, and 11) Safe use of agrochemicals in the Arab countries.

SYMPOSIA:

Symposium one: Policy and Developmental Issues in Plant Protection

1. The impact of the Montreal protocol and European Union controls on methyl bromide use in developing countries. *By Dr. Thomas A. Batchelor, Environment Directorate - Climate Change Ozone Layer Protection, European Commission, Belgium.*
2. The collaborative research support program (CRSP) as a model for technology development and transfer in the Arab countries, with special emphasis on plant protection. *By Dr. E. A. Heinrichs, IPM CRSP, USA.*
3. Development and risk assessment of transgenic crops resistant to pests. *By Drs. M. Madkour and M. Baum, ICARDA, Aleppo, Syria.*

Symposium two: Pest Management Without Synthetic Chemical Pesticides

1. IPM and Organic Farming. *By Dr. Mohamed Saeed El-Zemeity, Ain Shams University, Cairo, Egypt.*
2. Root grafting, an effective approach to control soil borne pathogens in vegetable crops. *By Dr. Mohamed Besri, IAV Hassan II, Rabat, Morocco.*
3. The use of non-chemical alternatives to synthetic pesticides in maintaining plant health in a clonally propagated crop: potato. *By Dr. Edward B. Radcliffe, University of Minnesota, USA.*
4. Microbial control of insect pests: is it an effective and environmentally safe alternative. *By Dr. Monir El-Hussini, Cairo University, Egypt.*
5. Lure and Kill strategy: A promising safe approach to pest management that alleviates synthetic pesticides use. *By Dr. Aly Rasmi, National Research Center, Cairo, Egypt.*

Symposium three: Invasive Pest Species: Identification and Potential Control

1. Emerging invasive species in crop production systems: how do these come about?. *By Dr. Francisco Morales, CIAT, Cali, Colombia.*
2. Prevention systems for invasive species in agriculture. *By Dr. Jeffrey Jones, FAO, Rome, Italy.*
3. Can invasive species be controlled effectively?. *By Dr. Peter Kenmore, FAO, Rome, Italy.*

Symposium four: Molecular Diagnostics of Plant Pest Species

1. Molecular diagnosis of fungal pathogens. By *Dr. E. Paplomatas, Agriculture University of Athens, Greece.*
2. Molecular Diagnosis of Plant Pathogenic Bacteria. *By Dr. J. E. Elphinstone, Central Science Laboratory, UK.*
3. Molecular Diagnosis of Plant Parasitic Nematodes. *By Dr. P. Castagnone Sereno, INRA, France.*
4. Molecular Diagnosis of Phytoplasmas. *By Dr. Cristina Marzachi, Istituto di Virologia Vegetale, Torino, Italy.*
5. Molecular Diagnosis of Plant Viruses. *By Dr. Khaled Makkouk, ICARDA, Cairo, Egypt.*

NEAR EAST WEED SCIENCE SYMPOSIUM
Tentative themes of the Near East Weed Science Symposium could be: 1) Weed Management in Rainfed Areas, 2) Weed Management in Horticultural Crops (Vegetables and Fruit Trees), 3) Weed Management in Lawns and Ornamentals, 4) Parasitic Weeds, 5) Aquatic Weed Management, and 6) Others ….

The sessions of the weed science symposium will be merged within the 9th ACPP congress sessions, a business meeting for NEWSS will be held during one of the evenings of the congress (November 21, 2006). Dr. B. Abu Irmaileh from Amman University, Jordan, will chair the general assembly. A general report, budget, and other businesses will be discussed. This is followed by general elections for the NEWSS. For more information, please contact Dr. B. Abu Irmaileh, Faculty of Agriculture, Amman University, Jordan, e-mail: barakat@ju.edu.jo

ENTRY VISA:
There is no need for entry visa for citizens of Arab countries. For others, it's advisable to contact the Syrian Embassy or Consulate nearest to your city in order to obtain an entry visa to Syria before your departure. In case you have difficulty in obtaining an entry visa please inform the Congress Secretariat as soon as possible.

REGISTRATION FEES:
The Congress registration fees are:

- Members of the Arab Society of Plant Protection	70 US$
- Non-members of the Arab Society of Plant Protection	80 US$
- Accompanying persons	40 US$
- Graduate students	25 US$

CONGRESS LANGUAGE:
Paper and poster presentation sessions during the Congress will be in Arabic for Arabic speaking participants, while exceptions are made for non-Arabic speakers. Symposia presentations will be in English, since a number of invited speakers are from non-Arab speaking countries.

CONTRIBUTED PAPERS:
Abstract of oral presentations or posters should be mailed to the organizing committee not later than April 30, 2006. Please refer to the abstract form and abstract sample in the 2nd announcement and follow strictly the instructions provided inside the abstract sample box. For each presentation, both Arabic and an English abstracts should be submitted.

GRADUATE STUDENTS AWARDS:
Awards will be presented to the best five research papers presented by graduate students. Those interested to participate in the competition are asked to submit an application for the award by June 30, 2006.

THIRD ANNOUNCEMENT:
The third congress announcement will be mailed to those who would have completed and returned the registration form by May 30, 2006. It is expected that the third announcement will be mailed to participants during August, 2006.

CONGRESS SECRETARIAT:
All correspondence should be addressed to: Dr. Salah Al-Chabi, Ninth Arab Congress of Plant Protection, GSCAR, P.O. Box 113 Douma, Syria; Tele/Fax: 00963-11-57386282; E-mail: <secretary@9acpp-sy.org>. For more information, please see the conference web site : <http://www.9acpp-sy.org>

❖ SOME PLANT PROTECTION ACTIVITIES OF FAO AND OTHER ORGANIZATIONS

DESERT LOCUST SITUATION

General during December 2005 Forecast until mid-February 2006

The Desert Locust situation remained generally calm during December. Control operations declined along both sides of the Indo-Pakistan border where small swarms were present during the first week. Adults that escaped control moved out of this area and reached the spring breeding areas in western Pakistan by mid-month. Small scale breeding continued in western Mauritania and southern Algeria where limited ground control operations were required in both countries. So far, only small-scale breeding has occurred on the Red Sea coast in Sudan in the Tokar Delta but locust numbers remained low. During the forecast period, breeding is expected on both sides of the Red Sea and could commence in northern Mauritania and Western Sahara where good rains fell in December.

Western Region - Small-scale breeding continued during December in western and central Mauritania for the fourth consecutive month. As a result of a gradual increase in locust numbers as well as a shift from solitarious to *transiens* locusts, ground control operations were conducted in a few areas. Scattered adults were present in northwest and northern Mauritania where ecological conditions improved and small-scale breeding commenced near Zouerate and could start in other areas in the coming weeks. Limited control operations were also carried out against hoppers and adults in southern Algeria. Scattered solitarious adults were present in parts of Tamesna, Niger. Low numbers of solitarious adults are likely to persist during the forecast period in parts of northern Mali and Niger, and perhaps in southern Algeria.

Central Region - Small-scale breeding continued during December in the winter breeding areas along the Red Sea coast in Sudan in the Tokar Delta where scattered hoppers and adults were present. Isolated adults were present in sub-coastal areas in northeast Sudan and near two farms in southern Egypt. In Yemen, ecological conditions remained favourable in some places along the Red Sea and Gulf of Aden coastal plains where hoppers and adults were present. During the forecast period, small-scale breeding will continue in the Tokar Delta and on the northern Tihama coast in Yemen. Limited breeding could also occur on the Red Sea coast in southeast Egypt where good rains fell in late December and, if more rainfall occurs, on the northern coast in Eritrea and central Tihama coast in Yemen.

Eastern Region - Ground control operations treated several small immature adult groups and swarms along both sides of the border in Rajasthan, India and Cholistan, Pakistan in early December. Thereafter, scattered mature adults appeared in eastern Pakistan and they moved progressively west across the Indus Valley and reached the spring breeding areas in coastal Baluchistan, western Pakistan at mid-month. Small-scale breeding will take place along the coast and in the interior of Baluchistan if rainfall occurs during the forecast period but low temperatures, especially in the interior, may delay hatching and hopper development.

The Latest Situation
Small-scale breeding in winter breeding areas
Limited breeding is in progress in the winter breeding areas along the Red Sea coast in the Tokar Delta, Sudan and on the northern Tihama coast in Yemen. Small-scale breeding continues in western Mauritania and southern Algeria. Ground control operations have been conducted in both countries against hoppers and adults. Scattered adults are present in a few places in Tamensa, Niger and near two farms in southern Egypt. Control operations against swarms on the Indo-Pakistan border have ended and only low numbers of solitarious adults moved from there to coastal areas in Baluchistan, western Pakistan. These adults will eventually breed if rains fall. Small-scale breeding is expected to commence in the coming weeks in northern Mauritania and Western Sahara where good rains fell in December.

❖ SHORT PLANT PROTECTION NOTES

- Acetic acid fumigation of apple rootstocks and dormant shoots prevented growth of *Erwinia amylovora*, *Pseudomonas syringae*, and *Powdery mildew*, report P. L. Sholberg and associates at Agriculture and Agri-Food Canada, Summerland, BC, Canada (Hort Technology, 15: 591-596, 2005).
- Cotton grown with potassium fertilizers hosted a post – harvest population of the reniform nematode 12% greater than in the control plots, report W.T. Pettigrew and associates at USDA-ARS, Stoneville, MS (Agron. J., 97:1245-1251, 2005).
- Inbred lines of sunflower with a high degree of resistance to *Sclerotinia sclerotiorum* were developed by S. Rönicke and associates at Justus- Liebig- Universität Giessen and Universität Hohenheim, Stuttgart, Germany (Plant Breed., 124: 376-381, 2005).
- Nine qualitative leaf rust- resistance loci were found in hybrid poplar (*Populus deltoids* or *P. trichocarpa*) and were useful in durable resistance strategies, report V. Jorge and associates at INRA or INRA/CNRS at Olivet and Evry, France (New Phytol., 167: 113-127, 2005).
- Resistance gene *rhg1* in soybean reduces soybean cyst nematode production and increases yield, report E. Brucker and associates at University of Illinois, Urbana (Crop Sci., 45: 1721-1727, 2005).
- Resistance of transgenic potato lines to *Erwinia carotovora* was twice that of normal lines and correlates with anthocyanin and sucrose content, report K. Lorenckubula and associates, Wroclaw University, University of Gdansk and Medical University, and Agricultural University, Poland (J. Agric. Food Chem., 53: 272-281, 2005).
- Sugar beet and spinach seeds treated with *Lysobacter* sp. Strain SB-K88 were significantly more resistant to damping–off caused by *Aphanomyces cochlioides*, likely due to antibiosis and rhizoplane biofilms, report M.T. Islam and associates, Hokkaido University, Sapporo, Japan (Appl. Environ. Microbiol., 71: 3786-3796, 2005).
- Unsaturated fatty acids from zoospores of *Scleospora graminicola* can induce resistance to downy mildew on pearl millet when applied to seeds, report K.N. Amruthesh and associates at University of Mysore, India and the Royal Veterinary and Agricultural University, Copenhagen, Denmark (Eur. J. Plant Pathol., 111: 125-137, 2005).
- Wheat-alien species derivatives proved resistant to *Fusarium* head blight and included amphiploids, synthetic hexaploid wheat lines, and wheat–alien substitution and translocation lines, report R. E. Oliver and associates at North Dakota State University and USDA-ARS, Fargo (Crop Sci., 45: 1353-1360, 2005).

❖ GENERAL NEWS

PESTICIDES HANDLING BY FARMERS TO CONTROL AGRICULTURAL PESTS IN SEYOUN-HADRAMOUNT GOVERNORATE, YEMEN

In a field survey conducted in Seyoun area (September-December 2002), during the period of active pesticides spraying to control pests (thrips, aphids, cucurbits fruit fly) on different crops (onion, alfalfa, squash), to investigate the way that farmers handle pesticides. Results showed that 84% of the farmers use the recommended pesticides to control thrips, 79% prepare the spray solution as per recommendations, and 90% spray during late afternoon. Farmers sprayed onion fields 4-5 times, which is 36% higher than the recommended frequency. The survey also showed that farmers obtain information on pesticides use 36%, 28% and 32% from extension services to control thrips, aphids and cucurbit fruit fly, respectively. Around 28% of pesticides spray workers suffer from headaches during spraying. The survey did not show any negative effect on bee hives in the region. The period of time between the last spray and harvest varied among farmers; 68% of the farmers harvested onions two months after the last spray and 34% harvested alfalfa 15-20 days after spraying. Most farmers do not use protective clothing during spraying and 84% discard pesticides containers anywhere on the farm. This study will help in developing the appropriate measures need to be followed to better protect agricultural workers and the environment from unwise use of pesticides. (Saleh Omar El- Beety, Seyoun Agricultural Research station, Hadramout, Yemen).

FUNGUS CONFERS SALT-RESISTANCE TO PLANTS

The Indian Thar desert is home to *Piriformospora indica*, a plant-root-colonizing fungus recently found to promote plant growth. Its hosts include rice, wheat, and barley, and research has shown that "The endophytic fungus *Piriformospora indica* reprograms barley to salt-stress tolerance, disease resistance, and higher yield". Frank Waller of the University of Giessen, Germany and colleagues document their work in the latest issue of the Proceedings of the National Academy of Sciences online. Using barley as their model organism, researchers allowed *P. indica* to colonize roots, then subjected the plants to salt stress and disease stress. Among others, they found that *P. indica* colonizes root cells and enhances yield; roots show higher antioxidant capacity; and colonization induces systemic disease resistance, protecting barley leaves from other fungal infections. Read the complete article at: http://www.pnas.org/cgi/content/full/102/38/13386

THE WITNESS WAS A FLY

Insects are considered as noxious pests to the man, but they also unseen useful role to humanity. In this concern, there is a remarkable resurgence of interest in the forensic entomology investigations within the last decade. This field has been recognized as mediocriminal entomology. Within, this area the most common applications of entomological evidences are in estimation of the postmortem interval (PMI) the time that has elapsed since death. Such knowledge narrows the

field of possible suspects in the crime. Moreover, these small creatures have an important impact as bioindicators for toxicological to detect drugs, e. g. cocaine and heroine in decomposing tissues. However, an event which shows the valuable use of entomological evidence during the murder investigations was reported in Oklahoma on August 8, 1994. A bloated decomposing corpse of a human male found beside a residential drive way. The last time victim had been seen, he and his wife was on August 4 and were engaged in a bitter argument. The wife claimed that she had last seen her husband on August 6. Entomological evidence collected from the corpse included larvae of two species of calliphoridae. Under the climatic conditions prevailing during the period in question, it was estimated that oviposition of the fly eggs producing the larvae collected must have occurred no latter than August 5. This insect evidence refused the wife's alibi. Consequently, the defendant was charged with first-degree murder. On the other hand, based on insect evidence, a couple in France was cleared of the death of a child although his mummified remains were discovered inside the chimney of their house (Aly H. Rasmy, Plant Protection Department, National Research Center, Dokki, Cairo, Egypt).

DIRECTOR GENERAL DESIGNATE OF ICARDA NAMED TO SUCCEED PROF. DR. ADEL EL-BELTAGY

Dr Mahmoud Mohamed Bachir El-Solh will be the next Director General of ICARDA after the completion of the tenure of Professor Dr. Adel El-Beltagy in May 2006. Dr Solh is a Lebanese national who, being the 'son of the soil', knows the ICARDA region and its challenges well. He has been associated with the international agricultural research and development in the dry areas since 1972 when he became a staff member of the Arid Land Agricultural Development (ALAD) Program of the Ford Foundation in the Near East, which was the predecessor of ICARDA. He also knows ICARDA well as he has served the Center for nearly 16 years in the past in various capacities - as Lentil Breeder, Regional Food Legume Breeder in North Africa, and Research Coordinator in the Nile Valley Program, Regional Coordinator of the Nile Valley and Red Sea Regional Program, and finally Assistant Director General for International Cooperation. It was only three years ago that he left ICARDA, to join FAO as the Director of Plant Production and Protection (AGP) Division. His three-year stay in FAO has provided him opportunity to expand his global perspective of agriculture as a tool for sustainable development and to sharpen his managerial and administrative skills through supervising three major FAO services, viz., Crops and Grassland Service, Plant Protection Service, and Seeds and Plant Genetic Resources Service. During this period in FAO, Dr Solh was also actively involved in the negotiations regarding the international treaty on global genetic resources conservation and use in agriculture, in the development of Global Genetic Diversity Trust, and in the governing Board of the International Plant Genetic Resources Institute (IPGRI). Dr Solh holds a Ph.D. in genetics from the University of California, Davis and has an impressive record of scientific publications. He has strong experience in academia and human resource capacity building, having served as Assistant/Associate Professor of Genetics and Plant Breeding at the American University of Beirut (AUB). Only last year was he honored by AUB through an award "In Recognition of Outstanding Achievements in the Agricultural Sector". Dr Solh has enormous experience of donor relations and fund raising within the ICARDA region and beyond. His people skills have been his great asset. He has an in-depth knowledge of the needs and aspirations of the national agricultural research and development systems in the whole of the Central and West Asia and North Africa region. He developed strong bonds with the leaders of the national programs and forged mutually rewarding partnership with the NARS during the period he earlier served as the Assistant Director General for International Cooperation at ICARDA. With a unique combination of scientific excellence, knowledge of the challenges and opportunities for agricultural research and development in the dry areas of the developing world, familiarity with the Central and West Asia and North Africa Region for which ICARDA has the ecoregional mandate, and excellent interpersonal capabilities, Dr Solh has been an ideal choice to lead the Center to achieve its mission, goal and objectives over the coming years.

❖ EVENTS OF INTEREST

MEETINGS AND SYMPOSIA

2006

* **19-24 February**

International Symposium on New Crop Technologies in Soil and soilless Cultivation under Protected Environment, Agadir, Morocco. E-mail: hanafi@iavcha.ac.ma

*** 28-31 March**

VI International Symposium on Artichoke, Cardoon and their Wild Relatives, Lorca, Spain. *For more information, please see the following web site:* <http://www.viajescajamurcia.com/artichoke>

*** 3-5 April**

International Symposium of Integrated Pest Management in Oilseed Rape, University of Göttingen, Germany. http://www.symposium-ipm-oilseed-rape.de

*** 22-26 May**

XX International Symposium on Virus and Virus-like Diseases of Temperate Fruit Crops and XI International Symposium of Small Fruit Virus Diseases, Antalya, Turkey. E-mail: caglay@mku.edu.tr

*** 11-14 June**

XVth Biennial Workshop on the Smut Fungi, Prague, Czech Republic. E-mail: blazkova@vurv.cz
Web site: http://www.lolo.usd.cas.cz/workshop

*** 11-15 June**

12th Congress of the Mediterranean Phytopathological Union, Rhodes Island, Greece. The meeting is organized by Mediterranean Phytopathological Union & Department of Plant Pathology Agricultural University of Athens, Athens, Greece. *For more information, please contact:* Prof. Eris Tjamos, Phone: +30 210 5294505, Fax: +30 201 5294513; e-mail: <ect@aua.gr> OR <phymed@unifi.it>; Web site: http://www.mpunion.com

*** 3- 6 July**

1st International Ascochyta Workshop on Grain Legume, Le Tronchet, Brittany, France.
E-mail: aep@prolea.com
Web site: http://www.grainlegumes.com

*** 10-14 July**

11th International Conference on Plant Pathogenic Bacteria, Edinburgh, UK.
E-mail: ICPPB2006@csl.gov.uk
Web site: http://www.csl.gov.uk/contact/icppb.cfm
http://www.australasianplantpathologysociety.org.au

*** 17-21 July**

4th International Bacterial Wilt Symposium, York, UK. E-mail: IBWS2006@sasa.gsi.gov.uk
Web site: www.australasianplantpathologysociety.org.au
www.sasa.gov.uk/about_sasa/internationalconferences.cfm

*** 23-27 July**

3rd International Workshop on Barley Leaf Blights, Edmonton, Alberta, Canada. E-mail: orrdd@agr.gc.ca

*** 28 August- 5 September**

International Powdery Mildew Conference, Asilomar Conference Center, Monterey, CA. Doug Gubler.
E-mail: wdgubler@ucdavis.edu

*** 13-17 September**

IXth Meeting of the Phytopathogens Working Group, IOBC/WPRS Working Group Biological Control of Fungal and Bacterial Plant Pathogens, Spa, Belgium.
E-mail: Monica.Hofte@ugent.be
Web site: www.agri.gov.il/Depts/IOBCPP/IOBCPP.html

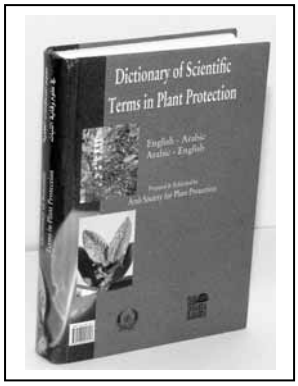
*** 19-23 November**

9th Arab Congress of Plant Protection, organized by the Arab Society of Plant Protection in collaboration with the General Commission for Scientific Agricultural Research, Damascus, Syria. *For more details, please contact* Dr. Majd Jamal, Chairman of the Organizing Committee, e-mail: <majdjama@SCS-net.org>, Web site: <http://www.9acpp-sy.org>

❖ PUBLICATIONS

NEW BOOKS

● **Dictionary of Scientific Terms in Plant Protection: (English : Arabic – Arabic: English), 1st Edition.** 2005. The Arab Dociety for Plant Protection, in an effort to unify Arabic scientific terms in plant protection issued recently the *"Dictionary of Scientific Terms in Plant Protection"*. This volume includes around 10,000 scientific terms, where the user can seek the translation he needs starting with either the Arabic or the English term. This is an effort of six years of voluntary hard work by a large number of dedicated scientists organized in a number of specialized committees (Nematology, Entomology, Mycology, Virology, Pesticides and Weed Science) that worked together to do the translation, and more importantly to agree on a unified Arabic translation for each term. This what makes this dictionary different from the already existing ones prepared by either individuals or few authors. This effort was culminated in a meeting held in October, 2003, where around 50 scientists from eight Arab countries met in a two days workshop hosted by Omar El-Mokhtar University, El-Beida, Libya, to discuss and finalize this work. This dictionary was Prepared and Published by Arab Society for Plant Protection; and Printed and Distributed by Dar Innahda Al-Arabiya, Beirut, Lebanon. 770 pages, 18x25 cm, hard cover. Price 15 US$.



This dictionary can be ordered from: Dar Innahda Al-Arabiya, P.O. Box 11-0749, Beirut, Lebanon, E-mail darnahda@cyberia.net.lb; Fax: +961-1-735295/736071. For more information, please contact Arab Society for Plant Protection, P.O. Box 113-6057, Beirut, Lebanon; E-mail: aspp@terra.net.lb

● **Forest Pathology: From Genes to Landscapes.** 2005. Edited by John E. Lundquist and Richard C. Hamelin. As ecological threats to forest health and sustainability intensify and new threats emerge, forest pathology plays an increasingly important role. Forest Pathology: From Genes to Landscapes presents a comprehensive treatment of emerging topics in forest health, providing clarity about these issues and the unique challenges they present. This book offers reviews on both basic and applied research and covers in depth topics including, genomics, molecular epidemiology, bark beetle/disease interactions, ecosystem pathology, pathogenesis, blue stain, development of transgenic hosts, operational disease resistance strategies, non-timber impacts, spatial analysis of diseased landscapes, and landscape pathology. This book will be of use for forest pathology scientists and professionals, forest managers and ecologists, molecular biologists and geneticists, and landscape ecologists. It may be used by researchers as a guide to previous work, by extension agents as a source of the most recent information, and by managers as a vehicle for applying the most appropriate science. It is also an excellent teaching resource for courses in forest pathology and entomology, forest and shade tree pathology, forest ecology, disturbance ecology, landscape ecology, forest health, conservation biology, and molecular epidemiology. 175 pages; 8.5" ×11"; softcover; 44 black and white illustrations; 8 tables; ISBN 0-89054 334-8, Item No. 43348. Price 69$.

● **Insect Management for Food Storage and Processing, 2nd Edition.** 2006. Edited by Jerry Heaps. This book has been completely revised and updated with new chapters on topics including, inspection techniques; retail pest management; environmental manipulation (e.g. hot, cold, modified atmospheres, ionization) to control insects; and the latest scientific research on integrated pest management (IPM) control techniques. Common and unusual exterior/interior pest insects are covered and examples of both chemical and non-chemical pest insect control strategies are thoroughly discussed. The book provides the latest practical and scientific research information on how to solve pest insect problems in a timely and economical manner. 248 pages; 8"x11"; Hardcover; ISBN 1-891127-46-2; Item No. 27462, Price $ 169.

The above two books can be ordered from: APS PRESS, 3340 Pilot Knob Road, Saint Paul, MN 55121, U.S.A. E-mail: aps@scisoc.org

● **Postharvest Pathogens and Disease Management.** 2006. Edited by P. Narayanasamy. Postharvest diseases caused by microbial pathogens account for millions of dollars in losses of both durable and perishable produce products every year. Moreover, with consumers increasingly demanding minimally processed vegetables and fruits which can be invaded by human pathogens, there is an imperative need for suitable protective measures to provide pathogen-free commodities that are free from, or contain only acceptable levels of, chemical residues. This book offers readers insight into the principles and methods of avoiding and managing postharvest diseases of fruit and vegetable products in an efficient, economical, and environmentally feasible manner, allowing producers to sell safer, higher-quality produce to the public and prevent the losses associated with postharvest disease. Hardcover, 578 pages, ISBN: 0-471-74303-8. Price 100.00.

This book can be ordered from John Wiley & Sons, Wiley-VCH Verlag GmbH, Boschstrasse 12, D-69469 Weinheim, Federal Republic of Germany, Telephone: 49-6201/6060, Fax: 49-6201/606328, Email: info@wiley-vch.de; Web site: http://eu.wiley.com/WileyCDA

● **Fruit Pests, 2nd Edition.** 2006. Edited by David V. Alford. A completely revised edition of this highly regarded book gives a systematic account of fruit and hop pests – their recognition, biology and control. The scope of the original book has been greatly expanded to cover pests of fruit crops in temperate and sub-tropical regions. There are over 600 colour photos from a total of 1100 new to this edition. A major new chapter has been added on pests of sub-tropical crops (particularly citrus, fig and olive). The pests are considered in their natural sequence of less advanced to more advanced forms, including a description of each, its life history, plants affected and damage caused. Families of pests are arranged according to generally accepted systematic systems, species appear under scientific names and show common names. Detailed general and scientific indexes allow cross-referencing between fruit and pest. 480 pages, 261 x 194 mm, 1,100 Colour illustrations, ISBN: 1-84076-051-6, Price £80.00.

This book can be ordered from: Manson Publishing Ltd., 73 Corringham Road, London NW11 7DL, UK. Tel: +44 (020) 8905 5150, Fax: +44 (020) 8201 9233. Web site: http://www.manson-publishing.co.uk

Selected Research Papers — أوراق علمية مختارة

ENTOMOLOGY AND ACAROLOGY — الحشرات والعناكب

A new species of *Athous* Eschscholtz (Coleoptera: Elateridae) from Turkey. 2005. Giuseppe Platia, Bahattin Kovanci (Turkey). *Turkish Journal of Entomology* (Turkey), 29 (1): 5-9.

Characteristics of resistance of the two spotted spider mite, *Tetranychus urticae* Koch (Acari : Tetranychidae) to bromopropylate. 2005. I.J. Al-Jboory and R.E. Jumida (Iraq & Yemen). *Arab Journal of Plant Protection* (Lebanon), 23(2): 76-79.

Faunistical studies on species of the family Elateridae (Coleoptera) in Ankara. 2005. Mahmut Kabalak and Osman Sert (Turkey). *Turkish Journal of Entomology* (Turkey), 29 (1): 49-60.

Gall midges (Diptera: Cecidomyiidae) of Turkey. 2005. Marcela Skuhrava, Serife Bayram, Halit Cam, Serdar Tezcan and Peyman Can (Turkey). *Turkish Journal of Entomology* (Turkey), 29 (1): 17-34.

Genetic diversity of *Mayetiola destructor* and *Mayetiola hordei* (Diptera: Cecidomyiidae) by inter-simple sequence repeats (ISSRs). 2005. M. Mezghani Khemakhem, M. Marrakch and H. Makni (Tunisia). *African Journal of Biotechnology*, 4(7): 601-606.

Investigations on the Pentatomidae (Heteroptera) fauna in wheat-growing areas in Southeastern Anatolia Region (Turkey). 2005. I. Özgen, C. Gözüacik, Y. Karsavuran and M. Fent. (Turkey). *Turkish Journal of Entomology* (Turkey), 29 (1): 61-68.

Quality and quantity diversity of aphids and its parasitoids on citrus in Coastal Regional of Syria. 2005. N. Abo Kaf (Syria). *Arab Journal of Plant Protection* (Lebanon), 23(2): 61-69.

Seasonal occurrence and the influence of corn cultivar on distribution and parasitism of *Telenomus bussealae* Gahan. (Hymenoptera : Scelionidae) on corn borer egg in Iraq. 2005. J.K. Mohammed, A.SA. Ali and R.F. Ahmed (Iraq). *Arab Journal of Plant Protection* (Lebanon), 23(2): 87-94.

Some new records for Diptera fauna of Turkey and additional notes on the dipterous fauna of cherry orchards. 2005. H.S. Civelek and S. Tezcan (Turkey). *Turkish Journal of Entomology* (Turkey), 29(1): 11-16.

Systematic investigations on epiphytic oribatid mites (Acari) of Erciyes Mountain (Kayseri). 2005. I. Sedat Per and N. Ayyildiz (Turkey). *Turkish Journal of Entomology* (Turkey), 29(1): 69-80.

The adult population fluctuations of *Ephestia kuehniella* Zellar (Lepidoptera: Pyralidae) in flour factories in Bursa province. 2005. K. Senan Coskumcu and B. Kovanci (Turkey). *Turkish Journal of Entomology* (Turkey), 29(1): 35-48.

The effect of pollen grain alternatives on certain activities of honey bee. 2005. N.A.S. Al-Gamali, S.K. Dhahir, T. M. Ibrahim and J. Fadhil Wahib (Iraq). *Arab Journal of Plant Protection* (Lebanon), 23(2): 70-75.

VIRUSES الفيروسات

Comparative sequence analysis of coat protein gene of Iranian *Citrus tristeza virus* isolates. 2005. A. Barzegar, H.H. Sohi and H. Rahimian (Iran). *Journal of Phytopathology* (Germany), 153(7-8): 457-463.

Comparison of biologically distinct isolates of *Citrus tristeza virus* from Iran using major coat protein sequences. 2005. V. Alavi, B. Khatabi and G.H. Salekdeh (Iran). *Australasian Plant Pathology* (Australia), 34: 577-582.

First record of *Faba bean necrotic yellows virus* and a Luteovirus in faba bean crop (*Vicia faba* L.) in Libya. 2005. S. Fadel, J. Khalil and M. Shagrun (Libya). *Arab Journal of Plant Protection* (Lebanon), 23(2): 132.

First report of *Tomato leaf curl New Delhi virus* infecting bitter gourd in Pakistan. 2005. M. Tahir and M.S. Haider (Pakistan). *Plant Pathology* (UK), 54(6): 807.

Genetics of resistance to cotton leaf curl disease in *Gossypium hirsutum*. 2005. M. Rahman, D. Hussain, T.A. Malik and Y. Zafar (Pakistan). *Plant Pathology* (UK), 54(6): 764-772.

Incidence and distribution of viruses infecting Iranian vineyards. 2005. F. Rakhshandehroo, R. Pourrahim, H. Zamani Zadeh, S. Rezaee and M. Mohammadi (Iran). *Journal of Phytopathology* (Germany), 153(7-8): 480-484.

New record of *Apple mosaic virus* on apple cultivars in south-west Turkey. 2005. N. Yardimci and H. Eryigit (Turkey). *Australasian Plant Pathology* (Australia), 34: 603.

Occurrence of *Cauliflower mosaic virus* in different cruciferous plants in Iran. 2005. Sh. Farzadfar, R. Pourrahim, A.R. Golnaraghi and A. Ahoonmanesh (Iran). *Plant Pathology* (UK), 54(6): 810-810.

Studies on parameters influencing the performance of reverse transcriptase polymerase chain reaction (RT-PCR) in detecting *Prunus necrotic ringpot virus* (PNRSV). 2005. M. Usta, H.M. Sipahioglu and B. Polat (Turkey). *Phytopathologia Mediterranea* (Italy), 44: 189-191.

NEMATODES نيماتودا

A Survey of nematodes of pomegranate orchards in Balochistan province, Pakistan. 2005. A. Khan, S.S. Shaukat and I.A. Siddiqui (Pakistan). *Nematologia Mediterranea* (Italy), 33: 25-28.

BACTERIAL بكتيريا

Characterization of the hypersensitive response eliciting protein, Harpin$_{Es}$, of *Erwinia* (*Pantoea*) *stewartii* and its role in determining the pathogenicity of the bacterium on corn. 2005. M. Ahmad, D.R. Majerczak and D.L. Coplin (USA & Pakistan). *Pakistan Journal of Biological Sciences* (Pakistan), 8(10): 1368-1375

Molecular characterization of the *hrpN* gene of *Erwinia* (*Pantoea*) *stewartii*, a bacterium that causes vascular wilt and leaf blight of corn. 2005. M. Ahmad, D.R. Majerczak and D.L. Coplin (USA & Pakistan). *Pakistan Journal of Biological Sciences* (Pakistan), 8(10):1361-1367.

Prevalence and incidence of bacterial spot disease caused by *Xanthomonas campestris* pv. *vesicatoria* on pepper in the Eastern Mediterranean Region of Turkey. 2005. M. Mirik, Y. Aysan and O. Cinar (Turkey). *Pakistan Journal of Biological Sciences* (Pakistan), 8(12): 1656-1658.

FUNGI الفطور

A study of pathogenic variability of *Tilletia caries* (DC.) Tul. and *T. foetida* (Wallr.) Liro, and their effects on growth and production of wheat plants. 2005. S. Al-Chaabi and L. Matrod (Syria). *Arab Journal of Plant Protection* (Lebanon), 23(2): 80-86.

DNA based characterization of *Ceratocystis fimbriata* isolates associated with mango decline in Oman. 2005. M. van Wyk, A.O. Al-Adawi, B.D. Wingfield, A.M. Al-Subhi, M.L Deadman and M.J. Wingfield (South Africa & Oman). *Australasian Plant Pathology* (Australia), 34: 587-590.

First report of fusarium wilt of eggplant caused by *Fusarium oxysporum* f. sp. *melongenae* in Turkey. 2005. H.H. Altınok (Turkey). *Plant Pathology* (UK), 54 (4): 577-577.

Genetic and virulence diversity in a Jordanian field population of *Rhynchosporium secalis* on barley. 2005. A. Kiros-Meles, A. Yahyaoui, H. Abu-Blan, S. Udupa and M. Baum (Ethiopia, Syria & Jordan). *Arab Journal of Plant Protection* (Lebanon), 2 3(2): 133-140.

Status and distribution of wheat bunt diseases in Iraq. 2005. E.M. Al-Maaroof, A.K. Hussien and D.A. Mushael. *Arab Journal of Plant Protection* (Lebanon), 23(2): 127-131.

Vegetative compatibility of *Verticillium dahlia* isolated from olive trees (*Olea europea* L.) in Algeria. 2005. M. Bellahcene, Z. Fortas, D. Fernandez and M. Nicole (Algeria & France). *African Journal of Biotechnology*, 4(9): 963-967.

CONTROL مكافحة

Alternative soil solarization treatments for the control of soil-borne diseases and weeds of strawberry in the Western Anatolia of Turkey. 2005. S. Benlioğlu, Ö. Boz, A. Yildiz, G. Kaşkavalci and K. Benlioğlu (Turkey). *Journal of Phytopathology* (Germany), 153(7-8): 423-430.

Antibacterial activity of extracts from *Withania somnifera* and *Aloe vera* against *Ralstonia solanacearum* in potato. 2005. S.N.S. El-Ariqi, M. El-Moflehi, K. El-Abara, A. El-Kobati and A. El-Shaari. *Arab Journal of Plant Protection* (Lebanon), 23(2): 95-99.

Effect of trap placement and pheromone trap design, pheromone concentration and the optimum field life of pheromone dispenser on the catch of the raisin moth males *Ephestia figulilella* (Greg.) (Lepidoptera: Phycitidae). 2005. M.A.A. Alasady, T.R. Ahmad and R.F. Ahmed (Iraq). *Arab Journal of Plant Protection* (Lebanon), 23(2): 112-117.

Effects of different soil tillage methods, weed Control and phosphorus fertilizer doses on yield components in Chickpea under Central Anatolian Conditions. 2005. N. Kayan and M. Sait Adak (Turkey). *Pakistan Journal of Biological Sciences* (Pakistan), 8(11):1503-1506.

Efficiency of the egg parasitoid, *Trichogramma embryophagum* Htg. in controlling the date fruit moth, *Ephestia cautella* under experimental storage conditions. 2005. S.A. Al-Tai, H.F. Alrubeai, I.J. Al-Jboory, S.A. Khlaywi1 and M.W. Khdair (Iraq). *Arab Journal of Plant Protection* (Lebanon), 23(2): 107-111.

Evaluation of *Cinnamomum cassia* (Blume) powder against three Coleopteran species of stored–products. 2005. N.H. Al-Moajel (Saudi Arabia). *Arab Journal of Plant Protection* (Lebanon), 23(2): 100-106.

Evaluation of *Pochonia chlamydosporia, Paecilomyces lilacinus* and *Arthrobotrys dactyloide* as biocontrol agents for *Meloidogyne incognita* under green house condition. 2005. A.E.R. EL-Shanshoury, S.A. El-Sayed, Y.A.G. Mahmoud and D.M. Khalefa (Egypt). *Pakistan Journal of Biological Sciences* (Pakistan), 8(11): 1511-1516.

Novel indica basmati line (B-370) expressing two unrelated genes of *Bacillus thuringiensis* is highly resistant to two lepidopteran insects in the field. 2005. K. Bashir, T. Husnain, T. Fatima, N. Riaz, R. Makhdoom and S. Riazuddin (Pakistan). *Crop Protection* (UK), 24(10): 870-879.

Selective control of *Orobanche ramosa* in potato with rimsulfuron and sub-lethal doses of glyphosate. 2005. M.A. Haidar, M.M. Sidahmed, R. Darwish and A. Lafta (Lebanon). *Crop Protection* (UK), 24(8): 743-747.

Wheat stem sawfly (*Cephus pygmaeus* L.) damage; impacts on grain yield, quality and marketing prices in Anatolia. 2005. I Özberk, A. Atli, A. Yücel, F. Özberk and Y. Coşkun (Turkey). *Crop Protection* (UK), 24(12): 1054-1060.

BIOLOGICAL CONTROL مكافحة حيوية

An investigation on susceptibility of some wheat cultivars to common bunt disease and assessment of biocontrol efficacy (*Trichoderma koningii* Oud. and *Gliocladium virens* Mill., Gidd., Fost. & Arx) in comparison with chemical control. 2005. S. Al-Chaabi and L. Matrod (Syria). *Arab Journal of Plant Protection* (Lebanon), 23(2): 118-126.

PESTICIDES مبيدات

Effects of ecdysone agonist halofenozide against *Culex pipiens*. 2005. H. Boudjelida, A. Bouaziz, T. Soin, G. Smagghe and N. Soltani (Algeria & Belgium). *Pesticide Biochemistry and Physiology* (UK), 83(2-3): 115-123.

Effects of oxidative stress induced by paraquat on wild and cultivated wheats. 2005. Y. Ekmekci and S. Terzioglu (Turkey). *Pesticide Biochemistry and Physiology* (UK), 83(2-3): 69-81.

THESIS RESEARCH رسائل جامعية

Cytogenic study of three species of genus chrysomya in Baghdad. 2002. Maysoon Jasim Rashid. M.Sc. Thesis. College of Education (Ibn El-Haitham), Baghdad University, Baghdad, Iraq, 67 pp.

Effect of radiation and some insect growth regulators in controlling cucurbits fruit fly *Dacus ciliatus*. 2003. Ahmad Jassim Mohammed Al- Shammary. M.Sc. Thesis. College of Agriculture, University of Baghdad, Baghdad, Iraq, 91 pp.

Effect of variety, temperature & gamma rays on the storability & development of infestation by potato tuber moth *Phthorimaea operculella* in potato tuber *Solanum tuberosum*. 2004. Naeem Saeed Deiab. M.Sc. Thesis. College of Agriculture, University of Baghdad, Baghdad, Iraq, 133 pp

Genetical & cytological studies on OWSWF, *Chrysoma bezziana*, exposed to gamma radiation. 2002. Layla Jabbar Mohamed Al-Bahadyli. Ph.D. Thesis. College of Science, Al Mustansiriyeh University, Baghdad, Iraq, 178 pp.

Laboratory and field studies on using bracon hebetor for controlling the fig moth Ephestia cautella & Spiny Bollworm Earias insulana. 2002. Asaad Alwan Hameed. M.Sc Thesis. College of Agriculture, University of Baghdad, Baghdad, Iraq, 119 pp.

The combined effect of gamma radiation & parasitoid bracon hebetor for controlling potato tuber moth *Phthorimaea operculella*. 2003. Hamid Kadhum Saoud Al-Ubaidy. M.Sc. Thesis. College of Education (Ibn El-Haitham), University of Baghdad, Baghdad, Iraq, 103 pp.

The effect of gamma radiation on some biological measurements of OWSWF, *Chrysoma bezziana*. 2002. Maysoon Hassan Meshjil Al-Seria. M.Sc. Thesis. College of Education for Women, University of Baghdad, Baghdad, Iraq, 82 pp.

Note: We would like to encourage all University Departments which award higher degrees (M.Sc. or Ph.D.) in any of the Plant Protection disciplines to submit to the Editorial Board of this Newsletter Thesis titles and names of students awarded the degree, in a format similar to what is published in this section.