



**IOBC / WPRS
OILB / SROP**

PROFILE

**Internal Newsletter issued by the Publication Commission for the
IOBC/wprs Council and Executive Committee**

<http://www.iobc-wprs.org>

**International Organization for Biological and Integrated Control of
Noxious Animals and Plants – West Palearctic Regional Section**

ISSUE Nr. 38

January 2005

In this Issue

The Presidents Page	2
IOBC/ WPRS Commissions, Working Groups	3
IOBC/wprs Officers and their Addresses	4
Hunting old IOBC documents (E. Boller)	8
Workshop "Management of Plant Diseases and Arthropod Pests by Biological Control Agents and their Integration in Agricultural Systems" – Report.....	9
WG "Pheromones and other Semiochemicals ..." – Report.....	11
WG „Genetically Modified Organisms in Integrated Production" – Next Meeting	12
WG „Integrated Control in Protected Crops, Temperate Climate" – Next Meeting	13
Commission on IP Guidelines and Endorsement	14
WG "Insect Pathogens and Insect Parasitic Nematodes" – Next Meeting.....	15
WG "Induced Resistance in Plants Against Insects and Diseases" – Report and Joint Meeting with the WG "Breeding for resistance against insects and diseases", Heraklio (Crete, Greece), 2006.....	16
WG "Integrated Protection of Olive Crops" – Next Meeting	18
WG „Integrated Control in Protected Crops, Mediterranean Climate" – Next Meeting	19
WG "Integrated Protection in Citrus Crops" – Next Meeting	19
WG "Pesticides and Beneficial Organisms".....	22
WG "Multitrophic Interactions in Soil"	24
50 Years of IOBC: General Assembly of IOBC/WPRS	28
WG "Integrated Protection in Oak Forests" – Report.....	33
Announcements of Congresses and other Meetings	35
New IOBC / wprs Publications – Bulletins: 27(2, 6-10) including Contents	41
Other interesting publications brought to attention of Profile	58
Time-Table of Forthcoming Events	62

The Presidents Page

A new year is just at its start, the typical time for looking ahead and also for reflections on the time past. Ahead: The best wishes for all members of IOBC/WPRS for 2005 as well in private life as professionally.

Reflections are of particular relevance this year which the WPRS Council has selected for the celebration of IOBC's 50th Anniversary. We take this opportunity because what became WPRS from 1971 was almost the heart of IOBC at its start which can be fixed to either 1954 or 1956 based on the interpretation of papers and events. We took the pragmatic step and made it 2005, in between, and in connection with the coming General Assembly (September 2005) of WPRS.

What might be relevant considering after 50 years is among others: how far have we come with biological and integrated control during the 50 years, how much remains yet to be done, how much is WPRS needed?

We all know the immediate feeling of small, very slow steps when we try to look from a lot of our research into the practical use of it. If, however, we remind ourselves about the picture starting in the mid 1950's: the peak of DDT and its environmentally dangerous and resistance provoking relatives. In the 1960's and 70's the often very toxic organophosphorous compounds followed parallel with quite some effort for both biological control and integrated pest management.

That biological control meant something we can see from what emerged in glass houses during the 1980's. Also the IPM / IP approaches were so serious that certain chemical companies at that time tried to counteract in different ways.

Much has improved tremendously since the start of IOBC, our guidelines are broadly used directly and indirectly and nobody any more questions the relevance of working with control thresholds. However, we can also question ourselves how many pests and diseases are in practice controlled on the basis of a serious risk assessment. Similarly there is no doubt about the success of biological control in glass houses but as little doubt that there is still a long way to go until we can reach a more widespread use of biological control in orchards and agricultural fields.

More of these elements will be touched upon during the scientific day of the General assembly in September but I dare conclude now that a lot has been achieved over 50 years but still a lot has to be done, and there is still a great need for IOBC and in our case for WPRS in particular. In that respect it's very confirming to hear, as very recently, three young scientists expressing: the WPRS Working Group meetings is one of the most productive ways of spending time and the Bulletins are a most useful mid term documentation and communication.

Peter Esbjerg

IOBC/ WPRS
Commissions, Working Groups
 December, 2003

Commissions	Convenor	Liaison-Officer
Publications	BATHON H. TIRRY L.	–
Determination and identification of entomophagous insects	BAUR H.	–
Guidelines for integrated production	AVILLA J.	ALBAJES R.

Working Groups

Integrated protection of fruit crops	CROSS J.	MALAVOLTA C.
Pesticides and beneficial organisms	VOGT H.	BIGLER F.
Breeding for plant resistance to pests and diseases	BIRCH A.N.	TIRRY L.
Pheromones and other semio-chemicals in integrated production	WITZGALL P.	BATHON H.
Multitrophic interactions in soil	SIKORA R.	KERRY B.
Integrated protection in viticulture	LOZZIA C.	GESSLER C.
Integrated protection of oilseed crops	KOOPMAN B.	ALABOUVETTE C
Integrated protection of field vegetables	VIDAL S.	ESBJERG P.
Integrated control in protected crops, temperate climate	ENKEGAARD A.	BLUEMEL S.
Integrated control in protected crops, mediterranean climate	CASTAÑÉ C.	BLUEMEL S.
Insect pathogens and entomoparasitic nematods	PAPIEROK B.	HUBER J.
Integrated control of fungal and bacterial plant pathogens	ELAD Y.	ALABOUVETTE C.
Integrated protection in oak forests	VILLEMANT.C.	VIEIRA M.M.
Integrated protection of stored products	NAVARRO S.	BATHON H.

Integrated protection of olive crops	(KALAITZAKI A.)	MALATHRAKIS N.
Integrated protection of citrus crops	(GARCIA-MARI F.)	BESRI M.
Induced resistance in plants against insects and diseases	SCHMITT A.	HUBER J.
GMO's in integrated plant production	ROMEIS, J.	BIGLER F.
Landscape management for functional biodiversity	(POEHLING H.M. / ROSSING W.)	VAN LENTEREN J.

IOBC/wprs Officers and their Addresses

All Officers are asked to send corrections and additions to this compilation of addresses to the editor of *Profile* and/or to the treasurer.

1 – Executive Committee

Esbjerg, Prof. Dr. Peter (President), Zoology Section, Royal Veterinary and Agricultural University, Thorvaldsensvej 40, DK-1871 Frederiksberg C., Copenhagen (Denmark), Tel +45-35282686, Fax +45-35282670, e-mail: peter.esbjerg@ecol.kvl.dk

Albajes, Prof.Dr. Ramon (Vice-President), Universitat de Lleida, Centre UdL-IRTA, Rovira Roure, 191, E-25006 Lleida (Spain), Fax +34-973-238301, e-mail: ramon.albajes@irta.es

Huber, Dr. Jürg (Vice-President), Institute for Biological Control, BBA, Heinrichstrasse 243, D-64287 Darmstadt (Germany), Tel +49-6151-407220, Fax +49-6151-407290, e-mail: j.huber@bba.de, <http://www.bba.de>

Tirry, Prof. Dr. Luc (Vice-President), Ghent University, Laboratory of Agrozoology, Department of Crop Protection, Coupure Links 653, B-9000 Gent (Belgium), Tel +32-9-2646152, Fax +32-9-2646239, e-mail: luc.tirry@ugent.be

Alabouvette, Dr. Claude (General Secretary), INRA, Laboratoire de recherches sur la flore pathogène du sol, 17, rue Sully, BP 86510, F-21065 Dijon Cedex (France), Tel +33-3-80693041, Fax +33-3-80693224, e-mail: ala@dijon.inra.fr

Gessler, Dr. Cesare (Treasurer), Swiss Federal Institute of Technology, Institute of Plant Sciences Phytomedicin-Pathology, Universitätsstrasse 2, CH-8092 ETH-Zürich (Switzerland), Tel +41-1-6323871, Fax +41-16321108, e-mail: cesare.gessler@ipw.agrl.ethz.ch, Tel +39-0461615239 cesare.gessler@ismaa.it

2 – Council

Bathon, Dr. Horst, Institute for Biological Control, BBA, Heinrichstrasse 243, D-64287 Darmstadt (Germany), Tel +49-6151-407-225, Fax +49-6151-407290, e-mail: h.bathon@bba.de

Besri, Prof. Dr. Mohamed, Département de Phytopathologie, Institut Agronomique et Vétérinaire Hassan II, BP 6202, Rabat-Instituts, Maroc, Tel: +212-3777-8364, Fax: +212-3777-8364 / -8135, e-mail: m.besri@iav.ac.ma

Bigler, Dr. Franz, Swiss Federal Research Station for Agroecology, Reckenholzstrasse 191, CH-8046 Zürich (Switzerland), Tel +41-1-3777111, Fax +41-1-3777201, e-mail: franz.bigler@fal.admin.ch

Blümel, Dr. Sylvia, AGES, Austrian Agency for Health and Food Safety (AGES), Institute of Plant Health, Spargelfeldstrasse 191, A-1226 Wien (Austria), Tel +43-0-50555-33300, Fax +43-0-50555-33303, e-mail: pflanzengesundheit@ages.at, sbluemel@ages.at

Kerry, Dr. Brian, Rothamsted, Research, Harpenden, Hertfordshire AL5 2JQ (UK), Tel +44-1582-763133, e-mail: brian.kerry@bbsrc.ac.uk

Malathrakis, Dr. Nikolaos, Technological Education Institute, Stauromenos, G-71500 HERAKLIO, Crete, Greece, Tel: +30-81-379459, e-mail: nmal@steg.teiher.gr

Malavolta, Dr. Carlo, Servizio Produzioni Vegetali, Viale Silvani, 6, I-40122 Bologna (Italy), Tel +39-051-284654, Fax +39-051-284337, e-mail: cmalavolta@regione.emilia-romagna.it

Van Lenteren, Prof. Dr. Joop Coert, Wageningen University, Laboratory of Entomology, P.O. Box 8031, NL-6700 EH Wageningen, The Netherlands, Tel: +31-317-482327, Fax: +31-317-484821, e-mail: joop.vanlenteren@users.ento.wau.nl

Vieira, Dr. Maria Margarida, Direcção-Geral de Protecção das Culturas, Quinta do Marquês, 2780-155 Oeiras, Portugal, Tel: +351-21-4464057, Fax: +351-21-4420616, e-mail: margaridav@dgpc.min-agricultura.pt

Deputy Members

El Titi, Dr. Adel, State Institute for Plant Protection, Reinsburgstrasse 107, D-70197 Stuttgart, Germany, Tel: +49-711-6642478, Fax: +49-711-6642498, e-mail: adel.eltiti@lfp.bwl.de

Pommier, Dr. Jean-Jacques, IREF, Lanxade, Prignonieux, F-24130 La Force, France, Tel: +33-553221510 / -553829031, e-mail: pommier@ciref.asso.fr

Den Belder, Dr.E., Plant Research International, P.O. Box 16, NL-6700 AA Wageningen, The Netherlands, Tel: +31-317-476105, Fax: + 31-317-410113, e-mail: e.denbelder@plant.wag-ur.nl

3 – Auditing Committee

Freuler, Dr. Jost A., Station Fédérale de Recherche en, Production végétale de Changins, Route de Duillier, Case postale 254, CH-1260 Nyon, Switzerland, Tel: +41-22-3634383, Fax: +41-22-3634394, e-mail: jost.freuler@bluewin.ch

Lavadinho, Dr. Antonio Manuel Pereira, Direcção-Geral de Protecção das Culturas, Quinta do Marquês, P-2780 - 155 Oeiras, Portugal, Tel: 351-214464058, Fax: 351-214420616, e-mail: dgpc@mail.telepac.pt

Rezapanah, Dr. Mohammadreza, Biocontrol Control Research Dept, Plant Pests and Diseases Research Institute (PPDRI), Agricultural Research and Education Organization (AREO), P.O. Box: 19395-1454, Velenjak, Tehran, Iran, Tel: +98-21-2420224 / +98-21-2420225, Fax: +98-21-2403691, e-mail: rezapana@yahoo.com, <http://www.areo.or.ir>

Royle, Dr. David J., East End Stable, Nowhere Lane, Nailsea, Bristol BS48 2PT, UK, Tel: +44-12-75857197

Adler, Dr. Cornel, BBA, Institute for Stored Product Protection, Königin-Luise-Strasse 19, D-14195 Berlin, Germany, Tel: +49-30-83042503, Fax: +49-30-83042502, e-mail: adler@bba.de, <http://www.bba.de>

4 – Convenors

Avilla, Dr. Jesus, Centre UdL-IRTA de Lleida, Area de Proteccio de Conreus, Alcalde Rovira Roure 191, E-25198 Lleida, Spain, Tel: +34-973-702581, Fax: +34-973-238301, e-mail: jesus.avilla@irta.es

Bathon, Dr. Horst, Institute for Biological Control, BBA, Heinrichstrasse 243, D-64287 Darmstadt (Germany), Tel +49-6151-407225, Fax +49-6151-407290, e-mail: h.bathon@bba.de, <http://www.bba.de>

Baur, Hannes, Natural History Museum, Department of Invertebrates, Bernastrasse 15, CH-3005 Bern (Switzerland), Tel: +41-31-3507264, Fax +41-31-3507499, e-mail: hannes.baur@nmbe.unibe.ch, <http://www.nmbe.ch>

Birch, Dr. A.Nick, Scottish Crop Research Institute, Invergowrie, Dundee DD2 5DA (Scotland, UK), Tel +44-1382-562731, Fax +44-1382-562426, e-mail: n.birch@scri.sari.ac.uk, <http://www.scri.sari.ac.uk>

Boller, Dr. Ernst F., Eidgenössische Forschungsanstalt Obst-, Wein- & Gartenbau, CH-8820 Wädenswil (Switzerland), Tel +41-1-7836330, Fax +41-1-7836379, e-mail: ernst.boller@faw.admin.ch

Castañé, Dr. Cristina, IRTA, Centre de Cabrils, Carretera de Cabrils s/n, E-08348 Cabrils (Barcelona) Spain, Tel +34-93-7507511, Fax +34-93-7533954, e-mail: Cristina.Castane@irta.es

Cravedi, Dr. Piero, Università Cattolica del Sacro Cuore, Istituto di Entomologia e Patologia Vegetale, Via Emilia Parmense 84, I-29100 Piacenza (Italy), Fax +39-523-599235, e-mail: piero.cravedi@unicatt.it

Cross, Dr. Jerry, Entomology and Plant Pathology Department, East Malling Research, East Malling, West Malling, Kent ME19 6BJ, UK, Tel: +44-1732-843833, e-mail: jerry.cross@emr.ac.uk

Elad, Dr. Yigal, A.R.O. The Volcani Center, Department of Plant Pathology, Bet Dagan 50250 (Israel), Tel +972-3-9683580, Fax +972-3-9683688, e-mail: elady@volcani.agri.gov.il

Enkegaard, Dr. Annie, Danish Institute of Agricultural Sciences, Department of Crop Protection, Research Centre Flakkebjerg, DK-4200 Slagelse (Denmark), Tel +45-58113300, Fax +45-58113301, e-mail: annie.enkegaard@agrsci.dk

Garcia-Mari, Ferran, Dept. Ecosistemes Agroforestales, E.T.S. Enginyers Agrònoms, Universitat Politècnica de València, Camí de Vera 14, E-46022 Valencia (Spain), Tel +34-9638-79250, Fax +34-9638-79269, e-mail: fgarciam@eaf.upv.es

Kalaitzaki, Argyro, Division of Agricultural Development, Prefecture of Rethymno, Dimitrakaki 17, 74100 Rethymno (Greece), Tel: +30 8210 98173, Fax: +30 821 92711 e-mail: argkalaitzaki@yahoo.com

Koopman, Dr. Birger, Institute for Plant Pathology and Plant Protection, Universität Göttingen, Grisebachstr. 6, D-37083 Göttingen, Tel +49-551-393779, Fax +49-551-394187, e-mail: bkoopma@gwdg.de

Lozzia, Dr. Carlo, Istituto die Entomologia Agraria, Università degli Studi di Milano, Via Celoria, I-20123 Milano (Italy), Tel +39-2-2369191, Fax +39-2-26680320, e-mail: lozcar@mailserver.unimi.it

Navarro, Dr. Shlomo, The Agricultural Research Organization, The Volcani Center, Department of Stored Products, P.O. Box 6, Bet Dagan 50250, Israel, Tel: +972-3-9683587 / -9683552, Fax: +972-3-9683583, mobile +972-56-220587, e-mail: snavarro@volcani.agri.gov.il or shlomonav@hotmail.com.

Papierok, Dr. Bernard, Institut Pasteur, 25, rue du Dr Roux, F-75015 Paris, Tel +33-1-45688226, Fax +33-1-40613044, e-mail: papierok@pasteur.fr

Poehling, Prof.Dr. Hans Michael, University of Hannover, Institute for Plant Pathology and Plant Protection, Herrenhäuser Strasse 2, D-30419 Hannover (Germany), Tel +49-511-7622641, Fax +49-511-7623015, e-mail: poehling@mbox.ipp.uni-hannover.de

Romeis, Dr. Jörg, Agroscope FAL Reckenholz, Swiss Federal Research Station for Agroecology and Agriculture, Reckenholzstr. 191, CH-8046 Zürich, Switzerland, Tel +41-1-3777299, Fax: +41-1-3777201, e-mail: joerg.romeis@fal.admin.ch

Rossing, Dr. Walter A.H., Biological Farming Systems Group Wageningen University, Marijkeweg 22, NL-6709 PG Wageningen (The Netherlands), Tel +31-317-478210, Fax ++31-317-478213, e-mail walter.rossing@wur.nl

Schmitt, Dr. Annegret, Institute for Biological Control, BBA, Heinrichstrasse 243, D-64287 Darmstadt (Germany), Tel +49-6151-407-241, Fax +49-6151-407290, e-mail: a.schmitt@bba.de, <http://www.bba.de>

Sikora, Prof.Dr. Richard, Universität Bonn, Institut für Pflanzenkrankheiten, Nussallee 9, D-53115 Bonn (Germany), Tel +49-228-732439, Fax +49-228-732432, e-mail: rsikora@uni-bonn.de

Vidal, Prof.Dr. Stefan, Georg-August-University, Institute for Plant Pathology and Plant Protection, Entomological Section, Grisebachstrasse 6, D-37077 Göttingen, Tel +49-551-399744, -393730, Fax +49-551-393730, -3934187, e-mail: svidal@gwdg.de

Villemant, Dr. Claire, Museum national d'Histoire naturelle, Laboratoire d'entomologie, 45 rue Buffon, F-75005 Paris (France), Tel +33-1-40793841, Fax +33-1-40793699, e-mail: villeman@mnhn.fr

Vogt, Dr. Heidrun, Institute for Plant Protection in Fruit Crops, BBA, Schwabenheimer Strasse 101, D-69221 Dossenheim, Tel +49-6221-8680530, Fax +49-6221-8680515, e-mail: h.vogt@bba.de, <http://www.bba.de>

Witzgall, Dr. Peter, Swedish University of Agricultural Sciences, Department of Crop Science, Box 44, S-23053 Alnarp (Sweden), Tel +46-40-415307, Fax +46-40-461991, e-mail: peter.witzgall@vv.slu.se, <http://www.phero.net>

Hunting old IOBC documents

The forthcoming IOBC/wprs General Assembly of September 2005 will provide the opportunity to celebrate the 50th anniversary of IOBC. Given the mandate by wprs Council I have the pleasure and honour to prepare a historic review covering half a century. Although IOBC/wprs has published regularly since 1968 the proceedings of Council and Working Group meetings there exist in IOBC archives only very few original records, letters or photographs documenting the important events that have taken place between 1948 and 1955 (the preparatory phase) and between 1956 and 1968. I would be interested to receive a short message from persons who possess or know the whereabouts of original documents and photos concerning IOBC matters of this period, especially

Letters and protocols documenting

- the preparation and conduct of the first meeting of 1956
- the general assembly 1965 at Montreux (changing the name from CILB to OILB)
- the preparation, establishment and first meetings of the individual IOBC/wprs Commissions and Working Groups.

There is general interest in photographs of IOBC/wprs General Assemblies and early activities of Working Groups and Commissions.

If you possess such documents or have access to such documents you are kindly invited to contact me as soon as possible. Photographs made available will be scanned and returned within a few days. Thank you very much for your kind co-operation.

Dr. Ernst Boller
IOBCwprs Commission on IP Guidelines
c/o Swiss Federal Research Station of Horticulture
CH-8820 Waedenswil, SWITZERLAND

e-mail: ernst.boller@faw.admin.ch

IOBC/wprs

COMMISSIONS AND WORKING GROUPS

Workshop “Management of Plant Diseases and Arthropod Pests by Biological Control Agents and their Integration in Agricultural Systems”

Annie Enkegaard¹ and Yigal Elad²

¹ *Danish Institute of Agricultural Sciences, Dept. of Crop Protection, Research Center Flakkebjerg, Denmark, Annie.Enkegaard@agrsci.dk*

² *A.R.O. The Volcani Center, Department of Plant Pathology, Israel, elady@volcani.agri.gov.il*

The workshop ‘Management of plant diseases and arthropod pests by biological control agents and their integration in agricultural systems’ was held at Istituto Agrario Di San Michele All’ Adige (IASMA) in S. Michele all’Adige, Trentino, Italy, from the 9 th to 13 th of June 2004.

The meeting was jointly organised by the IOBC Working Groups ‘Biological Control of Fungal and Bacterial Plant Pathogens’ (convenor Yigal Elad, Israel) and ‘Integrated Control In Protected Crops, Temperate Climate’ with organisational assistance from the IOBC Working Group ‘Integrated control in Protected Crops, Mediterranean Climate’ (convenor Cristina Castañe, Spain).

The meeting was organised with the aim of bringing plant pathologists and entomologists together and to encourage discussions between them. The meeting was locally organised by Ilaria Pertot, Daniele Barbacovi and Manuela Malavolta and hosted by the SafeCrop Research Center. This Center is a new partnership construction funded by the Provincia Autonoma di Trento, Italy, through which researchers from different European Institutes (IASMA, Italy; INRA, France; SLU, Sweden; BBA, Germany; ARO, Israel; ETHZ, Switzerland) can initiate and conduct collaborative research oriented toward plant protection technologies against pests and diseases using sustainable low environmental impact methods.

Some of the topics of the workshop were:

- Integrated plant disease and arthropod pest management
- Multi target agents, i.e. targeting several diseases or targeting disease(s) and pest(s).

- Side effects of arthropod pest management tools on disease development and control and side effects of disease control on beneficials.
- Case studies of implementation of integrated disease and pest management
- Integrated disease management.
- Application of natural substances/microbials against diseases.
- Role of host plant resistance in IPM
- Induced resistance towards diseases and pests.

The workshop was attended by 164 participants from 24 countries. During discussions a major concern was expressed regarding the difficulties in commercialisation of microbial biocontrol and other alternatives and the delay in implementation of friendly means of control. Missing information about the behaviour of biocontrol agents in scaled-up production, during storage and in the distribution chain and the usually short shelf life of these products were described as a drawback. The severe EU regulations for registration of microbials and the fact that the regulations are somewhat not clear at present, pose major difficulties in placing biocontrol agents in the market.

The companies involved are usually small or medium enterprises and have no strong enough financial backbones to withstand the demands. The public ignorance regarding biocontrol was also highlighted as a reason for concern among the scientists. Nevertheless, in spite of the existence of gaps of knowledge on the way to implementation of alternative control measures the support for research and development in this direction is poor.

Regrettably only a minor fraction (~20%) of the 34 presentations and 68 posters at the workshop dealt with topic of integration of control measures towards both pests and diseases while the rest dealt with various aspects of biological and integrated control of diseases. This presumably reflects the fact that experience both in research and in practice is still limited when it comes to true integration of measures against pests and diseases. As a consequence, the need for more work on integration of control methods for real life management of diseases and arthropod pests was widely expressed. Questions such as the following were raised: is there a possibility of multiple effects on targets that occur simultaneously; is there enough knowledge regarding conflicting results – control of one problem but increase of another problem; the risk of emerging problems; the possibility of minor pathogens and pests to become important and the limited information about the effect of alternatives on non-target organisms. A call for more research on these subjects was raised.

WG „Use of Pheromones and other Semiochemicals in Integrated Control“

Joint meeting with the Orchard WG, September 2004 in Baselga di Pine (Italy) – Report

A joint meeting with the Orchard WG (JERRY CROSS) was held in September 2004 in Baselga di Pine (Italy). The local organizer was CLAUDIO LORIATTI (IASMA, San Michele).

The meeting reflected recent work, especially on plant volatiles as insects attractants and the identification of non-lepidopteran insect pheromones. It also confirmed the growing importance of mating disruption with sex pheromones for insect control in orchards and vineyards.

A plenary discussion on insecticide resistance, particularly in codling moth, was mediated by MAX ANGST (Syngenta), PIERRRE-JOSEPH CHARMILLOT (Swiss Federal Research Station Changins) and CLAUDIO LORIATTI. Mating disruption is considered to be an important tool for resistance management.

Control of codling moth is a critical issue, especially in view of the anticipated deregulation of azinphos methyl, which is pursued by US-American and European authorities since many years. The compound, which is widely used in orchards, and which is particularly neurotoxic, will be banned from use in Norway in 2005 (Mattilsynet 2005; Preparater som har mistet sin godkjenning (in Norwegian) www.mattilsynet.no).

Insect control in orchards with insecticides, especially control of codling moth, will thus become more expensive and less efficient, and the importance of the mating disruption technique will increase. Unfortunately, mating disruption against codling moth is not efficient at high populations densities, and growers usually combine pheromone treatment with a reduced spray program. Stand-alone use of mating disruption requires further research on the behavioural mechanisms, which is expected to lead to improved formulations and application techniques.

This will be an important topic of the next plenary meeting of the WG in 2006.

Convenor

Peter Witzgall, Dept. of Crop Science, Swedish University of Agricultural Sciences, 230 53 Alnarp, Sweden

Working Group “GMOs in Integrated Production”

This working group aims to present a platform for exchange of research results and to stimulate collaborative projects dealing with genetically modified plants, their integration into IPM systems and their potential impact on the environment. For details on the objectives of this group see Profile Nr. 34.

The first meeting of this study group took place in November 2003 in Prague. More than one hundred participants from 23 countries attended the meeting. The proceedings of the meeting have been published in 2004 as an IOBC/wprs Bulletin 27(3).

Meeting announcement

The second meeting of the working group will take place from **June 1-3, 2005 in Lleida, Spain**. The local organization is carried out by RAMON ALBAJES from the Universitat de Lleida.

We will have three days for presentations, posters and time for discussions. We specifically invite contributions to the following themes:

- Pre-market risk assessment for non-target organisms (procedures and testing protocols)
- How do we deal with ‘unintended effects’ that are due to plant transformation in environmental risk assessment
- How does the deployment of GMOs change agricultural practise and what are the consequences for biological control and biodiversity?
- Environmental monitoring of GMOs (case-specific and general surveillance)

I'm very happy to announce the following key-note speakers:

PAUL CHRISTOU (Universitat de Lleida, Spain) – Recent advances in transgenic insect pest control

MARCO CANDOLFI (RCC Ltd., Switzerland) – Standard test methods as a basis for an appropriate tiered risk assessment of GM crops

PAUL JEPSON (Oregon State University, USA) – Design criteria for international GMO monitoring guidelines: the results of an FAO workshop

All contributions will be published in one issue of the IOBC/wprs Bulletin.

Regularly updated information and online registration is available on the meeting's website:

<http://www.eigmo.udl.es/>

Deadlines:

January 31th, 2005: Lowe rate registration

March 25th, 2005: Abstract submission

June 30th, 2005: Manuscript submission

Please distribute this announcement to colleagues who are possibly interested to attend the meeting.

Joerg Romeis (Convenor)

Agroscope FAL Reckenholz,

Swiss Federal Research Station for Agroecology and Agriculture

Reckenholzstr. 191

8046 Zurich - SWITZERLAND

Tel.: +41-1-377 7299

Fax: +41-1-377 7201

e-mal: joerg.romeis@fal.admin.ch

<http://www.reckenholz.ch/doc/de/forsch/control/biosi/biosi.html>

Working Group, 'Integrated Control in Protected Crops, Temperate Climate'

Next Meeting "Integrated Control in Glasshouses and Outdoor Nursery Stocks" 10-14 April 2005, Naantali, Finland

The IOBC/WPRS Working Group "Integrated Control in Protected Crops, Temperate Climate" will meet on the 10-14 April 2005, in Naantali, Finland (Local organizer: Irene Vanninen). The meeting will feature 4 days of presentations and workshop discussions on integrated pest and disease management in glasshouses, and will include a research tour of the glasshouse industry in the Turku area.

In addition, the last day of the meeting (14 April) will be dedicated to the topic "IPM in outdoor and hardy nursery stocks". This topic will encompass pests, diseases and weeds. It will be possible to participate in 1) the part of the meeting dealing only with IPM in glasshouses (10-13 April), 2) the part of the meeting dealing only with IPM in outdoor nursery stocks (14 April), or 3) the whole meeting (10-14 April).

Topics will include:

- Biological / microbial control and IPM of pests and / or diseases in vegetables / ornamentals
- Important and / or new pests and diseases; and beneficials
- Registration and quality control of natural enemies

- IPM-elements (SOS-signals, supplementary food, host plant resistance, etc.)
- Emerging tools of crop and herbivore manipulation – impact on IPM
- Impact of artificial lighting on IPM
- Need of new biocontrol agents in protected crops
- Factors affecting the success of technology transfer projects in IPM in ornamentals
- Pesticide resistance and its management in greenhouses
- Intraguild predation
- Invasive species
- IPM in outdoor and hardy nursery stocks

For further details see <http://web.agrsci.dk/plb/iobc/meet2005.htm>

Contact Local Organiser

Irene Vanninen, Agrifood Research Finland, e-mail:
Irene.Vanninen@mtt.fi

Contact WPRS Group convenor

Annie Enkegaard, Danish Institute of Agricultural Sciences,
Research Centre Flakkebjerg, e-mail: annie.enkegaard@agrsci.dk

Commission on IP Guidelines and Endorsement

The 3rd edition of the IOBC/WPRS Basic Document on Integrated Production, which contains the Definition and Principles, as well as the Guidelines I and II, is now available at the internet site of the Commission (see below) and as an IOBC/wprs Bulletin (vol. 27(2), 2004). It has raised a lot of interest, as demonstrated by the high numbers of downloads. As the document sets out the official position of IOBC/WPRS on Integrated Production, we encourage and kindly ask to all the IOBC members and participants in the WG's activities to consult the document and to use it as a guide to develop and to implement IP within the WG's activities. The 'Guidelines for Integrated Production of Vegetables' are also been approved and the English version is available at the internet site of the Commission.

As a result of a common project with the WG "Pesticides and Beneficial Organisms", a database that resume the available information on the effects of pesticides on beneficial organisms has been produced. The work has been finished and it will be published by the WG "Pesticides and Beneficials" as an IOBC/wprs Bulletin.

The book "Ecological Infrastructures. Ideabook on Functional Biodiversity at the Farm Level", edited under the leadership of ERNST BOLLER has been published in September. Since early reactions indicate interest in versions published in other languages, the Commission considers an Italian-French version as possible option.

The endorsed organizations (Trecoop (Spain), Apofruit (Italy), Tyflo (France) and Live (USA)), requested and obtained the renewal of the endorsement for 2005. Three more organizations from France, Czech Republic and Australia are candidates to obtain the endorsement in due term.

The activities planned for 2005 include the production of the 2nd edition of the Guidelines for Arable crops, the production of the IOBC Tool Box for endorsed organizations, which includes the Green / Yellow lists models and the inspection protocol and the production of a document on implementation of IP.

All the information on the activities of the Commission is available at the internet site:

<http://www.iobc.ch>

Dr. Jesús Avilla, Convenor
Centre UdL-IRTA de R+D
Universitat de Lleida
Rovira Roure, 191
25198 – Lleida. Spain
e-mail: jesus.avilla@irta.es
Tel: ++ 34/973-702581 Fax: ++ 34/973-238301

Working Group "Insect Pathogens and Insect Parasitic Nematodes", Next Meeting 2005

Invertebrate Pathogens in Biological control: Present and Future

The 10th European meeting of the WG will be held in Locorotondo, near Bari, Italy, 10-15 June 2005, in cooperation with the COST Actions 842 "Entomophthorales" and 850 "Biocontrol Symbiosis".

10 – 11 June: COST Action meetings; starting the registration of the WG meeting

12 – 15 June: WG meeting

The meeting will include oral and poster contribution sessions as well as three workshops (dedicated to nematodes, fungi and microsporidia respectively). 20 people will be allowed to attend every workshop. Contribution sessions will be organized according to the type of biological agents (bacteria, viruses, fungi, nematodes, other pathogens), the type of pests (e.g. *Diabrotica*, soil pests, forest pests...) or the type of concern (safety and risk assessment, marketing purposes...). Interestingly, sessions could be planned as round table discussions. Furthermore, a plenary session will be devoted to the election of a new convener.

Further informations are given on the following webpage :

<http://www.agr.uniba.it/iobc>

The second and final announcement will be sent in January 2005.

You can reach the Meeting Secretariat per e-mail:

IOBC.europeanmeeting@agr.uniba.it

Local Organizer:	WG Convener
Pr. Oreste Triggiani Dipartimento di Biologia e Chimica Agroforestale ed Ambientale Facoltà di Agraria Università degli Studi di Bari Via Amendola 165/A 70126 Bari (Italy) Tel: +39 080 5442878 Fax: +39 080 5442876 E-mail: triggian@agr.uniba.it	Bernard Papierok Collection des Champignons Institut Pasteur 28, rue du Docteur Roux 75015 Paris (France) Tel: +33 (0)1 45 68 82 26 Fax: +33 (0)1 45 68 85 87 E-mail: papierok@pasteur.fr

WG “Induced resistance in plants against insects and diseases”, Meeting Report

From 2 to 4 November 2004 the IOBC/wprs Working Group “Induced Resistance in Plants Against Insects and Diseases” organised a workshop held in Delémont, Switzerland. BRIGITTE MAUCH-MANI, (University Neuchatel, Switzerland) from the steering committee, was in charge of the local organisation. The workshop was entitled “Methods in research on induced resistance and tolerance” and was attended by about 50 young and senior scientists from 12 different countries within Europe, USA and Russia.

The participants were contributing to the workshop with 24 oral and 10 poster presentations covering a broad variety of research areas, which served as basis for active and stimulating discussions, and bridged gaps between entomologists, phytopathologists, molecular biologists and physicists. The workshop was used as platform to exchange methodological approaches, augment the understanding of the general and causal processes involved in these induced defence reactions of plants against both, insects and plant pathogens, and to discuss their potential for practical plant protection. This was the second event of the study group focussing on applied and fundamental aspects of induced resistance and induced tolerance in plants.

Joint Meeting of the WGs „Breeding for resistance against insects and diseases“ and „Induced resistance in plants against insects and diseases“, Heraklio (Crete, Greece), 2006

The two IOBC/wprs Working Groups „Breeding for resistance against insects and diseases“ and „Induced resistance in plants against insects and diseases“ will hold a joint conference in 2006 in Heraklio, Crete, Greece under the title “Breeding for (induced) resistance against pests and diseases”. The conference will be held in April/May 2006. Final dates will be advertised in due time via the IOBC/wprs homepage. Tentative topics to be addressed are:

- Tools to study the associations of genotypes and phenotypes
- Mechanisms involved in induced and constitutive resistance
- Types of resistance important for breeders and possible contribution of induced resistance (IR)
- Enhancing IR through biotechnology including use of priming and inducing agents, GMOs and selectable genetic markers
- Evolutionary aspects of plant resistance (aiding the development of deployment strategies for durable resistance within Integrated Crop Management = ICM)

Experts in the different fields (from fundamental molecular biology to applied plant breeding) will be invited as keynote speakers to be followed by oral and poster presentations from the participants.

For further information contact either Convenor:

Annegret Schmitt (a.schmitt@bba.de) or
Nick Birch (N.Birch@scri.sari.ac.uk)

Working Group “Integrated Protection of Olive Crops” Next meeting, Florence (Italy), 26-28 October 2005

On behalf of the IOBC/WPRS we are in the pleasant position to announce the forthcoming European Meeting of the IOBC/WPRS Working Group: “Integrated Protection of Olive Crops” that will be held in Florence, Italy from October 26 to 28, 2005.

The meeting includes oral presentations and poster session. The contributions will be published in an IOBC/wprs Bulletin. – The Website is still under construction.

The main topics of the meeting are:

- Monitoring and behavior of olive fly
- Biocontrol of olive fly
- IPM strategies of olive pests
- Diseases of olive crops.

The meeting will be organized by:

Dr Antonio Belcari (Chairman),
Department of Agricultural Biotechnologies,
University of Florence,
Piazzale delle Cascine, 18-50144 Firenze, Italy
Tel.: 055-3288-277
Fax: 055-3288-278
E-mail: antonio.belcari@unifi.it

Full articles of the 1st Meeting (“Integrated Protection of Olive Crops” Chania, Greece, May 29 to 31, 2003) will be published as IOBC/wprs Bulletin (in preparation) and issued to the participants, soon.

Dr. Kalaitzaki Argyro(Convenor)
Division of Agricultural Development of Chania
Department of Plant Protection
Tel.: +30 28210 28281
Fax: +30 28210 28047
E-mail: argkalaitzaki@yahoo.com

WG “Protected Crops, Mediterranean Climate” – Next Meeting, Murcia (Spain), 2006

The next meeting of the Working Group will take place from 15 to 19 May 2006 hosted by Dr. JUAN ANTONIO SÁNCHEZ from Instituto Murciano de Investigación y Desarrollo Agrario y Alimentario (IMIDA). The meeting will be held in the city of Murcia (Spain), which is located in the centre of an important greenhouse production area in the southeast Mediterranean coast of Spain. During the meeting we will have the opportunity to visit the area and see the situation of biological control strategies in such a production region.

For further information, please contact:

Dr. Cristina Castañé (Convenor)
Institut de Recerca i Tecnologia Agroalimentàries (IRTA),
Ctra. de Cabrils s/n, 08348 CABRILS, SPAIN
Tel. +34 93 7507511
Fax: +34 93 7533954
e-mail: Cristina.Castane@irta.es

or

Dr. Juan Antonio Sánchez (Local organizer)
Instituto Murciano de investigación y Desarrollo Agrario y
Alimentario (IMIDA)
C/ Mayor s/n; 30150 LA ALBERCA, SPAIN
Tel. + 34 968 362787
Fax + 34 968 366792
e-mail: Juana.Sánchez23@carm.es

WG “Integrated Protection of Citrus Crops”, Next Meeting: Lisbon (Portugal), September 2005

On behalf of IOBC/WPRS, you are cordially invited to participate in the next meeting of the IOBC/WPRS Working Group on “Integrated Control in Citrus Fruit Crops” (http://www.iobc-wprs.org/wg_sg/index.html), that will be held in Lisbon, Portugal, 26-27 September, 2005.

The meeting is organized by the Instituto Superior de Agronomia (Technical University of Lisbon) in collaboration with Estação Agronómica Nacional, Direcção Geral de Protecção das Culturas and Direcção Regional de Agricultura do Algarve. It will take place at the facilities of

Instituto Superior de Agronomia, in Tapada da Ajuda, Lisbon (<http://www.isa.utl.pt>).

The conference will cover all aspects of IPM in citrus orchards related with the three groups of citrus pests, arthropods, plant pathogens and weeds. It is also intended to discuss the major constraints and research priorities for further development of IPM of citrus in Mediterranean countries.

A post-meeting (28-30 September) scientific excursion to Madeira Island is planned, aiming to visit the facilities and learn about the Madeira-Med program (<http://www.sra.pt/users/madeiramed>), a pioneering area-wide program using the Sterile Insect Technique (SIT) to control medfly, *Ceratitis capitata*.

The pre-registration form (next page) should be sent to the local organiser preferably by e-mail (iobc2005@isa.utl.pt), before December 31st, 2004:

Local organiser	Convenor
Dr. José Carlos Franco Secção de Protecção Integrada Dep. Protecção das Plantas e de Fitoecologia Instituto Superior de Agronomia 1349-017 Lisboa (Portugal) Tel.: + 351-213653226 Fax.: + 351-213653430 e-mail: iobc2005@isa.utl.pt	Ferran Garcia Mari Entomologia Agrícola, Institut Agroforestal Mediterrani ETSE Agronomes Universitat Politècnica de València Camí de Vera 14, 46022 Valencia (Spain) Tel.: +34 96387 9250 Fax.: +34 96387 9269 e-mail: fgarciam@eaf.upv.es

Further information on accommodation, registration fees, instructions for the abstract preparation and full article publication, preliminary programme and scientific excursion to the Madeira Island etc. will be reported in the **second circular**. This circular will be sent by **January 2005**. Updated information will also be available on the website:

<http://www.isa.utl.pt/dppf/iobc>.

Looking forward to meet you at Lisbon

Sincerely

José Carlos Franco, Ferran Garcia-Mari, Mohamed Besri (Liaison officer), m.besri@iav.ac.ma

**IOBC/WPRS WG “Integrated Control in Citrus Fruit Crops”
Conference: Lisbon (Portugal), 26-27 September 2005
Scientific excursion (Optional):
Madeira Island, 28th-30th September 2005**

Pre-registration form

Name: _____ **First name:** _____

Position (Senior scientist, PhD student, ...): _____

Address: _____

Phone: _____ **Fax:** _____

E-mail: _____

I intend to submit a presentation with the title (orientative): _____

Oral Poster

Accompanying person:

I intend to participate in the scientific excursion to Madeira Island (28-30 September 2005), estimated cost per person 300 – 350 euros:

Yes No

Please send the pre-registration form before December 31, 2004, preferably by e-mail (iobc2005@isa.utl.pt) to the local organiser (alternatively, you can do it online at (<http://www.isa.utl.pt/dppf/iobc>)):

José Carlos Franco
Dep. Protecção das Plantas e de Fitoecologia
Instituto Superior de Agronomia
1349-017 Lisboa, Portugal
Tel.: + 351-213653226 Fax.: + 351-213653430

IOBC/WPRS WG „Pesticides and Beneficial Organisms“

1) Publications

Presentations of the last meeting of the WG in Ponte de Lima, Portugal, October 2003, are published in the IOBC/wprs Bulletin 27(6) 2004. Contents is available in this issue of Profile and on the IOBC/WPRS homepage.

2) Next meeting

The next meeting of the WG will take place at **Dębe near Warsaw, Poland, from 27th to 30th September 2005**. The meeting is organized in close cooperation with the *Research Institute of Pomology and Floriculture* in Skierniewice (Poland). Skierniewice is often called “the capital of polish Horticulture”. The main fruit growing region in Poland, and one of the biggest in the world, is located 40 km south-east from Skierniewice.

The place of the meeting will be the Training Centre of the Ministry of Environmental Protection in Dębe, which is a small village situated by the Narwa river, 35 km north from Warsaw and about 100 km north-east from Skierniewice. The WG is grateful about the invitation by the local organizer Prof. REMIGIUSZ W. OLSZAK.

Besides the sessions with oral presentations, it is planned to have special workshops with participation restricted to invited experts, e.g. it is intended to proceed with the topic “Sampling methodology for field tests in different crops” with the aim of establishing critical descriptions and instructions for several methods.

Please contact the convenor, if you have any suggestions related to especial goals, which should be discussed within special sub-group meetings.

Oral presentations (15 – 20 minutes) related to the topics below are invited:

- Development of **standard procedures to test side effects** of pesticides on important beneficial organisms. All testing tiers, but especially extended laboratory, semi-field and field tests. Presentation and discussion of new or optimized methods; completion of sequential testing schemes. Please consider IOBC standards.
- **Test methods for special plant protection products**, e.g. IGRs, soil-incorporated granules or seed dressings, special use patterns.
- **Results** from side-effect tests, especially with new compounds, and their **implementation into IPM**.

- **Duration of effects** (natural substrates, exposure under realistic conditions, aged residues) and **implementation into IPM**.
- **Field tests**: Test design, sampling techniques, statistics, interpretation.
- Extrapolation of field studies to different regions, different crops: Is this possible?
- **Comparison of results** from laboratory, extended laboratory, semi-field and field tests; extrapolation laboratory - field.
- **Comparison of results between species and biotypes**.
- Effects of **multiple applications** of pesticides, of sequences of sprays or of combinations of pesticides. How to test multiple application products in the laboratory/extended/sf-test?
- **Side-effects of pesticides in protected crops**.
- **Side effects of biological control agents** (e.g. Bt, fungi, viruses).
- Sublethal effects of pesticides, their **significance and acceptability**
- **Other topics related to side-effects**

Further information about the meeting and registration will be available on the IOBC homepage. You can also contact the convenor or the local organizers.

WG Convenor

Dr. Heidrun Vogt

BBA, Institute for Plant Protection
in Fruit Crops
Schwabenheimerstr. 101
69221 Dossenheim (Germany)

Tel.: +49(0)6221/8680530

Fax: +49(0)6221/8680515

E-mail: H.Vogt@bba.de

Local Organizers

Prof. Remigiusz W. Olszak

Dr. Dariusz Gajek

Research Institute of Pomology
and Floriculture
Department of Plant Protection
Pomologiczna str. 18,
96-100 Skierniewice (Poland)

Tel.: +48 46 8345357

Fax: +48 46 8333228

E-mail.: rolszak@insad.pl,

dgajek@insad.pl

WG “Multitrophic Interactions in Soil”: Meeting in Wageningen (The Netherlands), 5-8 June, 2005

Conference dates: 5 – 8 June, 2005

Arrival of the participants and registration is scheduled for Sunday, 5 June. Monday, 6 June and Tuesday, 7 June are full days with oral presentations followed by a social programme. On Wednesday, 8 June, oral presentations will be scheduled in the morning followed by a lunch.

Conference will be held in: Wageningen, The Netherlands

For national participants, Wageningen can be reached easily by public transport or car. The nearest train station is Ede-Wageningen. At the train station there are taxi and bus services for transport to the conference site. For international participants, also public transport (train) is an attractive option to go to Wageningen. Schiphol airport in Amsterdam is the nearest international airport from where several trains run every hour to Ede-Wageningen station.

Conference site and accomodation:

Conference hotel ‘De Wageningse Berg’
Generaal Foulkesweg 96, 6703 DS Wageningen, Netherlands
Phone: +31 317 495911 ; Fax: +31 317 418208
website: www.wageningseberg.com

Conference topics:

The overall aim of the IOBC/WPRS-meeting ‘Multitrophic Interactions in Soil’ is to bring together students, experts, researchers, and (biocontrol) companies specialised in different disciplines, including biological control, soil microbiology, molecular ecology, molecular biology, bacteriology, nematology, mycology and entomology. The meeting in 2005 will focus on recent findings in these areas of research. The specific conference topics include:

- biology and modes of action of beneficial (micro)organisms
- interactions between beneficial (micro)organisms and plants
- communication between soil (micro)organisms and regulation of beneficial traits
- (new) methods to study multitrophic interactions and biodiversity in soil
- commercial applications of beneficial (micro)organisms

For more information on topics discussed during the previous IOBC/WPRS-meeting 'Multitrophic Interactions in Soil', held in 2003 in Bonn (Germany), please visit the website of the IOBC/WPRS-working group (<http://www.iobc-wprs.org/index.html>) and see the contents of the proceedings.

Registration and reservation: 15 January 2005

Also **reservation for the hotel room** at the conference location 'De Wageningse Berg' should preferably be done not later than 15 January 2005.

Hotel reservation should be faxed directly to the conference hotel:

Conference hotel 'De Wageningse Berg'
Generaal Foulkesweg 96, 6703 DS Wageningen, Netherlands
Phone: +31 317 495911 ; Fax: +31 317 418208
website: www.wageningseberg.com

The registration form is given on the next page and can be sent by fax or e-mail to:

Dr. Jos M. Raaijmakers
Laboratory of Phytopathology
Wageningen University
Netherlands
Phone: +31 317 483427
Fax: +31 317 483412
E-mail: jos.raaijmakers@wur.nl

Please make sure you make your registration and hotel reservation as early as possible. Availability of rooms after 15 January 2005 can not be guaranteed !!!

Conference fees and payment:

Arrangements have been made with the conference hotel 'De Wageningse Berg' to your advantage. The prices are as follows:

1. Hotel accomodation (**3 nights** including breakfast):
At Wageningse Berg Conference Centre (62.50 per night per person) 187,50 euro
(note: if you share a room with a colleague, the price is 97,50 euro per room per night)
At WICC (in case rooms are not available anymore at Conference Centre) 201 euro
2. Meals (3 times lunch (6,7,8 June), 2 times dinner (6 and 7 June))
120 euro
3. Conference fee (including social activities): 100 euro

The Wageningse Berg Conference Centre will collect the **payments for the hotel accomodation and meals**. Please make sure you send in the Hotel Registration form by fax to the Wageningse Berg (see information given above). The **conference fee** will be collected upon arrival by the organising committee.

Organizer and convenor:

The local organiser of the IOBC/WPRS-2005 meeting 'Multitrophic Interactions in Soil' is the Molecular Ecology group, Laboratory of Phytopathology, Wageningen University, The Netherlands:

(www.dpw.wau.nl/fyto/welcome.html).

The conference convenor is Dr. JOS M. RAAIJMAKERS, Laboratory of Phytopathology, Wageningen University, Binnenhaven 5, 6709 PD Wageningen, The Netherlands; phone +31 317 483427; fax +31 317 483412; e-mail: jos.raaijmakers@wur.nl

**Registration Form IOBC-meeting 2005
'Multitrophic Interactions in soil'**

Family name: Title:

First name:

Organisation:

Address:

.....

Postal code:City/State:

Country:

Phone (incl. country and area code):

Fax (incl. country and area code):

E-mail:

I wish to give a presentation: Yes No

Tentative title presentation:

.....

.....

IOBC/WPRS GENERAL ASSEMBLY
and scientific meeting

OILB/SROP ASSEMBLÉE GÉNÉRALE
et colloque scientifique

50 YEARS of IOBC:
from chemical control to integrated production
with biological control

50^{eme} anniversaire de l'OILB: de la lutte
chimique à la production intégrée grâce à la
lutte biologique

DIJON – FRANCE

Saturday 17 september, Wednesday 21 september 2005

Samedi 17 septembre, mercredi 21 septembre 2005

Provisional programme
Programme prévisionnel

General Assembly

Dijon September 17-21, 2005

Saturday 17/9: Arrival in the after-noon

Welcome party and buffet at 18.30 h

Executive committee meeting 19.30 - 22 h

Sunday 18/9: General Assembly

8.30-10.30 h:

Report of the President

Report of the General Secretary:

Report of the Treasurer

Report of the Auditing committee

Approval of the activity report and of the financial report

Vote regarding the membership fees for individual members to be increased from 65 to 75 Euros

Results of the elections^{*)} to the new Council

Activity reports of the Commissions:

Publication

Identification

“harmonized regulations”

10.30 - 11.00 h coffee break

11.00 - 12.00 h

Activity report of the commission “Guidelines”

Activity reports of the working groups

12.00 - 14.00 h Lunch break

14.00 - 16.00 h

Activity reports of the working groups

16.00 - 16.30 h coffee break

16.30 - 17.45 h

Activity reports of the working groups

17.45 - 18.45 h

Discussion and vote of the recommendations for the next four years

18.45 - 20.00 h free

20.00 h dinner

^{*)} see also pages 30-31

Monday 19/9

9.00 - 18.00 h: Field trip: from vineyards to cellar

20.00 h: Gala dinner

Tuesday 20/9: workshop:

50 years IOBC:

From chemical control to integrated production with biological control

50^{eme} anniversaire de l'OILB

de la lutte chimique à la production intégrée grâce à la lutte biologique

8.30 - 9.00 h: Opening

9.00 - 9.45 h: History of IOBC by ERNST BOLLER

9.45 - 10.30 h: Integrated Pest Management In North America by LES EHLERS

10.30 - 11.00 h coffee break

11.00 - 11.45 h Integrated Production in Europe by P. ESBJERG

11.45 - 12.15 h Discussion

12.15 - 14.00 h Lunch

14.00 - 14.45 h Alternative integrated protection components for plant disease control by CLAUDE ALABOUVETTE

14.45 - 15.30 h Indicators of farm sustainability by PHILIPPE GIRARDIN

15.30 - 16.15 h Economical benefits of IPM by H. WEIBEL

16.15 - 16.45 h Coffee break

16.45 - 17.30 h Views for the future of IOBC/WPRS by CESARE GESSLER

17.30 - 18.30 h The future of biological control, panel discussion: assessment and management of risks, exotic versus autochthonous enemies, registration, the point of view of IBMA etc..

19.00 h reception

Evening free

Wednesday 21/9: Departure after breakfast

9.00 - 12.00 h Meeting of the new Council.



ELECTIONS
of the
New Council and Executive Committee
for the period
September 2005 to September 2009

According to our statutes and bye-laws, the elections of the members of the council should take place during the General Assembly.

However, considering that the number of members attending the General Assembly is limited and in order to improve the involvement of all the members of IOBC/WPRS it was decided **to organize the ballot by mail**, as it was the case for the previous elections in 2001.

Again, according to our statutes and bye-laws, this is the responsibility of the council to endorse the list of candidates for the new council and executive committee. However, **any member is invited to be candidate to the council**. The only condition is to be an active member and to be supported by two other members of IOBC.

The council is the legislative body of our organization; it generally meets twice during the term between general assemblies. It might be consulted by Email to help the executive committee to answer urgent questions.

Please consider the possibility to serve IOBC/WPRS as a member of the council.

To become candidate to the council for the term September 2005-September 2009 send back to the general secretary the following form before the 15th of May.



IOBC/WPRS – OILB/SROP

*International Organization for Biological and Integrated Control of
Noxious Animals and Plants, West Palaearctic Regional Section*

*Organisation Internationale de Lutte Biologique et Intégrée contre
les Animaux et les Plantes Nuisibles, Section Régionale Ouest
Paléarctique*

Ballot to the Council / Elections au Conseil

Form to be returned to/ Fiche à renvoyer à
Before the 15th of May/ avant le 15 mai 2005

Claude ALABOUVETTE
INRA- MGS
BP 86510
F- 21065 DIJON CEDEX

I undersigned: *name and function* institutional or individual [*select the
right option*] member of IOBC/WPRS declare to be candidate for election
to the Council of IOBC/WPRS for the term 2005-2009

Je soussigné : *nom et fonction* membre institutionnel ou individuel
[*rayez la mention inutile*] de l'OILB/SROP déclare présenter ma
candidature au conseil de l'OILB/SROP pour la période 2005-2009

Name / Nom

Forname / Prénom

Address / Adresse

.....

.....

Signature

Working Group “Integrated Protection in Oak Forests”, Meeting October, 2004 – Report

The fourth meeting of the working group «integrated protection in oak forests» was held in Tunisia (Hammamet), 4 to 8 October, 2004.

Besides IOBC, the meeting was supported by the INRGREF (Institut National de Recherche en Génie Rural, Eaux et Forêts, Tunisie), the DGF (Direction Générale des Forêts, Tunisie), the ATTF (Association Tunisienne des Techniciens Forestiers) and the MNHN (Muséum National d'Histoire Naturelle, Paris, France). About 120 participants attended to the meeting: working group members from 8 countries (Algeria, France, Iran, Italy, Morocco, Portugal, Spain, Tunisia) as well as representatives of Tunisian institutions of forest research and protection and INRGREF students (about 60 persons).

The location of the meeting and the founding allocated by IOBC/WPRS enabled for the first time an important participation of Algerian students and scientists (as well as Tunisian ones). We took this opportunity to encourage the scientists of Algerian Universities and INRGREF (Tunisia) to subscribe to IOBC/WPRS as institutional or supporting members, as have recently done our colleagues of the Sassari University (Italy). We were also happy to welcome in our group an Iranian forest scientist who assessed the situation of oak forest decline in Iran. By another way, we were pleased to notice that most of the researchers we financially helped during the last meeting found founding

As the previous ones, the fourth meeting aimed to consider the actual phytosanitary situation of European and Mediterranean oak stands and to share the results of the recent works. 35 oral communications and 22 posters were presented during the sessions which concerned respectively: phytosanitary status of the oak forests; biology and impact of xylophagous pests; biology and impact of pathogenous fungi; biology and impact of phytophagous pests; natural enemies, biological and integrated control of phyllophagous insects; forest management; cork production and forest fires; oak forest fauna. An excursion was organized during the last day in the region of Tabarka. It included a guided tour of Tunisian cork oak stands and visits of a tree nursery and a forest reserve.

Six of the oral communications concerned current common researches involving scientists of several Mediterranean countries : preservation and recovering of cork-growing areas (Sardinia, Tunisia), bioecology of the xylophagous pest *Platypus cylindrus* (Morocco, Portugal), declining factors in cork oak stands (Morocco and Portugal, Algeria and France), bioecology of *Lymantria dispar* (Morocco, Portugal,

France), cork oak seedling production at out-soil culture (Tunisia, Algeria). Several new collaborative projects were also discussed during the meeting; they notably concerned: entomophagous fungi (Tunisia, Sardinia, Portugal), *Platypus cylindrus* infestation (Tunisia, Sardinia, Morocco, Portugal), *Lymantria dispar* (Tunisia, Sardinia, Morocco, Portugal, France) and impact evaluation of forest decline factors (Sardinia, Tunisia, Portugal, Algeria).

It appeared also necessary to find more reliable collaborations to assess the economical impact of oak forest decline and make every effort to better explain the research aims and results to the public and the forest firms. As for agricultural research, forest research must be better supported and forest stands improved by ecotourism and micro enterprise projects.

EDMUNDO SOUSA proposed to take in charge the engraving of a CD gathering information provided by working group members and other persons involved in oak forest research and management.

In order to better harmonise their research programs and to homogenize the evaluation methods of oak phytosanitary status and pest damages, the participants of the fourth meeting suggested to divide our working group in three subgroups which can meet independently and more regularly:

- oak pathogenous fungi
- oak insect pests
- forest management

Subgroup meetings seem to be necessary to establish reliable field comparison and to homogenise the evaluation methods of oak decline and pest impact in the perspective of preparing IOBC guidelines in oak forest integrated protection.

Working group meetings would continue to be held every three years and each subgroup would meet each year during the two inter-meeting years. In the course of the global working group meeting, a day would be devoted to subgroup round-tables.

During the fourth meeting, EDMUNDO SOUSA, scientist of the National Forestry Station in Oeiras, was unanimously elected as new convenor of the working group by the IOBC member participants. Two deputy convenors were also elected: PR. FRANCESCHINI from the Sassari University (Italy) and M. BEN JAMAA from the INRGREF (Tunisia).

If the subgroup creation proposal will be accepted by the IOBC/WPRS council, their direction will be attributed as follows:

- PR. FRANCESCHINI: oak pathogenous fungi
- E. SOUSA: oak insect pests
- M. BEN JAMAA: forest management

The fifth meeting of the group would take place in October 2007 in Tlemcen (Algeria).

Convenor: Claire Villemant
Curator of Hymenoptera
MNHN Entomologie
ESA 8043
45 rue Buffon
75005 Paris (France)
Tel. +33 (0)1 40 79 38 41, Fax. +33 (0)1 40 79 36 99
E-mail: villeman@mnhn.fr

Pests and Weeds Control in Sustainable Fruit Production

Workshop, 1-3 September 2005, Skierniewice, Poland

Organized by:

**Research Institute of Pomology and Floriculture
within the framework of the project**

**Research Centre of Excellence in Sustainable Pomology
"PomoCentre"**

Under the auspices of:

Polish Academy of Sciences / Polish Entomological Society

The Workshop is a scheduled activity of the Research Centre of Excellence in Sustainable Pomology - PomoCentre, a 5th EC Framework Programme project (project no QLAM-2001-00402). The objective of the Centre is to develop and share knowledge on processes and techniques leading to increased sustainability of fruit production, to transfer these technologies to fruit producers and industry, and to stimulate international scientific cooperation in the area of sustainable pomology. We invite those interested in research on pests and weeds control in sustainable fruit production to attend the Workshop, which will be held in Skierniewice (Poland), from 1st to 3rd September, 2005.

Main topics will be focused on different aspects of relationships between noxious and desirable animals and plants in sustainable fruit production, related to such problems as:

- biodiversity and agro-ekosystems as elements of pests and weeds management
- current state of art in biological control agents

- pheromones and kairomones - the current state of art and the challenge for the future
- side effects of pests and weeds control
- significance and practical use of selective pesticides

Scientific committee:

Piero Cravedi (Italy), Jerry Cross (UK), Zbigniew T. Dąbrowski (Poland), Erich Dickler (Germany), Stuart Gordon (UK), Claudio Ioriatti (Italy), František Kocourek (Czech Republic), Danuta Kropczyńska (Poland), Janusz Lipecki (Poland), Gabriel Łabanowski (Poland), Victor Marko (Hungary), Remigiusz W. Olszak (Poland), Stefan Pruszyński (Poland), Peter Witzgall (Sweden)

Organizing committee:

Remigiusz W. Olszak, <i>Chairman</i>	Wojciech Warabieda
Darek Gajek, <i>Secretary</i>	Jerzy Lisek
Barbara Łabanowska	Małgorzata Sekrecka

Deadlines:

Confirmation of participation:	March 15th, 2005
Abstract submission:	May 31st, 2005
Notification of abstract acceptance:	June 15th, 2005
Submission of papers:	August 31st, 2005

Fee:

Early registration (before June 30th, 2005)	€ 80
Late registration (after June 30th, 2005)	€ 100

To receive the Second Announcement, please send to the Secretary the Information Request Form (next page) or register online before:

March 15th, 2005.

Contact:

Dr. Darek Gajek
 Research Institute of Pomology and Floriculture,
 Pomologiczna 18,
 96-100 Skierniewice, POLAND
 Tel: +48 46 8345361,
 Fax: +48 46 8333228
 E-mail: dgajek@insad.pl
<http://www.pomocentre.insad.pl>

Workshop on

PESTS AND WEEDS CONTROL IN SUSTAINABLE FRUIT PRODUCTION

1-3.09.2005

Skierniewice, Poland

Information Request Form (please return before March 15th, 2005)

Last name:

First name:

Title:

Organisation:

Postal address:

.....

.....

.....

Phone number:

Fax number:

E-mail:

I am interested in submitting a

paper

poster

Provisional title:

.....

.....

.....

.....

.....

Place & date

Signature

Third International Conference on IPM Role in Integrated Crop Management and Impacts on Environment & Agricultural Products

Nov 26-29, 2005 at Plant Protection Research Institute, Agricultural Research Center, Ministry of Agriculture Land Reclamation, Giza, Egypt.

Information and communication technologies have made great contribution to sustainable development of agriculture and have even greater impetus for future agricultural development. The Conference will be an important opportunity for exchanging views and experiences on information / knowledge management, and for facilitating stronger collaboration in plant protection fields.

The 2005 congress will be held in Giza, Egypt. It is well known that Egypt, the hosting country, has an ancient culture and agricultural history dating back thousands of years. The struggle between ancient Egyptian farmers and harmful insect pests has continued to the present day, however. In recent years, the Egyptian government has paid great attention to modern plant protection science and technology and has achieved notable success in controlling important insects and diseases such as the cotton leafworm, pink bollworm, and others.

Programmer's Committee Chairman
Prof. Dr. Ahmed Abdu Hamed Amin

Conference Objectives & Goals

1. Using modern techniques in crop management.
2. Development of post-harvest packages.
3. Expansion of plant breeding for pests and diseases resistance (tolerance).
4. Maximizing multidisciplinary research approaches to get closer to better crop management.
5. Monitoring the role of genetic engineering in crop production of safe, high yielding crops capacities.
6. IPM packages of agricultural products in storage for better access for international markets.

Acceptable Topics

1. Environmentally safe IPM approaches of pests or diseases either in the field or in storage.
2. Plant extracts and biotic insecticides role in plant protection.
3. Prediction programs of pests or diseases incidence and better crop management.

4. Plant breeding and screening for plant resistance (or tolerance) for pests or diseases.
5. Organic agriculture and production of un-contaminated environmentally safe products.
6. Development of bee keeping and sericulture programs.
7. Better access to international markets with free from pesticide residues agricultural products.

Correspondence

All correspondence should be addressed to:

Prof. Dr. Ahmed Abdu Hamed
Programme Committee Chairman
7 Nadi El-Seid Street
Dokki – Giza (Egypt)

Tel: +20 / 3372..... 93 – 7486..... 63 – 3356..... 75

Fax: +20 / 3365..... 75 – 3372..... 93

E-mail: plant_protection@hotmail.com plantprotection5@yahoo.com

XXXI CIOSTA - CIGR V Congress Increasing Work Efficiency in Agriculture, Horticulture and Forestry

September 19 - 21, 2005, University of Hohenheim, Stuttgart, Germany

CIOSTA, CIGR, EurAgEng and VDI- MEG feel honoured to invite you to the XXXI CIOSTA - CIGR V Congress at the University of Hohenheim in the South of Germany.

Founded as an agricultural college, the **University of Hohenheim** has developed its own profile. Besides agricultural sciences, it offers on its unique campus biology, food sciences and economics. The University of Hohenheim is proud to cover the whole spectrum of agricultural sciences and research with an interdisciplinary approach.

Since 2000 teaching has been organized in Bachelor and Master Courses including modular course structure and credit point system. Besides the traditional fields of study such as animal sciences, plant sciences, agricultural economics the University of Hohenheim offers unique master courses such as Soil Sciences, Agricultural Engineering, AgriBusiness, EnviroFood, Tropical Agriculture.

The Institute of Agricultural Engineering focusses on the following research topics: Technology of fruit and vegetable growing, viticulture,

plant protection technology, irrigation technology, harvest technology, agricultural tractor tyre technology, farm buildings and housing systems, milking, animal waste management and treatment, emissions and indoor air quality.

Congress Programme

The scientific programme will include plenary sessions, parallel oral sessions and poster sessions on the following topics. Furthermore a technical tour will be organised on interest.

Topics

- Methods and modelling
- Process engineering and controlling
- Calculation and planning
- Farm management
- Ergonomics and work place design
- Work safety, prevention and risk analysis

The oral presentations will be limited to 20 minutes each, followed by 10 minutes of discussion. The oral presentations will be supplemented by an exhibition of posters. Both will be published in the proceedings of the congress. – The congress language is English.

Congress Organisation

PRESIDENT:

Prof. Dr. Siegfried Kleisinger
Institute of Agricultural
Engineering
University of Hohenheim (440)
70593 Stuttgart, Germany

COORDINATOR:

Dr. Monika Krause
E-mail: ciosta@uni-hohenheim.de
Phone: +49(0) 711/459-3231
(only Friday)
Fax: +49(0) 711/459-4307

INTERNET:

<http://www.uni-hohenheim.de/ciosta-cigr>

Hosting Organisations

CIOSTA

The Commission Internationale de l'Organisation Scientifique du Travail en Agriculture (CIOSTA) was founded in 1950 as a non-profit professional organisation to promote agricultural economy with focus on agricultural production systems, yield and quality, automation, labour economics, ergonomics and safety.

CIGR

The International Commission of agricultural Engineering (CIGR) provides a global network for regional and national societies as well as private companies and individuals. CIGR was founded in 1930 as non-governmental, non- profit professional organisation.

EurAgEng

The European Society of Agricultural Engineers (EurAgEng) aims to promote the profession of agricultural and biosystems engineering. The society is particularly active in conferences, special interest groups, publications, networking and international lobbying.

VDI- MEG

The Association of German Engineers (VDI) is one of the leading engineers' associations world- wide. The Max- Eyth- Society of Agricultural Engineering (MEG) represents one of the professional sections of VDI. It bears the name of the founder of agricultural engineering as a distinct discipline in Germany, Max Eyth (1836- 1906).

New IOBC/wprs Publications

Individual Members: Important !

Individual members receive the Bulletins produced by **5 Working Groups or Commissions** of their choice. They may order additional Bulletins by the treasurer:

Dr. Cesare Gessler, Phytomedicine / Pathology
Universitaetsstr. 2, CH-8092 ETH Zürich (Switzerland)
e-mail: cesare.gessler@ipw.agrl.ethz.ch
cesare.gessler@ismaa.it

New IOBC/wprs Bulletins

The Publication Commission of the IOBC/wprs has issued the following Bulletins in 2004 (including the Contents of the Bulletins); see also *Profile 37*: 17-28 for IOBC/wprs Bull. **27**(1, 3-5), 2004 or visit the IOBC/wprs homepage.

IOBC/wprs Bulletin Vol. 27(2) 2004

Commission on "IP Guidelines and Endorsement". Integrated Production - Principles and Technical Guidelines. 3rd edition 2004. Edited by: E.F. Boller, J. Avilla, E. Joerg, C. Malavolta, F.G. Wijnands & P. Esbjerg. ISBN 92-9067-163-5 [vi + 49 pp.].

IOBC/wprs Bulletin Vol. 27(6) 2004

Working Group „Pesticides and Beneficial Organisms“. Proceedings of the Meeting at Ponte de Lima (Portugal), 8-10 October 2003. Edited by: Heidrun Vogt. ISBN 92-9067-168-6 [x + 111 pp.].

Natural control against pests on vegetables in Portugal: important species and their role. <i>Mexia, A., Figueiredo, E. & do Céu Godinho, M.</i>	1
Predators of <i>Phyllocnistis citrella</i> Stainton (Lepidoptera: Gracillariidae) on citrus in Spain: role of lacewings and ants. <i>Jacas, J. A. & Urbaneja, A.</i>	9
Comparative effects of several insect growth regulators and spinosad on the different developmental stages of the endoparasitoid <i>Hyposoter didymator</i> (Thunberg). <i>Schneider, M. Smagghe, G. & Viñuela, E.</i>	13
Duration of the toxicity of abamectin and spinosad on the parasitic wasp <i>Encarsia formosa</i> Gahan in Northern and Southern Europe. <i>Van de Veire, M., Viñuela, E., Bernardo, U., Tirry, L., Adan, A. & Viggiani, G.</i>	21
Toxic effects of indoxacarb to a predacious mirid and two species of predacious mites. <i>Bostanian, N.J., Vincent, Ch., Hardman, J.M. & Larocque, N.</i>	31
Toxicity of five insecticides on predatory mites (Acari: Phytoseiidae) in vineyards in two Portuguese regions <i>Rodrigues, R., Gonçalves, R., Silva, C. & Torres, L.</i>	37
Effects of the fungicide zoxamide, alone and in combination with mancozeb, to beneficial arthropods under laboratory and field conditions <i>Miles, M. & Green, E.</i> 45	
Development of an extended-laboratory method to test bait insecticides <i>Medina, P., Pérez, I., Budia, F., Adán, A. & Viñuela, E.</i> 59	
Side effects of surfactants and pesticides on entomopathogenic nematodes assessed using advanced IOBC guidelines <i>Peters, A. & Poullot, D.</i>	67
Influence of insecticide coated seeds on larvae of <i>Poecilus cupreus</i> (L.) (Coleoptera; Carabidae) using different container sizes and quantities of substrate <i>Heise, J., Heimbach, U. & Schrader, S.</i>	73
Laboratory tests of the impact of insect growth regulators on <i>Anthocoris nemoralis</i> F. <i>Luigi Caroli & Edison Pasqualini.</i>	81
Laboratory evaluation of four fungicides, two insecticides and an insecticide/acaricide to <i>Agistemus fleschneri</i> Summers (Acari: Stigmaeidae) <i>Bostanian, N. J., Racette, G. & Larocque, N.</i>	87
Variation in response of earthworms and soil microflora to reference test substances <i>Mallett, M. J., Hayward, J C & Davies, N. A.</i>	93
Influence of some pesticides on fecundity and longevity of <i>Coccinella septempunctata</i> and <i>Adalia bipunctata</i> (Col., Coccinellidae) under laboratory conditions <i>Olszak, R.W, Ceryngier, P. & Warabieda, W.</i>	105
Non-target arthropod field studies: asking the right questions for their purpose <i>Brown, K.</i>	107
Sampling methods in orchard trials: Assessment of treatment effects through	

beating and inventory sampling <i>Müther, J. & Vogt, H.</i>	109
Comparison between two different collecting methods of <i>Anthocoris nemoralis</i> F. in investigations about side-effects of pesticides in field tests <i>Vergnani S., Melandri M., Manucci F., Civolani S. & Pasqualini E.</i>	111

IOBC/wprs Bulletin Vol. 27(7) 2004

Working Group “Breeding for Plant Resistance to Pests and Diseases”. Proceedings of the Meeting “Breeding for Resistance to Insects and Mites” at Rostanga (Sweden), 8-12 December 2001.
Edited by: Nicholas Birch. ISBN 92-9067-169-4 [x + 58 pp.].

Preface	i
Contents	iii
List of Participants	v
Workshop Programme	ix
Resistance-breaking raspberry aphid biotypes: Constraints to sustainable control through plant breeding and Integrated Crop Management. <i>A.N.E. Birch, A.T. Jones, B. Fenton, G. Malloch, I. Geoghegan, S.C. Gordon, J.Hillier, G. Begg</i>	1
Insect biotype development due to plant host resistance. A literature study <i>Aad J.M. van der Arend</i>	5
A tri-trophic model to explore insect community response to the introduction of a pest-resistant GM crop <i>J. Hillier, N. Birch, J. Crawford, G. Squire, C. Hawes, M. Maule</i>	17
Surface waxes – possible triticale resistance factor to grain aphid <i>A. Wójcicka, B. Leszczynski, K. Salak-Warzecha</i>	23
Apple tree oviposition resistance against the codling moth, <i>Cydia pomonella</i> L. (Lepidoptera, Tortricidae) and leaf surface metabolites <i>N. Lombarkia, S. Derridj</i>	29
Evaluation of okra genotypes for field resistance to the leafhopper <i>Lokesh & Ram Singh</i>	35
It is not all roses: matching host plant resistance tests and pest damage observation in a (semi-) commercial glasshouse <i>S. Sütterlin, R.P.Th. Butôt, M.W.C. Dijkshoorn, T.A.M. van de Wurff</i>	41
Mechanism of resistance in <i>Mi</i> tomato to the potato aphid: an EPG study <i>W.F. Tjallingii</i>	43
WG ‘Integrated control in protected crops, temperate climate’: Aims of the WG and potential to interact with other WGs <i>A. Enkegaard, Convenor</i>	51
WG ‘Pheromones and other semio-chemicals in integrated production’: Integration of chemical ecology and plant breeding for sustainable insect management <i>P. Witzgall</i>	55

IOBC/wprs Bulletin Vol. 27(8) 2004

Working Groups “Biological Control of Fungal and Bacterial Plant Pathogens”, “Integrated Control in Protected Crops, Temperate Climate” and “Integrated Control in Protected Crops, Mediterranean Climate”. Proceedings of the Meeting “Management of Plant Diseases and Arthropod Pests by BCAs and Their Integration in Agricultural Systems” at S. Michele all’Adige (Trentino, Italy), 9-13 June 2004. Edited by: Yigal Elad, Ilaria Pertot and Annie Enkegaard. ISBN 92-9067-170-8 [xxiv + 429 pp.].

Welcome of the Councillor for research and innovation of the Autonomous Province of Trento <i>Gianluca Salvatori</i>	1
Compatibility of three biological methods to control grey mould, powdery mildew and whitefly on tomato <i>Marc Bardin, Jacques Fargues, Laurent Couston, Claire Troulet, Géraldine Philippe, Philippe C. Nicot</i>	5
Incidence of application of an elicitor of apple tree resistance against fire blight (<i>Erwinia amylovora</i>) on an insect pest codling moth (<i>Cydia pomonella</i>) (Lepidoptera, Tortricidae) egg laying <i>Sylvie Derridj, Alexis Borges</i>	11
Using honeybees to deliver a biocontrol agent for the control of strawberry <i>Botrytis cinerea</i> -fruit rots <i>Alon Bilu, Dalia Rav David, Arnon Dag, Sharoni Shafir, Mohamad Abu-Toamy, Yigal Elad</i>	17
Laboratory evaluation of antifeedant activity of <i>Trichoderma</i> spp. isolates in aphid biocontrol <i>Sonia Ganassi, Antonio Logrieco, Antonio De Cristofaro, Maria Agnese Sabatini</i>	23
Biological control in chestnut cultivation: criteria for a sustainable management <i>Giorgio Maresi, Gino Angeli, Tullio Turchetti</i>	27
Integrated control strategies for all pests and diseases in several glasshouse crops and implementation in practice <i>Aleid Dik, Dirk Jan van der Gaag, Juliette Pijnakker, Pim Paternotte, Jos Wubben</i>	35
<i>Verticillium lecanii</i> (<i>Lecanicillium</i> spp.) as epiphyte and its application to biological control of arthropod pests and diseases <i>Masanori Koike, Toshiki Higashio, Akio Komori, Kyouko Akiyama, Noriko Kishimoto, Emi Masuda, Mai Sasaki, Sanae Yoshida, Masayuki Tani, Katsuhiko Kuramoti, Midori Sugimoto, Hideyuki Nagao</i>	41
Integrated Pest Management of arthropod pests in stone fruits <i>Walt Bentley, Shawn Steffan, Scott Johnson, Gary Van Sickle</i>	45
Biocontrol agents and their integration in organic viticulture in Trentino, Italy: characteristics and constrains <i>Luca Zulini, Antonella Vecchione, Enzo Mescalchin, Ilaria Pertot</i>	49
Implementation of IPM strategies on greenhouse tomato on Oeste region of Portugal: case study <i>Sofia Rodrigues, Elisabete Figueiredo, Fernanda Amaro, Maria do Céu Godinho, Carla Miranda, António Mexia</i>	53

An integrated approach to simultaneously control insect pests, powdery mildew and seed borne fungal diseases in barley by bacterial seed treatment <i>Manochehr Azarang, David B. Collinge, Berndt Gerhardson, Lennart Johnsson, Sandra Wright</i>	57
Integration of <i>Trichoderma</i> and soil solarization for disease management <i>Neta Okon Levy, Yigal Elad, Jaacov Katan</i>	65
Integrated control of <i>Allium</i> white rot using biological control agents, composted onion waste and tebuconazole treated seed <i>John P. Clarkson, Anita Scruby, Emma Coventry, Ralph Noble, John M. Whipps</i>	71
Effect of fungicides and herbicides on in vitro sensitivity of <i>Clonostachys rosea</i> and different strains of <i>Trichoderma</i> <i>Roberta Roberti, Annamaria Pisi, Annarita Veronesi, Augusto Cesari</i>	75
Strategies to provide integrated biological control of late blight of potato to replace copper for sustainable organic agriculture production <i>Peter Eibel, Annegret Schmitt, Dietrich Stephan, Susana Martins Carvalho, Barrie Seddon, Eckhard Koch</i>	79
Control of <i>Phytophthora cryptogea</i> with <i>Trichoderma viride</i> combined with furalaxyl and chitosan <i>Leszek B. Orlikowski, Czesław Skrzypczak</i>	81
Screening and identification of potential biocontrol agents against grapevine downy mildew considering an integrated control strategy of the disease <i>Antonella Vecchione, Luca Zulini, Ilaria Pertot</i>	85
Disease control on organically grown cyclamen <i>Giovanni Minuto, Andrea Minuto, Federico Tinivella, M. Lodovica Gullino, Angelo Garibaldi</i>	89
Integration of the use of the antagonist <i>Ulocladium atrum</i> in management of strawberry grey mould (<i>Botrytis cinerea</i>) <i>Jürgen Köhl, Bert Evenhuis, Pedro Boff</i>	95
Suppression of <i>Rhizoctonia</i> root rot of tomato by <i>Glomus mosseae</i> BEG12 and <i>Pseudomonas fluorescens</i> A6RI is associated with combined modes of action <i>Graziella Berta, Simonetta Sampo, Elisa Gamalero, Nadia Massa, Philippe Lemanceau</i>	99
Biological control of <i>Pythium aphanidermatum</i> in cucumber with combined applications of bacterial antagonists with chitosan <i>Joeke Postma, Margarit Willemsen-de Klein</i>	101
Evaluation of the sustainability of strategies that include biocontrol agents to reduce chemical residues on strawberry fruits <i>Roberta Raffaelli, Riccarda Moser, Ilaria Pertot</i>	105
Use of biocontrol agents against powdery mildew in integrated strategies for reducing pesticide residues on strawberry: evaluation of efficacy and side effects <i>Ilaria Pertot, Rosaly Zasso, Liat Amsalem, Mario Baldessari, Gino Angeli, Yigal Elad</i>	109
Integrated management of late blight in greenhouse tomatoes <i>Dani Shtienberg, Haim Vintal, Miri Targerman, Yoel Mesika, Uri Adler, Eli Matan, Yigal Elad</i>	115
Development of a management system for integrated and biological control of <i>Botrytis</i> spp. in flower bulb crops <i>Marjan de Boer, Rik de Werd, Ineke Pennock-Vos, Joop van Doorn, Ernst van den Ende</i>	117
Use of chemical elicitors to reduce insect pest populations on greenhouse tomatoes	

Anthony J. Boughton, Kelli Hoover, Gary Felton	121
Protoplast fusion, using nitrate non-utilizing (nit) mutants in the entomopathogenic fungus <i>Verticillium lecanii</i> (<i>Lecanicillium</i> spp.)	
Daigo Aiuchi, Masanori Koike, Masayuki Tani, Katsuhisa Kuramoto, Midori Sugimoto, Hideyuki Nagao	127
Experiences with the entomopathogenic fungus <i>Beauveria brongniartii</i> for the biological control of the common cockchafer <i>Melolontha melolontha</i>	
Hermann Strasser, Tobias Längle, Barbara Pernfuss, Christoph Seger	131
Antagonistic activity of the entomopathogenic fungus <i>Beauveria bassiana</i> against grape vine pathogens: perspective of combined use against insects and fungi	
Federica De Luca, Mario Baldessari, Claudia Longa, Ilaria Pertot	133
Selection of entomopathogenic nematodes for heat tolerant and desiccation traits	
Adriano Ragni, Laura Quattrocchi, Simona Coranelli, Manuele Ricci	137
Development of a bio-insecticide based on a cold-active entomopathogenic nematode	
Manuele Ricci, Anna Paola Fifi, Marta De Berardinis, Monica Colli, Rosita Barcarotti, Adriano Ragni	139
Combined use of insectpathogenic fungi and nematodes against the onion thrips, <i>Thrips tabaci</i> in the field	
Kerstin Jung	141
The use of <i>Metarhizium anisopliae</i> against grape phylloxera	
Martin Kirchmair, Lars Huber, Hermann Strasser	145
Multi trophic relationships - interaction of a biocontrol agent and a pathogen with the indigenous micro-flora on bean leaves	
Yigal Elad, Simon C. Baker, Jane L. Faull, Jason Taylor	151
Investigation of <i>Trichoderma</i> strains isolated from winter wheat rhizosphere.	
András Szekeres, Miklós Ládai, László Kredics, Zsuzsanna Antal, Lóránt Hatvani, János Varga, László Manczinger	155
Survey of antagonistic yeasts occurring in apple trees managed with different production systems	
Rosa Maria Valdebenito-Sanhueza, Leticia Guimaraes, Valdirene Camatti-Sartori, Ribeiro Rute Terezinha da Silva	159
Strategy to control <i>Verticillium dahliae</i> in oilseed rape using <i>Serratia plymuthica</i> HRO-C48	
Henry Müller, Remo Meincke, Gabriele Berg	161
Molecular characterization of biocontrol agents	
M. Rosa Hermosa, Emma Keck, Isabel Chamorro, Belén Rubio, Luís Sanz, Juan A. Vizcaino, Isabel Grondona, Enrique Monte	165
Studies of soil and rizosphaera bacteria to improve biocontrol of avocado white root rot caused by <i>Rosellinia necatrix</i>	
M. Angeles González Sánchez, Francisco M. Cazorla, Ramos Cayo, Antonio de Vicente, Rosa M. Pérez Jiménez	169
Occurrence of breakdown in the biocontrol of crown gall disease by the <i>Agrobacterium radiobacter</i> strain K84 in Italy.	
Aida Raio, Raffaele Peluso, Gerardo Puopolo, Astolfo Zoina	173
Microorganisms associated with <i>Platanus acerifolia</i> W. growing in areas infected by <i>Ceratocystis fimbriata</i> f. sp. <i>platani</i>	
Anna Russo, Cristiana Felici, Paolo Grolli, Stefano Morini, Annita Toffanin	177
Variability of the β -tubulin gene and intergenic spacer (IGS) region as an indicator for characterization of intraspecific variation in Japanese isolates of <i>Verticillium lecanii</i> (<i>Lecanicillium</i> spp.)	
Midori Sugimoto, Masanori Koike, Kiyohito Teruya, Hideyuki Nagao	181

Compost as substrate for <i>Trichoderma</i> <i>Matteo Montanari, Maurizio Ventura, Gloria Innocenti, Maria Agnese Sabatini ...</i>	187
Replacement of copper fungicides in organic production of grapevine and apple in Europe (REPCO) <i>Jürgen Köhl, Hanns-Heinz Kassemeyer, Lucius Tamm, Cesare Gessler, Ilaria Pertot, Cyril Bertrand, Bart Heijne, John Hockenull, Hanne Lindhard, Paulin Köpfer, Marc Trapman, Stefan Brückner</i>	191
Evaluation of the effects of biocontrol agents (BCA) on the beneficial <i>Amblyseius andersoni</i> and the parasite <i>Tetranychus urticae</i> mites <i>Mario Baldessari, Rosaly Zasso, Ilaria Pertot, Gino Angeli</i>	193
Environmental risk assessment of soil-applied fungal biological control agents with respect to European registration <i>Tobias Laengle, Martin Kirchmair, Thomas Bauer, Josef Raffalt, Christoph Seger, Barbara Pernfuss, Hermann Strasser</i>	197
Risk characterization of a potential biocontrol agent: receptor identification, risk assessment and management <i>Davide Gobbin, Claudia Longa, Ilaria Pertot</i>	201
Safety in research: biocontrol agents and semiochemicals risk management in the laboratory <i>Ilaria Pertot, Michele Tommasini, Piero Mattioli</i>	207
<i>Trichoderma</i> applications on sugar beet leaves reduce lesion size and sporulation of <i>Cercospora beticola</i> and increase sucrose yield <i>Stefania Galletti, Claudio Cerato, Luigi Burzi, Simona Marinello, Piergiorgio Stevanato</i>	211
Screening of microorganisms and other alternative seed treatments for activity against seed-borne pathogens of cereals <i>Eckhard Koch</i>	215
Influence of wheat seed treatment with <i>Clonostachys rosea</i> on the expression of PR proteins <i>Roberta Roberti, Annarita Veronesi, Augusto Cesari, Annunziata Cascone, Iris Di Berardino, Carla Caruso</i>	217
Seed treatments for organic vegetable production <i>Annegret Schmitt, Eckhard Koch</i>	221
Antibacterial activity of some essential oils <i>Nicola Sante Iacobellis, Pietro Lo Cantore, Adriana De Marco, Francesco Capasso, Felice Senatore</i>	223
Evaluation of <i>Trichoderma</i> strains as biocontrol tools for integrated management of strawberry root rot <i>Leonor Leandro, Lisa Ferguson, Gina Fernandez, Frank Louws</i>	229
Characterization of avocado root-colonizing bacteria antagonistic against <i>Rosellinia necatrix</i> <i>Clara Pliego, Francisco M. Cazorla, Rosa M. Pérez-Jiménez, Cayo Ramos</i>	235
Integrated management of <i>Pythium</i> root rot in flower bulb production <i>Marjan de Boer, Rik de Werd, Vincent Bijman, Suzanne Breeuwsmaand, Jos Raaijmakers</i>	241
Role of the antifungal compounds produced by <i>Pseudomonas fluorescens</i> PCL1606 in the biocontrol activity of avocado white root rot <i>Francisco M. Cazorla, Diego J. Ruiz-Romero, Eva Arrebola, Guido V. Bloemberg, Alejandro Pérez-García, Ben J.J. Lugtenberg, Antonio de Vicente...</i>	243
Exploitation of spent mushroom compost in biological control against melon <i>Fusarium</i> wilt disease <i>Matteo Montanari, Maurizio Ventura, Gloria Innocenti</i>	247
Can incomplete spatial coverage of control measures prevent invasion of fungal	

parasites?	
<i>Wilfred Otten, Douglas J Bailey, Jon J. Ludlam, Christopher A. Gilligan</i>	251
Interaction between rhizoplane bacteria and a phytopathogenic Peronosporomycete <i>Aphanomyces cochlioides</i> in relation to the suppression of damping-off disease in sugar beet and spinach	
<i>Md. Tofazzal Islam, Yasuyuki Hashidoko, Abhinandan Deora, Toshiaki Ito, Satoshi Tahara</i>	255
Studies on efficacy and mode of action of rhizosphere bacteria against <i>Phytophthora</i> spp. in strawberry	
<i>Jayamani Anandhakumar, Wolfgang Zeller</i>	261
Eradication of plant pathogens and pests from composting wastes and their use in disease suppression	
<i>Emma Coventry, Léon Fayolle, Sebastien Aimé, Claude Alabouvette, Ralph Noble, John Whipps</i>	265
Multi-target biocontrol efficacy of <i>Clonostachys rosea</i> IK726	
<i>Inge M.B. Knudsen, Birgit Jensen, Kaare Møller, Mette Lübeck, John Hockenhull, Dan Funck Jensen</i>	271
Analysis of efficacy of a biocontrol agent to reduce the transmission of infection in damping-off epidemics	
<i>Wilfred Otten, Anne Bates, Christopher A. Gilligan</i>	275
Recent developments in inoculum production and application, ecology and pathogenicity in the biocontrol agent <i>Coniothyrium minitans</i>	
<i>John Whipps, Amanda Bennett, Mike Challen, Robert Hill, Daohong Jiang, Eirian Jones, Mark McQuilken, Arjen Rinzema, Chris Rogers, Alison Stewart, Nicola Tomprefa</i>	281
TUSAL®, a commercial biocontrol formulation based on <i>Trichoderma</i>	
<i>Isabel Grondona, Alfonso Rodriguez, Martha I. Gómez, Rafael Camacho, Antonio Llobell, Enrique Monte</i>	285
Application of a yeast, <i>Pichia anomala</i> strain WRL-076 to control <i>Aspergillus flavus</i> for reducing aflatoxin in pistachio and almond	
<i>Sui-Sheng T. Hua</i>	291
<i>Pseudomonas fluorescens</i> EPS62e, a potential biological control agent of fire blight	
<i>Jordi Cabrefiga, Marta Pujol, Anna Bonaterra, Esther Badosa, Emilio Montesinos</i>	295
Biocontrol agents against downy mildew of Grape: an ultrastructural study	
<i>Rita Musetti, Lisa Stringher, Antonella Vecchione, Stefano Borselli, Ilaria Pertot</i>	299
Effect of relative humidity on the efficacy of mycoparasitic fungi and antagonistic bacteria towards cucurbit powdery mildew	
<i>Diego Romero, Alejandro Pérez-García, Francisco M. Cazorla, Juan A. Torés, Antonio de Vicente</i>	301
Latest results on the biocontrol of fire blight in Germany	
<i>Zeller Wolfgang, Peter Laux</i>	305
Efficacy of control agents on powdery mildew: a comparison between two populations	
<i>Liat Amsalem, Rosaly Zasso, Ilaria Pertot, Stanley Freeman, Abraham Sztjenberg, Yigal Elad</i>	309
Grapefruit extract inhibits sporulation and development of <i>Phytophthora ramorum</i> on <i>Rhododendron</i>	
<i>Leszek B. Orlikowski</i>	315

Comparison of wood colonisation by local <i>Phlebia gigantea</i> strains, Rotstop® and <i>Trichoderma viride</i> on spruce logs in Alpine environment <i>Nicola La Porta, Renata Grillo, Paolo Ambrosi, Ari M. Hietala</i>	319
Selectivity and effectiveness evaluation of electrolyzed acidic water (EAW) alone and in mixture with Shin-Etsu surfactants, against tomato late blight <i>Phytophthora infestans</i> <i>Francesco Savino, Andrea Iodice, Vittorio Veronelli</i>	325
Biological control of powdery mildew by Q-fect WP® (<i>Ampelomyces quisqualis</i> 94013) in various crops <i>Sang-Yeob Lee, Sang-Bum Lee, Choong-Hoe Kim</i>	329
Control of powdery mildew on organic pepper <i>Leah Tsror (Lahkim), Sara Lebiush-Mordechai, Nurit Shapira</i>	333
Phenotypic traits underlying wound competence of postharvest biocontrol yeasts and degradation of mycotoxins by these microorganisms <i>Raffaello Castoria, Leonardo Caputo, Valeria Morena, Filippo De Curtis, Vincenzo De Cicco</i>	339
Evaluation of population density of <i>Pichia anomala</i> strain K and <i>Candida oleophila</i> strain O and their protection against <i>Penicillium expansum</i> Link on apples <i>Rachid Lahlali, M. Haïssam Jijakli</i>	341
Comparative study of the role of chitinase and pyrrolnitrin for biocontrol activity in <i>Serratia plymuthica</i> strain IC1270 <i>Sagi Gavriel, Zafar Ismailov, Marianna Ovadis, Ilan Chet, Leonid Chernin</i>	347
Formulation and shelf-life studies of the biocontrol yeast <i>Pichia anomala</i> : positive effect of endogenous solutes, isotonic solutions and additives during fluidised-bed drying <i>Stella Mokiou, Naresh Magan</i>	351
Post-harvest biological control of a wide range of fruit types and pathogens by <i>Pantoea agglomerans</i> EPS125 <i>Anna Bonaterra, Jesús M. Francés, M. Carmen Moreno, Esther Badosa, Emilio Montesinos</i>	357
Systemic resistance in <i>Arabidopsis thaliana</i> induced by biocontrol agent <i>Trichoderma harzianum</i> <i>Nadia Korolev, Yigal Elad</i>	363
Isolation of fungicide-resistant mutants from cold-tolerant <i>Trichoderma</i> strains and their <i>in vitro</i> antagonistic properties <i>Lorant Hatvani, Andras Szekeres, Laszlo Kredics, Zsuzsanna Antal, Laszlo Manczinger</i>	367
Protease over-production in the presence of copper by a <i>Trichoderma harzianum</i> strain with biocontrol potential <i>László Kredics, Lóránt Hatvani, Zsuzsanna Antal, András Szekeres, László Manczinger, Elizabeth Nagy</i>	371
Mycoparasitism against sclerotia of <i>Sclerotium rolfsii</i> and <i>Sclerotinia sclerotiorum</i> is widespread within the genus <i>Trichoderma</i> <i>Sabrina Sarrocco, Maurizio Forti, Giovanni Vannacci</i>	375
Discrimination of <i>Heterobasidion annosum</i> ISGs by measurement of volatile organic compounds <i>Nicola La Porta, Franco Biasioli, Flavia Gasperi, Tilmann D. Märk</i>	379
An antifungal α -1,3-glucanase (AGN13.2) from the biocontrol fungus <i>Trichoderma asperellum</i> <i>Luis Sanz, Manuel Montero, Manuel Rey, Antonio Llobell, Enrique Monte</i>	383

Mutual relationships between species of <i>Armillaria</i> and <i>Heterobasidion</i> on agar medium <i>Nicola La Porta, Renata Grillo, Paolo Ambrosi, Kari Korhonen</i>	387
Possible involvement of induced systemic resistance in sugar beet against <i>Cercospora beticola</i> by leaf treatment with <i>Trichoderma</i> sp. <i>Roberta Roberti, Simona Marinello, Claudio Cerato, Pier Luigi Burzi, Annarita Veronesi, Augusto Cesari</i>	393
Going underground: nature of soil suppressiveness to <i>Rhizoctonia solani</i> in sugar beet <i>Yvette Bakker, Johannes H.M. Schneider</i>	397
Endophytes: a new source for multi-target biological control agents? <i>Gabriele Berg, Annette Krechel, Jana Lottmann, Franziska Faltin, Andreas Ulrich, Johannes Hallmann, Rita Grosch</i>	399
Novel understanding of the biocontrol mechanisms of <i>Trichoderma</i> , a mycoparasite and an opportunistic avirulent plant symbiont <i>Sheridan L. Woo, Michelina Ruocco, Patrizia Ambrosino, Roberta Marra, Rosalia Ciliento, Stefania Lanzuise, Valeria Scala, Francesco Vinale, Sara Gigante, Lucia Catapano, Felice Scala, Matteo Lorito</i>	405
Studies on induced resistance against fire blight (<i>Erwinia amylovora</i>) with different bioagents <i>Wolfgang Zeller, Abo-Elyousr Kamal</i>	407
Risk related to BCAs: reality or phantom risk? <i>Cesare Gessler</i>	415
Transferring scientific results into practice – experience and problems <i>Aleid Dik</i>	419
EU registration problems and possible solution <i>Sergio Franceschini, Fabrizio Jondini</i>	423
What will be the future for BCAs? The industry point of view on problems in developing BCAs <i>Massimo Benuzzi</i>	427

IOBC/wprs Bulletin Vol. 27(9) 2004

Working Group “Integrated Protection in Stored Products”. Proceedings of the Meeting at Kusadasi (Turkey), September 16-19, 2003. Edited by: Shlomo Navarro, Cornel Adler, Matthias Schöller, Mevlüt Emekçi, Ahmet Güray Ferizli, Lise Stengård Hansen. ISBN 92-9067-171-6 [xxiv + 295 pp.].

What are the implications of climate change for integrated pest management of stored grain in the UK? <i>Dean A. Cook, David M. Armitage and Ken B. Wildey</i>	1
Significance of hermetic seals, controlled ventilation, and wire-mesh screens to prevent the immigration of stored product pests <i>Cornel Adler</i>	13
Evaluation of insect contamination in food products by immunological detection of chitin <i>Jordi Riudavets, Elena García, José Aramburu</i>	17
The use of IPM for cockroach (Dictyoptera: Blattaria) control <i>Celia Mateus and António Mexia</i>	27

Action thresholds and statistical quality control to manage food industry pests <i>Václav Stejskal, Jan Hubert and Jan Lukáš</i>	41
Bruchids (Coleoptera: Bruchidae) on peas (<i>Pisum sativum</i> L.): species, geographical distribution and effect on host varieties <i>Celia Mateus, I. Duarte, M. Tavares de Sousa and António Mexia</i>	47
Survey of storage moths in "Moscatel Málaga" variety raisins <i>C. Santiago-Alvarez, E. Hernández-Bisquert, F. Jiménez-Luque, M. Gutiérrez, G. Jiménez-Luque and M. García-Molina, M.</i>	51
The response of different wheat varieties to angoumois grain moth, <i>Sitotroga cereallega</i> (Oliv.) <i>Mansoor-ul-Hasan, Waqas Wakil, Faiza Bashir, Farooq Ahmad</i>	53
Monitoring and spatial distribution of insect pests infesting a paddy rice storage facility <i>Pasquale Trematerra, Andrea Sciarretta, Maria Cristina De Paula, Sonia Maria Lazzari</i>	59
<i>Sitotroga cereallega</i> (Lepidoptera: Gelechiidae), development parameters of a strain from maize stores in West Africa <i>Lise Stengård Hansen, Henrik Skovgaard, Kerstin Hell</i>	69
Sequential sampling plans for making management decisions about <i>Lasioderma serricornis</i> (F.) in stored tobacco using pheromone traps <i>Maria Otilia Carvalho, Laura Monteiro Torres, António Mexia</i>	77
Image analysis of occupancy and contamination - Mediterranean flour moth, <i>Ephestia kuehniella</i> and parasitoid <i>Venturia canescens</i> <i>Jan Lukáš, Václav Stejskal</i>	85
Estimation of population density and spatial pattern of stored paddy rice insect species using un-baited traps <i>Maria Otilia Carvalho, António Ferreira Barbosa, Pedro Marques, Blaine Timlick, Cornel Adler, António Mexia</i>	93
Evaluation of the efficacy of different kinds of pheromone traps for the monitoring of <i>Plodia interpunctella</i> Hbn. (Lepidoptera: Pyralidae) <i>Sara Savoldelli</i>	103
<i>Piophilidae</i> L. (Diptera: Piophilidae) monitoring in cheese ripening storehouses <i>Vasta Manuela Candida, Russo Agatino</i>	109
Comparative potential of powders and essential oils from leaves of <i>Clausena anisata</i> and <i>Eucalyptus saligna</i> to protect stored grains from attack by <i>Callosobruchus maculatus</i> and <i>C. chinensis</i> (Coleoptera, Bruchidae) <i>Tapondjou A. L.*, Adler C., Djoukeng J. D., Bouda H., Reichmuth C.</i>	117
Fungistatic activity of plant extracts against stored products fungi <i>Magro, A., Rodrigues-Júnior, C., Mexia, A.</i>	127
Effect of neem oil on predatory ability of <i>Teretriosoma nigrescens</i> Lewis on <i>Pro- stephanus truncatus</i> (Horn) <i>Ogemah, V., Reichmuth Ch., Büttner C., Adler, C.</i>	137
The assessment of toxicity of the <i>Melia azedarach</i> seed oil against stored product insects <i>A. Saraç, F. Erler, İ. Tunç</i>	147
The discrimination ability of parasitised hosts by <i>Venturia canescens</i> (Gravenhost) (Hymenoptera: Ichneumonidae) <i>Cem Ozkan, M. Oktay Gürkan</i>	155

Seasonal occurrence of dried fig pests and their parasitoids in a fig warehouse in Greece <i>P. A. Eliopoulos, C. G. Athanassiou</i>	161
Development time, fecundity, longevity of <i>Venturia canescens</i> (Gravenhorst) (Hymenoptera: Ichneumonidae) with <i>Ephestia kuehniella</i> Zeller (Lepidoptera: Pyralidae) as host <i>Cem Ozkan, Nilufer Gokcek And Hilal Tunca</i>	175
Effect of relative humidity on the preimaginal development of <i>Blattisocius tarsalis</i> (Acari: Ascidae) <i>Jordi Riudavets, Rosa Quero</i>	179
Occurrence of stored-product pyralid moths and their parasitoids in stored currant and in vineyards <i>C. G. Athanassiou, P. A. Eliopoulos</i>	183
Stored product psocids as one of the preys of the predatory mite <i>Cheyletus eruditus</i> (Schrank) (Acarina: Cheyletidae) <i>Zuzana Kučerová</i>	193
The influence of temperature on the sequence of biological control of stored food mites <i>Eva Žďárková, Pavel Horák</i>	199
Impact of fumigants applied to control storage pests on fruit quality of dried figs <i>U. Aksoy, B. K. Meyvacı, F. Şen, A. Altındaşlı</i>	205
Control of <i>Cryptolestes pusillus</i> (Coleoptera, Cucujidae) and <i>Tribolium castaneum</i> (Coleoptera, Tenebrionidae) at high temperatures <i>Cornel Adler</i>	211
Utilization of freezing temperatures to control <i>Callosobruchus maculatus</i> Fabr. (Coleoptera, Bruchidae) <i>A.G. Ferizli, M. Emekci, S. Tutuncu, S. Navarro</i>	215
Emigration and control of nitidulid beetles from dates using heat <i>Shlomo Navarro, Simcha Finkelman Miriam Rindner, Refael Dias</i>	221
The efficacy of modified atmosphere applications against dried fruit pests in Turkey <i>Mevlüt Emekçi, A. Guray Ferizli, Sule Tütüncü, Shlomo Navarro</i>	229
The use of portable systems to control insect pests by low pressures <i>Simcha Finkelman, Shlomo Navarro, Miriam Rindner, Refael Dias, Avi Azrieli</i>	235
The lethal effects of high carbon dioxide on various life stages of <i>Ephestia cautella</i> (Wlk.) (Pyralidae: Lepidoptera) <i>Sule Tütüncü, Mevlüt Emekçi, Shlomo Navarro</i>	243
Results of a practical test with the ThermoNox® heat treatment procedure, an alternative possibility for control of stored product pests by thermal eradication <i>H. Klupal, Dr. P. Cate, F. Rappl</i>	247
Novel quarantine treatments of narcissus flies using vacuum, CO ₂ or hermetic conditions <i>Miriam Rindner, S. Finkelman, S. Navarro, R. Dias, A. Isikber, Dorit Sandlar-Ziv, Avi Azrieli</i>	253
Thermonox-heat treatments in a flour mill – model and reality <i>H. Hofmeir, C. Adler</i>	257
Efficacy of vacuum and saturated water steam on stored-product moths and beetles <i>S. Prozell, M. Schöller</i>	259
EcO ₂ B.V. – non-toxic pest control in stored products as the alternative for methyl bromide and phosphine <i>F. Bergwerff, J. Suurd, N. Vroom</i>	263
The efficacy of phosphine fumigation against dried fruit pests in Turkey	

A.G. Ferizli, M. Emekci, S. Tütüncü, S. Navarro.....	267
Effect of phosphine concentration and exposure period on the mortality of <i>Tribolium castaneum</i> (Hbst.) collected from Sheikhpura district, Punjab - Pakistan	
Waqas Wakil, Mansoor-ul-Hasan, Faiza Bashir, Farooq Ahmad	273
Propylene oxide: a fumigant for quarantine purposes as a potential alternative to methyl bromide	
A. A. Isikber, S. Navarro, S. Finkelman, A. Azrieli, M. Rindner, R. Dias.....	279
Alternative fumigants to methyl bromide, for the control of stored product insect pests	
Eli Shaaya, Moshe Kostyukovsky.....	285
Report about a deltamethrin-resistant strain of <i>Rhyzopertha dominica</i> (F.) (Coleoptera: Bostrychidae) in Italy	
Massimiliano Stampini	293

IOBC/wprs Bulletin Vol. 27(10) 2004

Working Group “Integrated Integrated Control in Oilseed Crops”.
 Proceedings of the Meeting at Rothamsted (UK), March 30 - 31, 2004.
 Edited by: Birger Koopmann, Neal Evans, Samantha Cook and Ingrid H. Williams. ISBN 92-9067-172-4 [x + 302 pp.].

In Memoriam <i>Bent Bromand</i>	i
The EU project MASTER (MAnagement STRategies for European Rape pests): a review of progress.	
I.H. Williams, W. Büchs, H. Hokkanen, Z. Klukowski, A. Luik, I. Menzler-Hokkanen, C. Nilsson and B. Ulber	3
SECURE – possibilities for durable resistance to stem canker?	
N. Evans, B. Fitt, F. van den Bosch, M. Eckert, Y.-J. Huang, S. Pietravalle, Z. Karolewski, T. Rouxel, M.-H. Balesdent, S. Ross, L. Gout, H. Brun, D. Andrivon, L. Bousset, P. Gladders, X. Pinochet, A. Penaud, M. Jedryczka, P. Kachlicki, A. Stachowiak, J. Olechnowicz, A. Podlesna, I. Happstadius and M. Renard	17
Effects of conservation tillage on harmful organisms and yield of oilseed rape.	
H. Kreye.....	25
The PASSWORD project: a decision support system for managing pests and diseases of winter oilseed rape in the UK.	
P. Gladders, N. Evans, B. Fitt, K. Walters, J. Turner, P. Northing, K. Sutherland, S. Campbell, A. Selley, B. Hall, D. Ellerton and D. Naylor.....	31
Comparing fungal diseases on oilseed rape in England, France and Poland.	
J.S. West, M. Jedryczka., A. Penaud A. and B.D.L. Fitt.....	39
The effect of sulphur, magnesium and boron fertilisation of the spring rape on the occurrence of diseases on plants and fungi composition on harvested seeds.	
C. Sadowski, L. Lenc, A. Łukanowski.....	45
The contribution of cultivar resistance and fungicides to disease control in winter oilseed rape in England.	
P. Gladders, K. Jewell1 and S. McDonough.....	51
Disease/yield loss analysis for <i>Sclerotinia</i> stem rot in winter oilseed rape.	
S. Dunker, A. von Tiedemann	59
DNA polymorphism in <i>Sclerotinia sclerotiorum</i> isolates from oilseed rape in China.	
W. Irzykowski, J. Sun, Q. Li, T. Gao, S. Hou, A. Águedo and M. Jedryczka	67
Field and controlled environment assessment of winter oilseed rape resistance to <i>Pyrenopeziza brassicae</i> (light leaf spot).	

Z. Karolewski ¹ , D.H. Arkell ¹ , B.D.L. Fitt	77
Preliminary results on the use of quantitative PCR for assessing resistance to light leaf spot (<i>Pyrenopeziza brassicae</i>) in oilseed rape cultivars. J. Thomas, D. Kenyon, C. Handy	83
Large-scale survey of race structure of <i>Leptosphaeria maculans</i> in France. M.-H. Balesdent, K. Louvard, X. Pinochet and T. Rouxel	89
Frequency of avirulence genes in field populations of <i>Leptosphaeria maculans</i> in Germany, UK and Poland. A. Stachowiak, J. Olechnowicz, M. Jedryczka, T. Rouxel, M.-H. Balesdent, I. Happstadius, P. Gladders and N. Evans	91
Field behaviour of oilseed rape genotypes carrying major resistance genes exposed to different <i>Leptosphaeria maculans</i> populations. H. Brun, V. Huteau, M. Ermel, F. Eber, A.-M. Chèvre and M. Renard	95
Identification of specific plant resistance factors to Phoma (<i>Leptosphaeria maculans</i>) among winter oilseed rape varieties: Interest for variety testing and for the promotion of a first step of a durable management of resistances. X. Pinochet, M.-H. Balesdent, F. Salvi, E. Mestries and T. Rouxel	101
Feasibility of using quantitative PCR for assessing resistance to stem canker in oilseed rape cultivars. D. Kenyon, J. Thomas, C. Handy	109
Durability of resistance, a modelling approach. S. Pietravalle, F. van den Bosch and N. Evans	119
LeptoNet and SPEC - new projects supporting the control of stem canker of oilseed rape in Poland. M. Jędrzycka, R. Matysiak, K. Graham	125
Development of an 'ascospore shower' method for inoculating oilseed rape leaves with <i>Leptosphaeria maculans</i> . Y.-J. Huang, M.-H. Balesdent, N. Evans and B. Fitt	131
Spatial aspects of <i>Leptosphaeria maculans</i> (phoma stem canker) epidemiology. N. Evans, A. Baierl, J. S. Steed, Y.-J. Huang and B. D. L. Fitt	139
Effects of temperature and humidity on <i>Leptosphaeria maculans</i> symptom development on cotyledons of oilseed rape with different resistance genes. J. Olechnowicz, A. Stachowiak, M. Jędrzycka, A.-M. Chèvre and M. Renard	145
<i>Leptosphaeria maculans</i> , <i>L. biglobosa</i> and fungicides, preliminary results from in vitro and winter oilseed rape experiments. M. Eckert, B. Fitt, A. Selley	157
Molecular characterization of Portuguese isolates of <i>Leptosphaeria maculans</i> using PCR-ISSR and RAPD markers. J. S. Godinho, M.-H. Balesdent, E. Mendes-Pereira and J. S. Dias	165
<i>Thlaspi arvense</i> , a source of A-type isolates of <i>Phoma lingam</i> ? M. R. Islam, R. K. Gugel, G. Séguin-Swartz and B. Koopmann	167
Sirodesmins in tissues of infected rape plants revisited. P. Kachlicki	177
<i>Agrobacterium tumefaciens</i> -mediated transformation of <i>Leptosphaeria maculans</i> . M. Meyer, F. Blaise, E. Rémy, L. Zhou, C. Tourneur, J.-P. Narcy, T. Rouxel, M.-H. Balesdent	179
Screening of <i>B. napus</i> with <i>Xanthomonas campestris</i> pv. <i>campestris</i> and <i>Leptosphaeria maculans</i> . J. S. Dias; B. Ribeiro and J. Godinho	193
The exploitation of genetic resources of <i>Brassica juncea</i> for resistance to <i>Xanthomonas campestris</i> pv. <i>campestris</i> . J. S. Dias and J. P. Paiva	195

Effects of a turnip rape trap crop on the spatial distribution of <i>Meligethes aeneus</i> and <i>Ceutorhynchus assimilis</i> in oilseed rape. <i>S. M. Cook, N. P. Watts, F. Hunter, L. E. Smart and I. H. Williams</i>	199
Spatial dynamics of pollen beetles (<i>Meligethes aeneus</i>) in relation to inflorescence growth stage within a simulated trap crop system for oilseed rape. <i>D. Frearson, A. W. Ferguson, J. Campbell and I. H. Williams</i>	207
Trap plants to avoid insecticide application against pollen beetles in oilseed rape. <i>C. Nilsson</i>	215
Effect of sowing density of oilseed rape on the abundance and within-plant distribution of cabbage stem flea beetle, <i>Psylliodes chrysocephala</i> . <i>H. Nuss and B. Ulber</i>	223
Means to control pests in organic oilseed rape production. <i>W. Büchs and K. Katzur</i>	225
Occurrence of pollen beetle parasitoids in the south of Sweden. <i>M. Jönsson, C. Nilsson, P. Anderson</i>	239
Phenology and spatial distributions of <i>Dasineura brassicae</i> and its parasitoids in a crop of winter oilseed rape: implications for integrated pest management. <i>A. W. Ferguson, J. M. Campbell, D. J. Warner, N. P. Watts, J. E. U. Schmidt and I. H. Williams</i>	243
Verification of protective sowing ability to concentrate insect pests and their parasitoids around oilseed rape field. <i>D. Nerad, J. Vašák, H. Zukalová, P. Kuchtová and P. Baranyk</i>	253
Rearing and identification of the larval parasitoids of <i>Psylliodes chrysocephala</i> and <i>Ceutorhynchus pallidactylus</i> from field-collected specimens. <i>H. Barari, S. M. Cook and I. H. Williams</i>	263
Incidence of larval parasitism of <i>Psylliodes chrysocephala</i> within oilseed rape crops in Germany. <i>B. Ulber and R. Wedemeyer</i>	273
Incidence and feeding activity of epigeic, predatory invertebrates within winter oilseed rape in the UK with comparisons between integrated and conventional crop management. <i>R. Piper, I. H. Williams</i>	281
Approaches to assess the importance of carnivorous beetles as predators of oilseed rape pests. <i>O. Schlein and W. Büchs</i>	289
Impact of predators on pollen beetle <i>Meligethes aeneus</i> on rapeseed in Finland. <i>H. M. T. Hokkanen</i>	293
Long term survival of Brassica Pod Midge (<i>Dasineura brassicae</i>) populations. <i>C. Nilsson, L. Vimarlund and G. Gustafsson</i>	297

The regular prices for the Bulletins are:

- up to 100 pages: 10 EURO per copy
- up to 300 pages: 15 EURO per copy
- > 300 pages: 30 EURO per copy



Boller, E.F., F. Häni & H.-M. Poehling (2004): Ecological Infrastructures: Ideabook on Functional Biodiversity at the Farm Level. Temperate Zones of Europe. (Text in English and German) – 212 pp., figures and tables, Lindau (Switzerland) (LBL: IOBC-wprs Commission on Integrated Production Guidelines and Endorsement), € 25.00 (CHF 34.65) plus porto (ISBN 3-906776-07-7).

Order form on the website of the Commission: www.iobc.ch – downloads.

Contents:

Objectives and structure of idea book

1 Sorting out the facts

- 1.1 Services provided by a multifunctional agriculture
- 1.2 A first glance at the ecological infrastructures
- 1.3 Ecological Infrastructures – Short descriptions
- 1.4 «Ecological distances»
- 1.5 Functional Units: Field, farm, landscape
- 1.6 Ecological Infrastructures and fauna
- 1.7 Ecological Infrastructures: IOBC lists of options
- 1.8 Buffer zones and pesticide drift
- 1.9 Mowing techniques and faunistic diversity

2 Hedges and their wildflower strips as special ecological infrastructures

- 2.1 Hedges: Facts and figures
- 2.2 Hedges: Structures
- 2.3 Hedges: Their functions
- 2.4 Hedges: Negative agronomic aspects
- 2.5 Planting Hedges: Sites and procedures
- 2.6 Planting Hedges: Selecting plant material
- 2.7 Maintenance of hedges and their grass strips
- 2.8 The stinging nettle: A hidden ecological treasure?

3 Agro-Ecosystems, their characteristics and ecological infrastructures

- 3.1 Viticulture

- 3.10 Vineyards with high ecological potential
- 3.11 Vineyard flora and fauna
- 3.12 Antagonists in vineyards
- 3.13 Green cover on slopes
- 3.14 Green cover in the plain
- 3.15 Tailor-made hedges ?
- 3.16 Hedges as potential sources of predatory mites
- 3.17 Food sources of the predatory mites in vineyards
- 3.18 The green grape leafhopper and its egg parasitoids
- 3.2 Fruit Orchards
- 3.20 The ecological potential in fruit orchards
- 3.21 Orchards in Europe: Key pests and their antagonists
- 3.22 Ecological infrastructures of fruit farms
- 3.23 Establishment and maintenance of ecological infrastructures
- 3.24 Wildflower strips enhance aphid predators
- 3.25 High-stem trees and orchard meadows
- 3.26 Beneficials and their ecological infrastructures
- 3.3 Arable Crops
- 3.30 Ecological potential of arable crops
- 3.31 Pests, antagonists and ecological infrastructures
- 3.32.1 Conservation headland: Basics
- 3.32.2 Conservation headland: Functions
- 3.32.3 Conservation headland: Establishing and maintaining
- 3.33.1 Rotational fallows: Basics
- 3.33.2 Rotational fallows: Functions
- 3.34.1 Wildflower strips: Basics
- 3.34.2 Wildflower strips: Functions
- 3.35 Fallows: Establishing and maintaining
- 3.4 Field grown Vegetables
- 3.40 The vegetable paradox
- 3.41 Ecological infrastructures in field vegetable production

- | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>3.5 Grassland, grass strips and field margins</p> <p>3.51 Poor grassland as ecological infrastructures</p> <p>3.52 Poor grassland: Evaluation, establishment and maintenance</p> <p>3.53 Grass strips, field margins: plants species and mixtures</p> <p>4 Measuring and Improving the Quality: Methods and Tools</p> <p>4.1 Evaluating ecological quality: Overview</p> <p>4.2 RISE, a tool to evaluate the sustainability performance of farms</p> <p>4.3 Evaluating the ecological quality of hedges/ woodland patches and their grass strips (English version only)</p> | <p>4.4 Evaluating the ecological quality of meadows and pastures (English version only)</p> <p>4.5 Evaluating the ecological quality of high-stem fruit orchards (English version only)</p> <p>5 Appendices</p> <p>5.1 Selected technical leaflets and documents for self-training</p> <p>5.2 Useful addresses</p> <p>5.3 Glossary (Explanations of technical terms)</p> <p>5.4 Literature mentioned in the text</p> <p>5.5 Authors of illustration</p> <p>5.6 Feedback from critical readers</p> |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
-

New Publications of IOBC Global

Egg Parasitoid News (previously Trichogramma News), **no. 15 (December 2003)**, 56 pp. (eds.: A. Herz, O. Zimmermann & S.A. Hassan), Braunschweig (Germany). – Order: Dr. A. Herz, BBA, Institute for Biological Control, Heinrichstr. 243, 64287 Darmstadt (Germany), Fax +49-6151-407290, e-mail: a.herz@bba.de.

Egg Parasitoid News, no. 7 (1993) – 14 (2002) are still available. The issues no. 10 (1998) – 14 can be found also under website:

www.bba.de/eggpara/eggp.htm

IWGO Newsletter 25(2), 26 pp. – This IOBC Newsletter of the “International Working Group on *Ostrinia* and other Maize Pests” can be ordered by: Harald K. Berger, AGES, Spargelfeldstr. 191, A-1226 Vienna, Austria, e-mail: harald.berger@ages.at

Contents: Abstracts of the 10th *Diabrotica* Subgroup Meeting in Engelberg, Switzerland, January 14-17, 2004 (Second Part). – Invitation to the 11th IWGO *Diabrotica* Subgroup Meeting in Bratislava, February 14-17, 2005

IOBC-Global Newsletter 76, December 2004, 20 pp. (eds. Joop C. van Lenteren & Stefano Colazza). – This newsletter is available in the web at: **www.iobc-global.org** (also previous newsletters) or can be ordered by:

Prof. Dr. J.C. van Lenteren
 Laboratory of Entomology, Wageningen University
 P.O. Box 8031, 6700 EH Wageningen, The Netherlands,
 Tel: +31 317 482327 Fax: +31 317 484821
 e-mail: Joop.vanLenteren@wur.nl

Prof. Dr. S. Colazza
 S.En.Fi.Mi.Zo. Department - Section of Entomology,
 Acarology and Zoology, University of Palermo
 Viale delle Scienze, 13 90128 Palermo, Italy
 Tel. +39 091 7028825 Fax. +39 091 7028826, email: colazza@unipa.it

Other interesting publications brought to attention of Profile

- Albajes, R., M. Lodovica Gullino, J.C. van Lenteren & Y. Elad (eds., 2000): *Integrated Pest and Disease Management in Greenhouse Crops (Developments in Plant Pathology)*. – 568 pp., Dordrecht, Kluwer Academic Publishers, hardcover: \$ 235.00 (ISBN 0-7923-5631-4).
- Alford, D.V. (2003): *Biocontrol of Oilseed Rape Pests*. – 355 pp., Oxford, Blackwell Publishers, hardcover: € 154.99 (ISBN 0632054271).
- Amaro, P. (2003): *A Protecção Integrada*. – 446 pp., Cadaval (ISA/Press) (ISBN 972-8669-10-0). Distribution: Secção de Protecção Integrada, Departamenro de Protecção das Plantas e Fitoecologia. Tapada da Ajuda, Instituto Superior de Agronomia, 1349-017 Lisboa, Portugal.
- Ben-Dov, Y. & V. German (2003): *A Systematic Catalogue of the Diaspididae (Armored Scale Insects) of the World, Subfamilies Aspidiotinae, Comstockiellinae and Odonaspidinae*. – 1111 pp., Andover (UK), Intercept Ltd., € 132.00 (ISBN 1898298939).
- Benuzzi, M. & V. Vacante (2004): *Difesa fitosanitaria in agricoltura biologica. Le avversità, i prodotti e le strategie di lotta nelle colture orto-frutticole*. – xii + 297 pp., Calderini, Edagricole: € 36.50 (ISBN 88-506-4996-7).
The authors summarize the technical methods and crop protection products available for biological production (natural enemies, microbial products, plant produced pesticides, pheromones and other chemical products). Then they describe pest and disease management methods for all major Italian crops (e.g. apples, pear, peach, grape, vegetables, olive, potatoes, strawberries). Information about this book can be obtained from M. Benuzzi (benuzzi@intrachem.it).
- Blomquist, G.J. & R.G. Vogt (eds., 2003): *Insect Pheromone Biochemistry and Molecular Biology. The Biosynthesis and Detection of Pheromones and Plant Volatiles*. – xv + 745 pp., Amsterdam (NL), Elsevier / Academic Press, \$ 99.95, (ISBN 0-12107-151-0).
- Bourtzis, K. & T.A. Miller (eds., 2003): *Insect Symbiosis*. – 368 pp., Boca Raton (Florida, USA), CRC Press, \$ 119,95 (ISBN 0-8493-1286-8).
- Cohen, A.C. (2003): *Insect Diets*. – 344 pp., Boca Raton (Fla., USA), CRC Press, \$ 129.95 (ISBN 0-84931-577-8).
- Ehler, L.E., R. Sforza, T. Mateille & Lester E. Ehler (2004): *Genetics, Evolution, and Biological Control*. – 304 pp., Wallingford (UK), CABI Publishing, Hardcover \$ 100,00 (ISBN: 085199735X).
- Eldridge, B. F. & J.D. Edman (eds., 2003): *Medical Entomology. A textbook on public Health and Veterinary Problems Caused by Arthropods. Revised Edition*. – 659 pp., Kluwer Academic Publishers, \$ 299.00 (ISBN 0792363205), softcover: \$ 83.00 (ISBN 1402017944).
- Hajek, A.E. (2004): *Natural Enemies: An Introduction to Biological Control*. – 394 pp., Cambridge University Press, Paperback \$ 50.00 (ISBN: 0521653851).

- Heinz, K.M., R.G. van Driesche & M.P. Parella (eds., 2004): Biocontrol in Protected Culture. – 552 pp., Batavia (IL: USA), Ball Publishing, hardcover. \$ 94.95 (ISBN 1-883052-39-4).
- Helyer, N., K. Brown & N.D. Cattlin (2003): A colour handbook of biological control in plant protection. – 128 pp., 338 colour illustrations, London (Manson Publishing), £ 24.95 (ISBN: 1-874545-28-6).
- Hokkanen, H.M.T., J.M. Lynch & J. Lynch (eds., 2003): Biological Control: Benefits and Risks (Biotechnology Research). New Edition. – 326 pp., Cambridge University Press, Paperback \$ 40.00 (ISBN: 052154405X).
- Koul, O. (2004): Insect Antifeedants. – 1005 pp., Boca Raton (Fla., USA), CRC Press, \$ 189,95 (ISBN 0-415-33400-4).
- Koul, O. & G.S. Dhaliwal (eds., 2003): Predators and Parasitoids. – 152 pp., London (UK), Taylor & Francis, \$ 99,95 (ISBN 0-41530-665-5).
- Rees, D. (2004): Insects of Stored Products. – 184 pp., 231 colour illustrations, London (Manson Publishing), £ 30.00 (ISBN: 1-84076-060-5).
- Shiferaw, B., H.A. Freeman & S.M. Swinton (eds., 2004): Natural Resource Management in Agriculture: Methods for Assessing Economic and Environmental Impacts. – 384 pp., Wallingford (CABI Publishing), £ 65.00 (ISBN 0851998283).
- Vidal, S., U. Kuhlmann & C.R. Edwards (eds., 2004): Western Corn Rootworm: Ecology and Management. – 320 pp., Wallingford (CABI Publishing), £ 65.00 (ISBN 0851998178).

Tommasini, M.G. (2003): Evaluation of *Orius* species for biological control of *Frankliniella occidentalis* (Pergande) (Thysanoptera: Thripidae). – Thesis (with summaries in English, Dutch and Italian), Wageningen University (The Netherlands).

The overall aim of this research was to develop a biological control programme for *F. occidentalis* through the selection of an efficient beneficial arthropod.

First, a general review of the literature about thrips pest species in Europe and in particular of *Frankliniella occidentalis* (Perg.) (Western Flower Thrips) was made. Information regarding the biology, distribution, host plants of thrips and damage induced by this pest species were discussed and summarized. The main candidates as natural enemies for control of thrips emerging from this literature study and from an evaluation of all present data, were Anthocoridae, and, thus, further research was directed towards Anthocorid predators of the genus *Orius* (Rhynchota: Heteroptera) (**chapter 1**).

Next, of the genus *Orius*, the most common species of the Mediterranean regions of Europe were chosen as candidates for biological control of *F. occidentalis*. *Orius* predators were collected in several areas in Italy on 36 plant species infested by thrips. The most common species were *O. niger* Wolff, *O. laevigatus* (Fieber) and *O. majusculus* (Reuter). No clear host-plant preferences of these *Orius* species were recorded (**chapter 2**).

Consequently, biological characteristics and predation activity of four *Orius* species (the palearctic *O. majusculus*, *O. laevigatus* and *O. niger* and the nearctic *O. insidiosus*, an exotic species that was earlier released in Italy) were determined by laboratory experiments using two prey species: *Ephestia kuehniella* (Zell.) eggs and *Frankliniella occidentalis* adults. Preimaginal mortality, development time, sex-ratio, pre-oviposition period, longevity, fecundity, and predation during the instar stages and the adult stage were measured. The intrinsic rates of natural increase (r_m) and the kill rates ($k_m = \ln k_0/t_k$) for all four *Orius* species were determined. The k_m was 0.23 for *O. laevigatus*, 0.21 for *O. majusculus*, 0.25 for *O. insidiosus*, 0.19 for *O. niger*, respectively. In all species, the females that fed on *E. kuehniella* showed greater longevity and higher reproduction than those fed on *F. occidentalis*. Most data for the nearctic *O. insidiosus* were similar to those of *O. laevigatus* and *O. majusculus*. Mass rearings of *O. insidiosus*, *O. laevigatus* and *O. majusculus* were successfully developed, while *O. niger* appeared difficult to rear. Based on these data, it was concluded that *O. laevigatus* might be the best candidate for control of thrips (**chapter 3**).

No data were available about the occurrence of diapause in *O. laevigatus*. As thrips pest occur early in the season, it is important to use natural enemies that do not go into diapause. The possibility of inducing a reproductive diapause in this palearctic species was therefore investigated in the laboratory using two strains: strain N collected in northern Italy (Po Valley) and strain S collected in southern Italy (Sicily). The influence of photoperiod on *Orius* eggs was studied. Development time, adult emergence, sex ratio, pre-oviposition period, fecundity, and the presence of mature oocytes were recorded.

The two strains of *O. laevigatus* showed to have a different way of overwintering: in the northern strain part of the population undergoes a weak reproductive diapause, while for the southern strain overwintering could best be described as quiescence (**chapter 4**).

Finally, the capacity of *O. laevigatus* to control thrips pests (*F. occidentalis* and *T. tabaci*) was studied by releases of this predator in two vegetable crops in commercial greenhouses, sweet pepper and eggplant. The releases of the pirate bugs were made as soon as thrips were detected, resulted in early establishment of the predator, in an interaction between prey and predator at low population densities and often in sufficient control of the pest (**chapter 5 and 6**).

In conclusion, the southern Italian strain of *O. laevigatus* showed to be an efficient natural enemy of thrips and *F. occidentalis*. This natural enemy is currently produced and commercially used on large scale in Europe to control thrips species in vegetable and ornamental crops, mostly in protected crops (**chapter 7**).

A pdf version of this thesis can be obtained from: tommasini@crpv.it

IOBC Global Scientific Meetings and Celebration of 50th Anniversary

Fifty Years IOBC in the New World: Montreal, Canada, 8-12 May 2005

In collaboration with IOBC-NRS and the Canadian BioControl Network, we organize a combined meeting on various aspects of biological control. During the "IOBC day" the history, current situation and future developments will be sketched by IOBC members from Europe and North America. This will be followed by two day symposium on "Trophic and Guild Interactions in Biological Control". The symposium will provide critical review of current knowledge and propose fresh perspectives on trophic and guild interactions in the specific context of biological control.

For more information: www.biocontrol.canada, or via IOBC-Global.org to Region NRS

Fifty Years IOBC in Latin America: Summer 2006

IOBC-Global has started discussions with members of the Latin American Region (NTRS) to organize a symposium in the summer of 2006 concurrent with another Latin American meeting that is attended by many biocontrol workers. The aims of this symposium will be (1) to discuss successful cases of biological control in this region, (2) to evaluate the current situation, and (3) to develop a strategy for improvement of research collaboration. News about this symposium will be reported in the newsletter and on the IOBC-Global website.

Fifty Years of IOBC in Western Europe: Dijon, France, 17-21 September 2005

The region where IOBC was founded, West Europe, will organize an anniversary meeting in conjunction with the General Assembly of WPRS in Dijon, France from 17-21 September 2005.

The programme see pages 27-31 in this issue of *Profile*.

Fifty Years IOBC in Africa and Worldwide: Summer 2008

In collaboration with the Organization Committee of the 22nd International Congress of Entomology, IOBC-Global will organize a one or more day symposium. The aims of this symposium will be: (1) to give an overview of successful cases of biological control in Africa, (2) to discuss scientific and applied aspects of biological control research.

Ideas for honorary members

In 2005 - 2008 several festivities are organized to commemorate the start of IOBC 50 years ago. We intend to select and appoint an honorary member for each Regional Section. If you have a good suggestion, please mail the name of the person with a short motivation to the Secretary General (colazza@unipa.it). We prefer to honour "older" persons that have done much work for IOBC and biological control.

Time-Table of forthcoming events

For the Meetings of the IOBC/wprs Working Groups see also the IOBC/wprs homepage: <http://www.iobc-wprs.org>

- 30 January - 03 February, 2005: International Symposium „Ecology and Management of *Lygus* Plant Bugs“, Ottawa (Canada). – e-mail: Lygus_Symposium@hotmail.com, additional informations in the Web: www.Lygus-Symposium.org
- 14 - 17 February, 2005: 11th IWGO Diabrotica Subgroup Meeting, Bratislava, Slovak Republic. – Dr. Jozef Kotleba, Tel +421/2/59266357, Fax +421/2/59266358, e-mail: kotleba@land.gov.sk
- 21 - 24 March, 2005: German Congress of Entomology, Dresden. – Dr. U.M. Ratschker, TU Dresden, Forstzoologie, Piennner Str. 9, 01737 Tharandt, Tel +49(0)35203/38-31351, Fax +49(0)35203/38-31317, e-mail: dgaee@snsd.de, <http://www.snsd.de/dgaee/>
- 10 - 14 April, 2005: IOBC/wprs WG "Integrated Control in Protected Crops, Temperate Climate", Naantali (Finland). – Irene Vanninen, Agrifood Research Finland (MTT), Plant Production Research, Plant Protection, 31600 Jokioinen, Finland, tel. +358-3-4188 2580, fax +358-3-4188 2584, e-mail: Irene.Vanninen@mtt.fi
- 8 - 12 May, 2005: Fifty Years IOBC in the New World, Montreal (Canada). – www.biocontrol.canada, or www.IOBC-Global.org
- 10 May, 2005: 57th International Symposium on Crop Protection, Ghent (Belgium). – K. de Jonghe, Dept. of Crop Protection, Univ. of Ghent, Coupure Links 653, B-9000 Gent, Belgium, e-mail: Kris.DeJonghe@rug.ac.be, iscp@ugent.be, <http://www.iscp.ugent.be>
- 08 - 11 May, 2005: First meeting of the IOBC Neartic Regional Section and the Biocontrol Network of Canada, Magog-Orford, Quebec, Canada. – This conference will cover all aspects of biological control and will include a special symposium on "Trophic and Guild Interactions in Biological Control" featuring invited keynote speakers and a special IOBC Global 50th anniversary session. – Jacques Brodeur, Biocontrol Network, jacques.brodeur@plg.ulaval.ca, or Guy Boivin, Biocontrol Network, boiving@agr.gc.ca.

- 01 - 03 June, 2005: IOBC/wprs WG "GMOs in Integrated Production": "Ecological Impact of Genetically Modified Organisms", Lleida (Spain). – Dr. Jörg Romeis, Agroscope FAL Reckenholz, Eidgenössische Forschungsanstalt für Agrarökologie und Landbau, Reckenholzstr. 191, 8046 Zürich (Switzerland), Tel: +41-1-3777299, Fax: +41-37777201, e-mail: joerg.romeis@fal.admin.ch
- 4 - 11 June, 2005: 1st International Conference of Plant Protection and Plant Health in Europe. "Introduction and spread of invasive species", Berlin, Germany. – Deutsche Phytomedizinische Gesellschaft and BCPC, e-mail: dpg-bcpc@dpg.phytomedizin.org; Web: <http://www.bcpc.org/>
- 5 - 8 June, 2005: WG "Multitrophic Interactions in Soil", Wageningen (The Netherlands) – Dr. Jos M. Raaijmakers: jos.raaijmakers@wur.nl
- 10 - 15 June, 2005: IOBC/WPRS Working Group "Insect Pathogens and Insect Parasitic Nematodes", 10th European Meeting, Locorotondo, Bari, Italy. – Prof. Oreste Triggiani, Dipartimento di Biologia e Chimica Agro-Forestale ed Ambientale, Università degli Studi di Bari, Via Amendola 165/A, I-70126 Bari, ITALY, Phone: +39 080 5442878, Fax: + 39 080 5442876, e-mail: triggian@agr.uniba.it; Administrative Secretariat: IOBC.europeanmeeting@agr.uniba.it, <http://www.agr.uniba.it/iobc>
- 1 - 3 September, 2005: Workshop "Pests and Weeds Control in Sustainable Fruit Production", Skierniewice (Poland). – Dr. Darek Gajek: dgajek@insad.pl; <http://www.pomocentre.insad.pl>
- 5 - 9 September, 2005: IX European Workshop on Insect Parasitoids, Cardiff (Wales, UK). – Dr J.S. Noyes, e-mail: jsn@nhm.ac.uk, www.royensoc.co.uk/meet.html (<http://www.royensoc.co.uk/ewiplInfo.doc>).
- 12 - 16 September, 2005: 2nd International Symposium on Biological Control of Arthropods, Davos, Switzerland. – ISBCA-Sekretariat: e-mail: ISBCA@bluewin.ch, further informations: www.cabi-bioscience.ch/ISBCA-DAVOS-2005/; Dr. Mark Hoddle, University of California mark.hoddle@ucr.edu and Dr. U. Kuhlmann, CABI Bioscience Switzerland U.Kuhlmann@cabi-bioscience.ch

17 - 21 September, 2005: **IOBC/wprs General Assembly** "Fifty Years of IOBC in Western Europe and the Mediterranean", Dijon (France). – Dr. Claude Alabouvette, UMR INRA Université de Bourgogne, Microbiologie, Géochimie des Sols (MGS), 17 rue Sully, BP 86510, F-21065 DIJON CEDEX, tel: +33 (0) 380693041, fax: +33 (0) 380693224, e-mail: ala@dijon.inra.fr, Web: <http://www.iobc-wprs.org>

- 19 - 21 September, 2005: XXXI CIOSTA - CIGR V Congress "Increasing Work Efficiency in Agriculture, Horticulture and Forestry", Stuttgart-Hohenheim (Germany). – Dr. Monika Krause: ciosta@uni-hohenheim.de, <http://www.uni-hohenheim.de/ciosta-cigr>
- 26 - 27 September, 2005: IOBC/wprs WG "Integrated Control in Citrus Fruit Crops", Lisbon (Portugal). – <http://www.isa.utl.pt/dppf/iobc>

- 27 - 30 September, 2005: WG „Pesticides and Beneficial Organisms“, Dębe near Warsaw (Poland). – Dr. Heidrun Vogt: H.Vogt@bba.de; Prof. Remigiusz W. Olszak: rolszak@insad.pl, Dr. Dariusz Gajek: dgajek@insad.pl
- 26 - 28 October, 2005: IOBC/wprs WG “Integrated Protection of Olive Crops”, Florence (Italy). – Dr Antonio Belcari, Department of Agricultural Biotechnologies, University of Florence. E-mail: antonio.belcari@unifi.it
- 26 - 29 November, 2005: Third International Conference on IPM Role in Integrated Crop Management and Impacts on Environment & Agricultural Products, Giza (Egypt). – Prof. Dr. Ahmed Abdu Hamed: plant_protection@hotmail.com; plantprotection5@yahoo.com

2006

- 03 - 05 April, 2006: Integrated Pest Management in Oilseed Rape, Göttingen (Germany). – Dr. Bernd Ulber, Institut für Pflanzenpathologie und Pflanzenschutz, University of Göttingen, bulber@gwdg.de, <http://www.paulinerkirche-goettingen.de>
Further details (including a Call for Papers) will be issued in late March 2005, with a deadline for receipt of offers of 31 August 2005. A Provisional Programme (including Registration details) is expected to be available from November 2005 onwards.
- April / May, 2006: Joint Meeting of the WGs „Breeding for resistance against insects and diseases“ and „Induced resistance in plants against insects and diseases“, Heraklio (Crete, Greece). – Annegret Schmitt (a.schmitt@bba.de) or Nick Birch (N.Birch@sari.ac.uk)
- 15 - 19 May, 2006: IOBC/wprs WG “Protected Crops, Mediterranean Climate”, Murcia (Spain). – Dr. Juan Antonio Sánchez, Instituto Murciano de Investigación y Desarrollo Agrario (IMIDA). e-mail: Juana.Sánchez23@carm.es
- 06 - 10 September, 2006: IOBC/wprs WG “Integrated Control of Fungal and Bacterial Plant Pathogens”: “Fundamental and Practical Approaches to Increase Biocontrol Effects”, Spa (Belgium). – Monica Höfte (monica.hofte@UGent.be) and Haïssam Jijakli (jijakli.h@fsagx.ac.be).
- 17 - 22 September, 2006: 8th European Congress of Entomology, Izmir (Turkey). – Prof. Dr. Seniz Kismali, Ege University, Agricultural Faculty, Dept. of Plant Protection, Bornova 35100 Izmir, Turkey, e-mail: kismali@ziraat.ege.edu.tr, www.ece2006.org

Next Issue of Profile

The summer-issue of *Profile* (number 39) will be edited in July 2005. Please send your contributions for this issue of *Profile* to me at the latest:

15 June, 2005

but don't hesitate to contact me long before this deadline! Please send your contributions by e-mail (preferably), mail or fax to:

Dr. Horst Bathon
Institute for Biological Control
Heinrichstrasse 243
D-64287 Darmstadt (Germany)
e-mail: h.bathon@bba.de
Tel ++49-6151-407-225, Fax ++49-6151-407290

