

Report of the 6th Meeting of the EPPO ad hoc Panel on *Diabrotica virgifera virgifera* held jointly with the 8th International IWGO Workshop on *Diabrotica virgifera virgifera*

Venezia, IT, 2001-10-29/30

1. Opening

A very large number of participants (approximately 100 from 27 different countries) participated in this Conference on *Diabrotica virgifera* which took place in the Corte Benedittina in Legnaro (near Padua and Venezia). Participants were welcomed by Dr Berger (IWGO), several representatives of Italian organizations: MM. G. Carollo (Chief of Azienda Regionale Veneto Agricoltura), G. Conta (Agricoltura councilor of Veneto Region), G. Marchesini (Rector of Padua University), Ms Allara (FAO) and Ms Roy (EPPO). Prof. Edwards briefly recalled the situation of the previous year (see 2000 report). Dr Vidal explained that a 3-year EU project was initiated in February 2000 ("The threat to maize production in the EU by the exotic corn rootworm pest *Diabrotica virgifera virgifera*: sustainable pest management approaches and ecological background"). Its aim is to provide advice to the EU on how to continue research and organize action against *D. virgifera*. It focuses on the biology, host plants, IPM, trapping methods, and it will also lead to the preparation of a handbook on the pest. A web site presents in detail the EU project and can be consulted at the following address: <http://www.gwdg.de/~instphyt/vidal/diabrotica/>

2. Situation of *Diabrotica virgifera virgifera* in the EPPO region

In summary, *D. virgifera* has continued to spread in Central Europe in 2001 (see figure 1), at a slower pace in some countries due to the very hot and dry climatic conditions. In 2001, it has been found the first time in Ukraine, in the Zakarpatya region (west part of the country near the Romanian and Hungarian borders). The situation in Italy and Switzerland in 2001 has changed considerably. Although eradication is continuing in the Veneto region, it appears that the findings made in 2000 at Lugano/Agno airport (Ticino, Italy) and near Malpensa airport (Lombardia, Italy), which were previously considered as incursions, are in fact parts of a rather large outbreak corresponding to an established population. Eradication of this outbreak in Ticino and Lombardia/Piemonte is not considered feasible due to both extent and level of population.

Albania

Dr Çota noted that in 2001 monitoring of *D. virgifera* continued near the airport and in several districts. No *D. virgifera* was caught.

Austria

In 2001, Dr Berger said that, monitoring of *D. virgifera* continued in Austria. Pheromone traps and yellow sticky traps were placed along the borders with Hungary and Slovakia, along the main roads and the Danube, and in Tyrol. In 2001, no *D. virgifera* was caught.

Bosnia & Herzegovina

Dr Festic presented the situation in 2001. The insect has spread 30 to 35 km towards the west and south. No damage was observed in 2001.

Bulgaria

Ms Ivanova presented the 2001 situation in Bulgaria. *D. virgifera* was found for the first time in 1998 and it then spread towards the northwest near the Serbian and Hungarian borders. In 2001, the pest continued to spread towards the south and east. It was first found near the cities of Kneja and Stara

Planina (near Godetch). So far, no larval damage was seen. However, silk clipping was observed near Prevala. Surprisingly, in the area where the pest had first been observed (region of Lom), no adults were caught in 2001.

Croatia

D. virgifera was first observed in 1995. In 2000, it infested an area of 14,000 km². In 2001, explained Dr Igrc Barčić, pheromone and yellow stick traps were placed on 145 sites. It was observed that the front line of the infestation did not move (only 1 new place was found infested). It is estimated that 15,000 ha were infested in 2001. However, population levels increased (approximately 1.4 increase compared to 2000). Plant lodging and root damage were observed in the eastern part of Croatia.

France

After the Conference, the EPPO Secretariat received the results of the 2001 monitoring made by the French NPPO. Maize is a very important crop in France. In 2000, 1,790,618 ha were cultivated for grain production and 43,033 ha for seed production, and it is expected that maize production will increase. In 2001, pheromone traps were located at 31 different sites, in maize fields or areas considered at risk (e.g. public and military airports). In 2001, no *D. virgifera* was caught in France. Considering the presence of the pest in Piemonte in Italy, the survey will be intensified in 2002.

Germany

Mr Imgraben stated that Baden-Württemberg is an important maize-growing area in Germany and is therefore considered at risk. In addition, maize monoculture is increasing. In this Land, monitoring started in 1997. Pheromone traps were placed near airports, motorways, railways, warehouses, custom stations, seed-breeding farms and maize fields. In 2001, no *D. virgifera* was caught. Dr Baufeld added that for the whole territory of Germany, 283 pheromone traps were placed on 147 monitoring sites (covering 9 Länder) and no *D. virgifera* was caught in 2001.

Hungary

M. Ripka recalled that the first adults of *D. virgifera* were caught in 1995 in Csongrád county, and the pest rapidly spread over the country. In 2001, adults were caught in all Hungarian counties, and the pest was found for the first time in Vas, Győr-Moson-Sopron and Szabolcs-Szatmár-Bereg. On average, more catches were made in 2001 than in the previous year. Larval damage was observed in 10311 ha in several counties (Baranya, Bács-Kiskun, Békés, Csongrád and Tolna), but economic damage was seen only in Baranya, Bács-Kiskun, and Tolna (covering 3058 ha).

Italy

Veneto region

It can be recalled that *D. virgifera* was first caught in 1998 near Marco Polo International airport near Venezia. Dr. Vettorazzo presented the results of the containment and eradication programme in 2001 as required by an Italian Ministerial decree of compulsory control of *D. virgifera*. As in the previous year, a outbreak area of 1200 ha with a surrounding buffer zone of 35,000 ha was monitored. In the outbreak area: 1) 159 pheromone traps were monitored, 2) maize cultivation was totally prohibited on 37 ha and maize monoculture was prohibited in the rest of the zone, 3) chemical treatments against the adults were applied twice in July and August in all maize fields; 4) it was prohibited to move fresh maize out of this zone and to harvest maize before the 1st of October. In the buffer zone: 1) 207 pheromone traps (1 x 1 km grid) and later 430 traps (at increasing distance from the outbreak area) were placed mainly in monoculture maize fields, 2) chemical treatments were applied twice in July and August in maize fields and their surroundings where *D. virgifera* were caught. In addition, for research purposes, 132 traps of various types were added in both outbreak area and buffer zone. The 2001 results were the following: In the outbreak area: 3 small maize fields in monoculture were discovered (0.4 ha) and according to the prohibition, they were destroyed. 6 adults were caught and all captures were made at the border of the outbreak area, near monoculture maize fields of the buffer zone. In the buffer zone: 108 and later 49 adults were caught in a monoculture maize field (300 m away from the border of the outbreak area), which was then treated. However, new findings were made outside the buffer zone and therefore two new outbreak areas had to be defined (250 ha close to

the initial outbreak area, and 27 ha 3 km away from it). Total costs of this programme in 2001 were evaluated at approximately 83,400 euros. Conclusion was that the interruption of maize monoculture is the key element in the programme and that chemical treatments are effective. Eradication is considered still possible and will be continued on a larger area in 2002.

Lombardia and Piemonte

Dr Furlan recalled that extensive monitoring of *D. virgifera* was conducted in different regions of Northern Italy (Friuli-Venezia Giulia, Veneto, Emilia Romagna, Lombardia and Piemonte). Pheromone traps were placed in monoculture maize fields and near potential entry points such as airports, custom stations, etc. During the last 3 years, no *D. virgifera* were caught in Friuli-Venezia Giulia and Emilia Romagna. In Veneto, the situation has already been presented above. In Lombardia, 3 adults were caught in 2000 in a few traps placed near Malpensa airport (Milano). In 2001, more than 300 traps were placed in Lombardia. As a result, numerous specimens were caught in an area of more than 100.000 ha (including the provinces of Varese, Como, Lecco, Bergamo, Sondrio, Milano, Lodi and Cremona). In Piemonte, several specimens were caught in an area covering 17.800 ha in the province of Novara which borders the infested area in Lombardia. Considering the extent of the infestation in Lombardia and Piemonte, eradication is not considered feasible in these regions. Considering levels of populations, it is no longer considered that the airport of Malpensa was the original point of entry of this large outbreak (but some place near the Italian/Swiss border). However, in order to limit the spread of *D. virgifera*, maize monoculture will be prohibited in an area of 5 km wide along the border of the infested area. Information on *D. virgifera* will be provided to growers and the importance of crop rotation will be emphasized.

Romania

D. virgifera was first reported in Romania in 1996 at Nadlac (Arad county), near the Hungarian border. In the following years, the pest has spread towards the north-east and the population levels have increased especially in Caras-Severin, Timis, Arad and Mehedinti counties. *D. virgifera* has continued to spread towards the east and compared to 2000, three more counties are now infested (Sibiu, Mures and Bistrita Nasaud counties). *D. virgifera* is now present in 15 out of 22 counties, covering nearly half of the Romanian territory (approximately 1.000.000 ha). However, as 2000 and 2001 have been very hot years, populations remained approximately at the same levels. In 2001, larval damage has been observed in Arad, Caras-Severin and Timis counties but it did not reach economic level.

Slovakia

D. virgifera was found for the first time in Slovakia in 2000 in the south of the country. Mr Siviček said that monitoring continued in 2001 and showed that the pest has spread towards the north and a little towards the west (approaching Austria). The area infested was respectively, 500 ha in 2000 and 6,300 ha in 2001.

Slovenia

Mr Pajmon said that in 2001, 56 trapping points located near the Croatian, Italian and Hungarian borders and in Ljubljana were observed. As *D. virgifera* is approaching, the number of pheromone traps has increased. *D. virgifera* was not caught in Slovenia in 2001, but it is feared that it may appear next year.

Switzerland

Mr Bertossa said that four specimens of *D. virgifera* were caught for the first time in 2000, near the Lugano-Agno airport. As a result, measures were taken to eradicate the infestation and monitoring was intensified. In 2001, a total of 74 traps were placed in 37 sites: 10 in the German-speaking part, 13 in the French-speaking part and 14 in Ticino (including the Lugano-Agno airport). Traps were primarily located along the main transportation routes in the main maize-growing regions. The topography of Ticino shows three different maize-growing regions, each separated by mountains and lakes. In this programme, these topographic zones were called: zone A (border region near Chiasso), zone B (central region including Lugano), zone C (Magadino plain, more to the north). The trapping results

were the following. In zone A, a total of 1710 insects were caught (75% of them were caught in a single field which is located near an important railway and road transshipment area). In zone B, a total of 462 insects were caught, equally distributed among the trapping sites. In zone C, only 2 beetles per week were trapped over the monitoring period. In all other regions of Switzerland, no *D. virgifera* was caught. The numbers of insects caught in 2001 in Ticino indicated that a population is now established near the border area of Chiasso. As the numbers of insects caught near Lugano are less important, it is no longer believed that the airport was the initial outbreak. The Swiss authorities will prohibit maize monoculture in zone A and B. Transport of silage from zones A and B to C will also be prohibited. Considering the population levels observed in the nearby northwestern Italy, eradication is not considered feasible.

Ukraine

Dr Movchan explained that maize is one of the major crops, covering 1,700,000 ha. During the last few years, a monitoring programme was set up in Ukraine. In 2001, 1200 pheromone and yellow sticky traps were placed over an area of 500,000 ha in 25 geographical regions and 106 administrative units. More attention was given to the regions of Zakarpatya, Chernivtsi and Odessa, which are near Hungary and Romania. In August 2001, *D. virgifera* was caught for the first time in Zakarpatya region, near the Hungarian and Romanian borders (districts of Vynogradiv and Beregove). Research is being carried out on pheromones and on resistant maize cultivars. Ms Sadlyak added that 50 specimens were caught in 7 locations. Mr Omalyuta made an analysis of the geographic and agroclimatic characteristics of Ukraine to predict the spread of *D. virgifera* in the country. Considering the biology of *D. virgifera*, it is likely to survive on the whole territory of Ukraine. However, maize is usually not grown in monoculture and is not grown everywhere. He felt that in 2002-2005, *D. virgifera* will spread actively in the lowland part of the Zakarpatya region and hoped that the Carpathian mountains will act as a barrier to slow down its spread towards the east and south (although it is feared that the Danube valley will allow entry from the south at a later stage). Finally, the risk of incursions via road or air transportation to other places in Ukraine has to be considered.

Yugoslavia

Dr Sivcev explained that *D. virgifera* was first found in Europe near Belgrade airport in 1992. Monitoring continued in Serbia. As 2001 was a very hot and dry year, little movement was observed towards the south or west and a decrease in population levels was observed. In 2001, damage was observed on less than 1.000 ha (compared to 50.000 ha in 2000). However, Dr Sivcev felt that when climatic conditions return to normal, populations might increase again. He also stressed that small farmers in Yugoslavia when faced with the damage caused by *D. virgifera* have abandoned monoculture and started crop rotation. He estimated that there was a 30 % reduction of maize cultivation in the last few years. He stressed the importance of training farmers on how to assess population levels in their fields and better estimate the need for crop rotation or chemical treatments.

3. Research papers

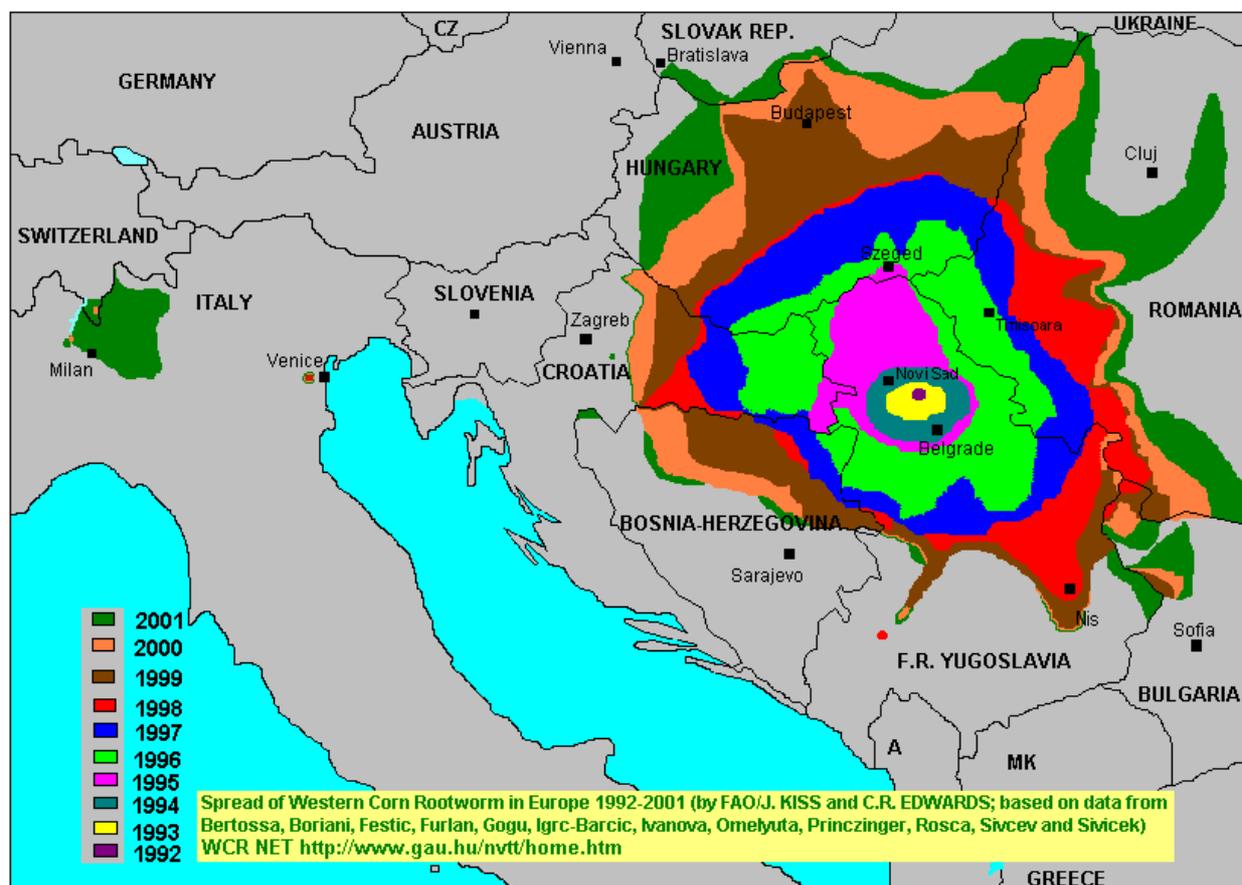
A very large number of research papers were presented during the Conference. All abstracts can be consulted on the IWGO web site at the following address: http://www.infoland.at/clients/iwgo/sub_meet_08/sub_meet_08a.html

4. Close

Warm thanks are due to Dr Vettorazzo and his colleagues for the fine organization of this large Conference, and the most interesting visits they organized for the participants in Venezia.

Figure 1. Spread of *D. virgifera* in Europe from 1992 to 2001

Prepared by FAO Network / J. KISS and C.R. EDWARDS, based on data provided by Bertossa, Boriani, Festic, Furlan, Gogu, Igrc-Barcic, Ivanova, Omelyuta; Princzinger, Rosca, Sivcev and Sivicek.



Participants (of all meetings)

AGAZZI Giorgio Osservatorio Malattie Piante Bia Beato Odorica 13, Pordenone, ITALY – E-mail: omp.pn@regione.fvg.it

AGNES Andrea Settore Agricoltura Provincia Di Novara Via Dominioni 4, 28100 Novara, ITALY – E-mail:

andreaagnes.novara@reunitaria.peimonte.it

ALLARA Manuela Plant Protection Service, FAO, via delle Terme di Caracalla, 00100 Roma, ITALY – E-mail: Manuela.Allara@fao.org

BACA Franja Maize Research Institute "Zemun Polje", St. Bajica 1; YU -11185 Zemun, YUGOSLAVIA - E-mail: fbaca@mrizp.co.yu

BARBIERI Stefano Azienda Regionale Veneto Agricoltura – Settore Divulgazione Technica Formazione Professionale, Via Roma, 34,

35020 Legnaro, ITALY – E-mail: Stefano.barbieri@venetoagricoltura.org

BARBULESCU Alexandru Research Institute for Cereals and Industrial Crops, Fundulea, ROMANIA - E-mail: fundulea@cons.incerc.ro

BAUFELD Peter Biologische BA. f. Land- u. Forstwirtschaft; Außenstelle Kleinmachnow, Stahnsdorfer Damm 81; D - 14532

Kleinmachnow, GERMANY - E-mail: P.Baufeld@bba.de

BAYAR Khosbayar St Istvan University Department of Plant Protection, Pater k 1 H 2103 Gödöllő, HUNGARY – E-mail:

khosbayar@exite.com

BERBEROVIC Husein Polioprivredni Zavod Tuzla, Br.10 Obalmazmaja, BOSNIA - HERZEGOVNA – E-mail: nmucic@utic.nt.ba

BERGER Harald K Bundesamt und Forschungszentrum für Landwirtschaft, Spargelfeldstr. 191, 1226 Wien, AUSTRIA - E-mail:

hberger@bfl.at

BERTOSSA Mario Swiss Federal Research Station for Plant Production, Centro Di Cadenazzo, 6594 Canton Ticino, SWITZERLAND - E-

mail: mario.bertossa@rac.admin.ch

BORIANI Luca Centro Agricoltura Ambiente s.r.l., Via di Mezzo Levante, 40014 Crevalcore ITALY – E-mail: Lboriani@caa.it

BORIANI Marco Lombardy region, Phytosanitary Service, Piazza IV Novembre 5, 20100 Milano, ITALY – E-mail:

marco_boriani@regione.lombardia.it

BRMEZ Mirjana Faculty of Agriculture Osijek, Trg. Su. Trojstva 3, 31000 Osijek, CROATIA – E-mail: mirjanam@suncokret.pfos.hr

BROWN Tom Florida Food Products, 1300 Eustis, Florida, USA.

BOUSTRON GOMEZ Ana Maria Mision Biologica de Galicia (Csic), Aptdo 28, 86080 Pontevedra, SPAIN – E-mail: csgpoamb@cesga.es

CAMOSA Marta Azienda Regionale Veneto Agricoltura – Settore Divulgazione Technica Formazione Professionale, Via Roma, 34, 35020 Legnaro, ITALY – E-mail: marta.camosa@venetoagricoltura.org

CASTAGNOLI Filippo Via Damiano Chiesa 3/1, 31021 Mogliano Veneto, ITALY - E-mail: fc0740@libero.it

CASTANERA Pedro CSIS, CIB, Velazquez 144, 28006 Madrid, SPAIN – E-mail: castan@cib.csic.es

CHILLEMI Giovanni Azienda Regionale Veneto Agricoltura, Via Romea, Agripolis, 35020 Legnaro, ITALY – E-mail: Giovanni.chillemi@venetoagricoltura.org

COLOMBI Luigi Servizio Fitosanitario, Via S. Franscini 17, 6500 Bellinzona, Canton Ticino, SWITZERLAND

COTA Ejup Plant Protection Institute, Shkozet, Durres, ALBANIA - E-mail: imb@anep.al.eu.org

DE CRISTOFARA Antonio Dipartimento Di Scienze Animali, Vegetali e dell’ambiente, Via de Sanctis, 86100 Campobasso, ITALY – E-mail: decrist@unimol.it

DERKACH Volodimir General State Inspection on Quarantine of Plants, Str. Koloskovaya 7, 03138 Kiev, UKRAINE

DERRIDJ Sylvie INRA – Station de Zoologie; Cedex Route St. Cyr F-78026 Versailles. France, E-mail: derridj@versailles.inra.france

DI BERNARDO Andrea Department of Agronomy, Entomology, University of Padua, Agropolis, Via Romea, 16, 3502 Legnaro, ITALY – E-mail: andrea.dibernardo@libero.it

DISEGNA Luigi Azienda Regionale Veneto Agricoltura, Agropolis, Via Romea, 16, 3502 Legnaro, ITALY – E-mail: luigino.disegna@venetoagricoltura.org

DOBRINCIC Renata University of Zagreb, Faculty for Agriculture, Department for Agricultural Zoology, Svetosimunka 25 10000 Zagreb, CROATIA - E-mail: rdobrincic@agr.hr

EDWARDS C.Richard Purdue University, 1158 Smith Hall West Lafayette, Indiana 47907-1158, USA - E-mail: rich_edwards@entm.purdue.edu

EKE Istvan Ministry of Agriculture, P.O.B., 1860 Budapest, HUNGARY

ESTER Albert Applied Research for arable-farming and field production of vegetables, P.O. Box 430, 8200 Lelystad, NETHERLANDS – E-mail: a.ester@pav.agro.nl

FERRARI Roberto Centro agricoltura ambiente associazione, Via di Mezzo Levante, Crevalcore, ITALY – E-mail: rferraru@caa.it

FESTIC Husein Faculty of Agriculture Sarajevo, Zmaja od Bosne 8, 71000 Sarajevo, BOSNIA AND HERZEGOVINA – E-mail: rnumeric@utic.net.ba

FRAUSIN Carlo O.M.P., Via Beato Odorico, 33170 Pordenone, ITALY – E-mail: carlo.frausin@regione.fvg.it

FUNES Vanna Via Bertoli, 16, 31100 Treviso, ITALY – E-mail: funesvanna@libero.it

FURLAN Lorenzo University of Padua, Institute of Agricultural Entomology Padova; Via Romea 16 35020, Legnaro, ITALY - E-mail: baspiav1@his.it

GALLUZZO Robert Via Moro 18, 33100 Udine, ITALY – E-mail: robertogalluzzo@virgilio.it

GATTI Batista Group Limagain Genetics Research, Via Matteotti 2/A, Loc. Cignone, 26020 Corte de Cortesi, ITALY –E-mail: battista.gatti@limagain.com

GERBER Corey Purdue University, 1158 Smith Hall, West Lafayette, Indiana 47907-1158, USA – E-mail : cgerber@entm.purdue.edu

GERMINARA Giacinto Salvatore Dipartimento Di Scienze Animali, Vegetali e dell’ambiente, Via de Sanctis, 86100 Campobasso, ITALY – E-mail: germinara@unimol.it

GERVASINI Eugenio S.F.R. Lombardia, V le Raimondi 56, 22070 Vertemate con Minoprio, ITALY – E-mail: egervasini@tiscalinet.it

GIROLAMI Vincenzo University of Padua, Institute of Agricultural Entomology; Via Romea 16, 35020 Legnaro, ITALY - E-mail: vigiro@agripolis.unipd.it

GOMBOC Stanislav Biotechnical Faculty, Agronomy Department, Jamnikardeva 101, 1000 Ljubljana, SLOVENIA – E-mail: stanisla.gombac@bf.uni-lj.si

GRANDIS Francesca Azienda Regionale Veneto Agricoltura – Settore Divulgazione Technica Formazione Professionale, Via Roma, 34, 35020 Legnaro, ITALY – E-mail: Francesca.grandis@venetoagricoltura.org

GRITSYUK Volodymyr General State Inspection on Quarantine of Plant in the Ukraine, Str. Koloskovaya 7; 03138 Kiev, UKRAINE

HATALA-ZSELLER Ibolya Plant Health and Soil Conservation Station of Csongrad County, P.O.Box 99 6801 Hodmezovasarhely, HUNGARY – E-mail: hzsi-csnta@fki.gov.hu

HUMMEL Hans E. Justus-Liebig Universität, Institut für Phytopathologie und angewandte Zoologie, Heinrich-Buff-Ring 26 – 32, D - 35392 Gießen, GERMANY - E-mail: Hans.E.Hummel@agr.uni-giessen.de

HUREMOVIC Zijo Faculty of Agriculture Sarajevo, Zmaja od Bosne 8, 71000 Sarajevo, BOSNIA AND HERZEGOVINA – E-mail: rnumeric@utic.net.ba

IATSYNINE Veniamine Krasnodar Lukyanenko Research Institute of Agriculture, 350012 Krasnodar 12, RUSSIA – E-mail: knish@online.ru

IGRC BARCIC Jasminka University of Zagreb, Faculty for Agriculture, Department for Agricultural Zoology, Svetosimunka 25 10000 Zagreb, CROATIA – E-mail: rdobrincic@agr.hr

IMGRABEN Hansjörg Regierungspräsidium Freiburg, Bertholdstr. 49, 79098 Freiburg. GERMANY – E-mail: hansjoerg.imbraben@rpf.bwl.de

IMREI Zoltan Plant Protection Institute, Hungarian Academy of Sciences, P.O.B. 102, 1525 Budapest, HUNGARY

IVANOVA EVTIMOVA Ivanka Central Laboratory for Plant Quarantine, Gornobanski Blvd. 120, Sofia, BULGARIA – E-mail: clkr@bgnet.bg

IVEZIC Marija University of J.J.Strossmayer, Faculty of Agriculture, Trg.sv. Trojstva 3; HR - 31000 Osijek, CROATIA – E-mail: mivezic@suncokret.pfos.hr

KARABATSAS Konstantinos University of Thessaly, Laboratory of Entomology and Agricultural Zoology, Fytokou Str. 38, 446 Nea Ionia Magnesia, GREECE – E-mail: kkarabat@agr.uth.gr

KARIC Nedzad Faculty of Agriculture Sarajevo, Zmaja od Bosne 8, 71000 Sarajevo, BOSNIA AND HERZEGOVINA – E-mail: rnumeric@utic.net.ba

KERESI Tatjana Agricultural faculty, Department for Environment and Plant Protection, TRG Dositesa Obradovica 8; 21000 Novi Sad, YUGOSLAVIA – E-mail: keresi@polj.ns.ac.yu

KISS Jozsef St. István University; Department of Plant Protection; Pater Karoly u. 1, 2100 Gödöllő, HUNGARY - E-mail: jkiss@gikk.gau.hu

KOMAROMI Judith St. István University; Department of Plant Protection; Pater Karoly u. 1, 28. 2100 Gödöllő, HUNGARY - E-mail: jkiss@gikk.gau.hu

KUHLMANN Ulrich CABI Bioscience Centre, Rue des Grillons 1; CH - 2800 Delemont, SWITZERLAND - E-mail: U.Kuhlmann@cabi-bioscience.ch

LANFRANCHINI Fabio Federazione Italiana Coltivatori Diretti, Via Ravizza 10, 28100 Novara, ITALY

LEFEBVRE DU PREY Vincent Aventis Cropscience Italia, Piazzale Turr 5, 21000 Milano, ITALY – E-mail: vincent.lefebvre-du-prey@aventis.com

LIFRIERI Luigi Istituto di Entomologia, Facolta di Agraria, Via a. Murri, 39, 40139 Bologna, ITALY – E-mail: luigilifrieri@yahoo.it

MAINI Stefano Dista Universita di Bologna, Via Filippo Re, 6, 40100 Bologna, ITALY – E-mail: smaini@agrsci.unibo.it

MACELJSKI Milan University of Zagreb, Faculty for Agriculture, Department for Agricultural Zoology, Svetosimunka 25 10000 Zagreb, CROATIA

MAJDANCIC Meho Faculty of Agriculture Sarajevo, Zmaja od Bosne 8, 71000 Sarajevo, BOSNIA AND HERZEGOVINA – E-mail: rnumeric@utic.net.ba

MALVAR ROSA Ana Mision Biologica de Galicia (Csic), Aptdo 28, 86080 Pontevedra, SPAIN – E-mail: csgpomp@cesga.es

MAZZINI Nicoletta Federazione Italiana Coltivatori Diretti, Via Ravizza 10, 28100 Novara, ITALY – E-mail: cold.novara@iol.it

MELNIK Pavel General State Inspection on Quarantine of Plant in Ukraine, 03138 Kiev, UKRAINE

MICHELATTI Giacomo Servizio Fitosanitario Regione Piemonte, Grosseto 71/6, 10147 Torino, ITALY – E-mail: entomologia@regione.piemonte.it

MILEVOJ Lea Biotechnical Faculty, Agronomy Department, Jamnikaojeva 101, 1000 Ljubljana, SLOVENIA – E-mail: lea.milevoj@bf.uni.lj.si

MINELLO Bruno Servizio Fitosanitario Regione Veneto, Viale dell'agricoltura 1/a, 37060 Buttapietra, ITALY – E-mail: fitosanitario@regione.veneto.it

MÖSER Joachim University Göttingen; Institute for Plant Pathology, Grisebachstraße 6, D - 37077 Göttingen, GERMANY – E-mail: jmoeser@gwdg.de

MOLNAR Zanos Verhalom 12-16, 1023 Budapest, HUNGARY – E-mail: zanos.molnar@ea.monsanto.com

MOLNAR Zoltan I.C.P.C. Brasov, Str. Principala Nr. 1312, 4215 Lazarea jud. Harghita, ROMANIA – E-mail: mozika33@yahoo.com

MOVCHAN Oleksiy General State Inspection on Quarantine of Plant in Ukraine, 03138 Kiev, UKRAINE

MUCSI Krisztina Plant Health and Soil Conservation Station of Csongrad County, 6801 Hodmezövasarhely, HUNGARY - E-mail: kmucsi@freemail.hu

MULLER J Frank INRA – Unité de Phytopharmacie et Médiateurs chimiques – Plant Insect Lab. Route de St. Cyr, 78026 Versailles Cedex, FRANCE – E-mail: muller@versailles.inra.fr

MURESAN Felicia Agricultural Research Station of Turda, Str. Agriculturii 27, 3350 Turda, ROMANIA

MYKYTYK Nadejda General State Inspection on Quarantine of Plant in Ukraine, 03138 Kiev, UKRAINE

NORIDO Franco Azienda Regionale Veneto Agricoltura – Settore Divulgazione Technica Formazione Professionale, Via Roma, 34, 35020 Legnaro, ITALY – E-mail: franco.norido@venetoagricoltura.org

OLEINIK Stanislav General State Inspection on Quarantine of Plant in Ukraine, 03138 Kiev, UKRAINE

OMELYUTA Victor P Institute of Plant Protection, Vasytkoyskaja 33, 03002 Kiev 22, UKRAINE – E-mail: nikol@mail.kar.net

ONDRUSZ Iлона State Stud-estate Corporation, 5820 Mézőhegyes, HUNGARY – E-mail: istvan@menesbirtok.hu

PAJMON Ales Agricultural Institute of Slovenia, Hacquetova 17 1000 Ljubljana, SLOVENIA – E-mail: ales.pajmon@kis-h2.si

PALAGESIU Joan University of Agriculture and Veterinary Medicine – Banatului, Department of Entomology, Calea Aradului 119, 1900 Timisoara, ROMANIA

PALEKAR N.V. Shank Syngenta Biotechnology Inc., 3054 Cornwallis Road, P.O.B. 12257, Research Triangle Park, NC 27709-2257 USA – E-mail: shank.palekar@syngenta.com

PARKER William E. ADAS Woodthorne, Wolverhampton WV6 8TQ, UNITED KINGDOM – E-mail: bill.parker@adas.co.uk

PEREZ FARINOS GEMA CSIC, CIB, Velazquez 144, 28006 Madrid, SPAIN – E-mail: gpfarinos@cib.csic.es

PERSHING Jay C. Monsanto, 700 Chesterfield Pkwy North, Chesterfield, Missouri MO 63198, USA - E-mail: jay.c.pershing@monsanto.com

PETRIS Giovanni Osservatorio Malattie delle Piante, Via Caccia 17, 33100 Udine, ITALY – E-mail: omp.ud@regione.fvg.it

PIRANI Clemente Regione del Veneto –Giunta Regionale, Via Udine 35, 30027 San Dona di Piave, ITALY – E-mail: clemente.pirani@regione.veneto.it

POPOV Constantin Research Institute for Cereals and Industrial Crops, Fundulea, ROMANIA -E-mail: fundulea@cons.incere.ro

PRINCZINGER Gabor Ministry of Agriculture and Regional Development, 55 P.O.B. 1, 1860 Budapest, HUNGARY – E-mail: prigabor@westel900.nt

RASPUDIC Emilija University of J.J. Strossmayer in Osijek, HR - 31000 Osijek, CROATIA - E-mail: remilija@suncockret.pfos.hr

RIPKA Geza Plant Health and Soil Conservation Station of Budapest, P.O.B. 340, H -1519 Budapest, HUNGARY - E-mail: novved@elender.hu

ROSCA Ion University of Agricultural Sciences and Veterinary Medicine; Faculty of Agriculture, Bdl. Marasti 39; RO - 71322 Bucuresti, ROMANIA – E-mail: rosca@cons.incere.ro

ROY Anne-Sophie Eppo, 1 rue Le Notre, F - 75016 Paris, FRANCE - E-mail: asr@epo.fr

SADLYK Alla General State Inspection on Quarantine of Plant in Ukraine, 03138 Kiev, UKRAINE

SANTAMARIA Giggio Agronomist free lance, Via Trento 14, Mestre – Venezia, ITALY – E-mail: gishws@tin.it

SIVCEV Ivan Institute for Plant Protection and Environment, Banatska 33 YU -11080 Zemun, YUGOSLAVIA - E-mail: ibsivcev@eunet.yu

SIVICEK Peter The Central Control and Testing Institute of Agriculture, Hanulova 9/A, SK - 84429 Bratislava, SLOVAK REPUBLIC E-mail: uksup@internet.sk

SOROKOVA Vasyi General State Inspection on Quarantine of Plant in Ukraine, 03138 Kiev, UKRAINE

SZABO Zoltan State Stud-estate Corporation, 5820 Mézőhegyes, HUNGARY – E-mail: turcsan.istvan@menesbirtok.hu

TINLAND Bruno Monsanto, Av. Tervuren 270-272, 1150 Brussels, BELGIUM – E-mail: BrunoTinland@monsanto.com

TOLLEFSON Jon J. Iowa State University, 17 Insectary Bldg. Ames IA 50011 3140 USA - E-mail: tolly@iastate.edu

TÖPFER Stefan CABI Bioscience Centre, Rue des Grillons 1 CH - 2800 Delemont, SWITZERLAND – E-mail : stoepfer@gmx.ch

TOTH Bertalan Biomark Ltd Nagysandor G.U. 10, 1046 Budapest, HUNGARY – E-mail: tothb.biomark@euroweb.hu

TOTH Ferenc St. István University; Department of Plant Protection; Pater Karoly u. 1, 59. 2100 Gödöllő, HUNGARY – E-mail: tothf@fau.gau.hu

TOTH Miklos Research Institute for Plant Protection; Hungarian Academy of Science, PF 102, 1525 Budapest, HUNGARY - E-mail: tothm@helka.iif.hu

TSITSIPIS John A. Research Committee, University of Thessaly, Department of Crop and Animal Production, Fytokou Str. 38, 446 Nea Ionia Magnesia, GREECE – E-mail: tsitsipi@agr.uth.gr

TUSKA Tamas Department of Plant Protection, St. Istvan University, Pater Karoly u. 1n 2103 Gödöllő, HUNGARY – E-mail: jkiss@gikk.gau.hu

VETTORAZZO Marco Servizio Fitosanitario Regione Veneto, Via Poerio 34, 30173 Venezia - Mestre, ITALY – E-mail: serv.fitove@regione.veneto.it

VICINANZA Sonia I. USDA-APHIS-IS, American Embassy, Boltzmanngasse 16, 1090 Wien, AUSTRIA - E-mail: sonia.i.vicinanza@usdg.gov
VIDAL Stefan Georg August Universität Göttinger; Institut für Pflanzenpathologie und Pflanzenschutz, Abt. Entomologie, Griesbachstraße 6, 37077 Göttingen, GERMANY - E-mail: svidal@gwdg.de
WENNEMANN Ludger Justus-Liebig Universität ; Institut für Phytopathologie und angewandte Zoologie, Heinrich-Buff-Ring 26 – 32; 35392 Gießen, GERMANY - E-mail: ludger.wennemann@agr.uni-giessen.de
WILDE Gerald E. Dept.of Entomology, Kansas State University Manhattan KS 66506, USA - E-mail: gwilde@oznet.ksu.edu
WILHEM Ronald Aventis Cropsience Industriepark Höchst H 872, 65926 Frankfurt/Main, GERMANY – E-mail: ronald.wihelm@aventis.com
YAKOBCHYUK Vasyl General State Inspection on Quarantine of Plant in Ukraine, Str. Koloskovaya 7, 03138 Kiev, UKRAINE
YRYNYAK Alla General State Inspection on Quarantine of Plant in Ukraine, Str. Koloskovaya 7, 03138 Kiev, UKRAINE
YUSHCHUK Ostap General State Inspection on Quarantine of Plant in Ukraine, Str. Koloskovaya 7, 03138 Kiev, UKRAINE
YUSHCHUK Taras General State Inspection on Quarantine of Plant in Ukraine, Str. Koloskovaya 7, 03138 Kiev, UKRAINE
ZANIRATO Marco Pioneer HI-Bred Italia S.R.L. Via guiseppina 39, 26030 Malagnino, ITALY – E-mail: marco.zanirato@pioneer.com
ZHANG Feng Agricultural Pest Research, CABI Bioscience Centre, rue des Grillons 1, 2800 Delemont, SWITZERLAND – E-mail: f.zhang@cabi-bioscience.ch
ZHELEZNYAK Vitaliy General State Inspection on Quarantine of Plant in Ukraine, Str. Koloskovaya 7, 03138 Kiev, UKRAINE