



## INTEGRATED PROTECTION IN VITICULTURE

Joint IOBC-WPRS Meeting of the Working Group:  
**Integrated Protection in Viticulture**  
5-8 November 2019, Vila Real – Portugal

## Program

### Tuesday, 5 November 2019

19h00 Cocktail and Dinner Reception - *Murças, S.A. Wine*

### Wednesday, 6 November 2019 – Vila Real Theater

08:00 09:00 Registration

09:00 09:50 Opening session

Welcome to participants - *José Manso* | Chairman of the Executive Board of ADVID

Phytosanitary Framework of Portuguese Viticulture - *Ana Paula Carvalho* | DGAV Sub-director General

Characterization of Portuguese Viticulture - *Bernardo Gouvêa* | IVV President

09:50 10:10 IOBC-WPRS Presentation

*Carlo Duso* (convenor), *Mauro Jermini* (liason officer)

*Christoph Hoffmann, Michael Maixner, Agnès Calonne, René Fuchs, Tirtza Zahavi* (SB convenors)

**10:10 11:10 Session 1: Advances in knowledge and new solutions against diseases: Flavescence dorée**

**Chairs: Mauro Jermini and Ana Maria Nazaré Pereira**

10:10 10:40 Keynote lecture - ARE GRAPEVINE PLANTS RECOVERED FROM FLAVESCENCE DORÉE SUSCEPTIBLE TO NEW INFECTIONS OF THIS PHYTOPLASMA? *D. Bosco, Università degli Studi di Torino, Italy*

10:40 11:00 SAME DISEASE, DIFFERENT RESPONSE: THE CASE OF FLAVESCENCE DORÉE PHYTOPLASMA AND DIVERSE GRAPEVINE CULTIVARS. *M. Ripamonti, University of Turin, Italy*

11:00 11:20 INVESTIGATIONS ON THE ABILITY OF PHLOGOTETTIX CYCLOPS TO TRANSMIT FLAVESCENCE DORÉE PHYTOPLASMA TO VITIS VINIFERA L.. *G. Strauss, Austrian Agency for Health and Food Safety (AGES), Austria*

11:20 – 11:40 Coffee break



**11:40 13:10 Session 1: Advances in knowledge and new solutions against diseases: mildews**

**Chairs: Mauro Jermini and Ana Maria Nazaré Pereira**

**11:40 12:10 Keynote lecture: A 2-YEAR MULTIVARIATE ANALYSIS OF MULTIPATHOGENS DAMAGE (DOWNY MILDEW AND POWDERY MILDEW) RELATED TO SOIL RESISTIVITY, GRAPEVINE VIGOR AND YIELD LOSS.** *M. Fermaud, Institut national de la recherche agronomique, France*

**12:10 12:30 IMPROVEMENT OF COPPER EFFICACY AGAINST PLASMOPARA VITICOLA IN ORGANIC VITICULTURE BY ADDING ADJUVANTS.** *O. Baus, Hochschule Geisenheim University, Germany*

**12:30 12:50 EVALUATION OF INTER AND INTRACULTIVAR VARIABILITY IN THE DOWNY MILDEW RESISTANCE IN VITIS VINIFERA L.** *A. Diaz-Fernandez, Estación de Viticultura e Enología de Galicia, Spain*

**12:50 13:10 RESISTANCE OF ERYSIPE NECATOR TO FUNGICIDES AND THE USE OF BIO-FUNGICIDES AND MACRO PLUS MICRO-NUTRIENTS IN GRAPE POWDERY MILDEW MANAGEMENT.** *L. Gur, Shamir Research Institute, Israel*

13.10 14:30 Lunch – *Poças Júnior - Vinhos S.A. Wine*

**14:30 17:00 Session 1: Advances in knowledge and new solutions against diseases: trunk diseases**

**Chairs: Tirtza Zahavi and Cecília Rego**

**14:30 15:00 Keynote lecture: APPLICATION OF TRICHODERMA ATROVIRIDE SC1 IN GRAPEVINE NURSERIES AND YOUNG VINEYARDS TO REDUCE FUNGAL GRAPEVINE TRUNK PATHOGENS INFECTIONS.** *J. Armengol, Universidade Politécnica de Valência, Spain*

**15:00 15:20 BACILLUS SUBTILIS PTA-271 COUNTERACTS BOTRYOSPHERA DIEBACK IN GRAPEVINE, TRIGGERING IMMUNE RESPONSES AND DETOXIFICATION OF FUNGAL PHYTOXINS.** *F. Fontaine, Université Reims Champagne-Ardenne, France*

**15:20 15:40 FIELD EVALUATION OF BIOCONTROL AGENTS AGAINST BLACK-FOOT AND PETRI DISEASES.** *M. Pilar, Estación de Viticultura e Enología de Galicia (AGACAL-EVEGA), Spain*

**15:40 16:00 PROTECTION OF GRAPEVINE ROOTSTOCK MOTHER VINE PRUNING WOUNDS AGAINST PHAEOMONIELLA CHLAMYDOSPORA ASSOCIATED WITH PETRI DISEASE AND ESCA.** *F. Halleen, University of Stellenbosch, South Africa*

**16:00 16:20 SPORE TRAPPING OF ESCA DISEASE PATHOGENS IN ISRAELI VINEYARDS.** *V. Naor, Shamir Research Institute, Israel*

**16:20 16:40 SUSCEPTIBILITY OF FOUR PORTUGUESE GRAPEVINE CULTIVARS TO LASIODIPLODIA SPP.: PRELIMINARY RESULTS.** *P. Reis, Instituto Superior de Agronomia, Portugal*

**16:40 17:00 RESPONSE OF FOUR PORTUGUESE GRAPEVINE CULTIVARS TO INFECTION BY PHAEOMONIELLA CHLAMYDOSPORA.** *J. Sofia, Direcção Regional de Agricultura e Pescas do Centro, Portugal*

**EXPLORATION OF GRAPE SKIN PENETRATION FORCE AND OTHER PHYSICAL AND CHEMICAL PROPERTIES OF GRAPES.** *P. Kehrli, Agroscope, Switzerland*

**17:00 17:45 Poster Flash Talks**

**INFLUENCE OF GRAPEVINE CULTIVAR ON DIFFERENT GENERATIONS OF LOBESIA BOTRANA (LEPIDOPTERA: TORTRICIDAE).** *A. Nave, Association for the Development of Viticulture in the Douro Region, Portugal*

**ON THE OCCURRENCE OF DROSOPHILA SUZUKII (MATSUMURA, 1931) IN THE VINEYARD ECOSYSTEM FROM DOURO DEMARCATED REGION.** *C. Carlos, Association for the Development of Viticulture in the Douro Region, Portugal*

**BROWN MARMORATED STINK BUG HALYOMORPHA HALYS (STÅL) EFFECTS ON THE QUALITY OF PROSECCO WINE.** *A. Pozzebon, University of Padova, Italy*

**EFFECT OF HOT-WATER TREATMENT AND TRICHODERMA ATROVIRIDE SC1 ON FUNGAL TRUNK DISEASE PATHOGEN INFECTIONS IN GRAPEVINE NURSERIES.** *M. Diz, Estación de Viticultura e Enoloxía de Galicia (AGACAL-EVEGA), Spain*

**XYLEM AND PHLOEM MODIFICATIONS IN GRAPEVINE (VITIS VINIFERA) INDUCED BY FLAVESCENCE DORÉE.** *M. Jermini, Agroscope, Switzerland*

**MATE LOCATION IN PSEUDOCOCCUS CALCEOLARIAE, A PRIMARY PEST OF GRAPE IN NEW ZEALAND.** *R. Ricciardi, University of Pisa, Italy*

**CAN WE GET A PESTICIDE REDUCTION BY INTEGRATING DEFENCE INDUCERS IN GRAPEVINE PROTECTION?** *G. Carella, Università degli Studi di Firenze, Italy*

17:45 18:30 Cocktail and Poster Viewing Session 1- *Poças Júnior - Vinhos S.A. Wine*

**Thursday, 7 November 2019 – Vila Real Theater**

**09:00 10:50 Session 2: New strategies in arthropod pest control**

**Chairs: Christoph Hoffmann and Laura Torres**

09:00 09:30 **Keynote lecture: FUNCTIONAL BIODIVERSITY IN DOURO VINEYARDS (NORTHEAST OF PORTUGAL).** *C. Carlos, Association for the Development of Viticulture in the Douro Region; Centre for the Research and Technology of Agro-Environmental and Biological Sciences, Portugal*

09:30 09:50 **CRYPTOBLABES GNIDIELLA: A FEARED PRIMARY PEST OF GRAPEVINE IN THE MEDITERRANEAN AREA.** *R. Ricciardi, University of Pisa, Italy*

09:50 10:10 **ERASMONEURA VULNERATA (HEMIPTERA CICADELIDAE) IS CHANGING ITS PEST STATUS IN EUROPE.** *C. Duso, University of Padova, Italy*

10:10 10:30 **CHARACTERIZING SYMPATRIC LEAFHOPPER SPECIES OF THE “GREEN LEAFHOPPER” COMPLEX (TYPHLOCYBINAЕ) BY NICHE CHOICES.** *R. Sharon, MIGAL – Galilee Research Institute, Northern R&D, Israel*

10:30 10:50 **THE GRAPE PHYLLOXERA IN TUSCANY: AN OLD OR A NEW PROBLEM?** *A. Belcari, University of Florence, Italy*

10:50 11:20 Coffee break

**11:20 13:00 Session 2: New strategies in arthropod pest control**

**Chairs: Carlo Duso and António Mexia**

11:20 11:50 **Keynote lecture: TESTING THE USE OF MATING DISRUPTION IN THE MANAGEMENT OF VINE MEALYBUG POPULATIONS IN ALENTEJO VINEYARDS.** *J.C. Franco, Universidade de Lisboa - ISA, Portugal*

11:50 12:10 **ALTERNATIVE HOST PLANTS AS POTENTIAL TRAP CROPS AGAINST DROSOPHILA SUZUKII IN VINEYARDS.** *A. Fagnière, Agroscope, Switzerland*

12:10 12:30 **POPULATION ABUNDANCE AND IMPACT OF BROWN MARMORATED STINK BUG HALYOORPHA HALYS (STÅL) ON GRAPEVINE IN NORTHEASTERN ITALY.** *D. Scaccini, University of Padova, Italy*

12:30 12:50 **IMPACT OF PROCESSED HALYOMORPHA HALYS ON THE TASTE OF PROCESSED GRAPES.** *P. Kehrl, Agroscope, Switzerland*

13:00 - 14:15 Lunch – *Quinta de Ventozelo Wine*

**14:15 15:45 Session 3: IPM implementation and tools for sustainable viticulture**

**Chairs: Tirtza Zahavi and José Carlos Franco**

14:15 14:45 **Keynote lecture: ENTOMOPATHOGENIC FUNGI, SOLITARY BEES AND SPIDERS IN VINEYARDS: HOW TO PROMOTE THEIR DIVERSITY AND ABUNDANCE FOR A SUSTAINABLE VITICULTURE.** *A. Reineke, Geisenheim University, Germany*

14:45 15:05 **SIDE EFFECTS OF PLANT PROTECTION PRODUCTS ON SCALE INSECTS AND ITS NATURAL ENEMIES.** *C. Hoffmann, JKI- Institute for Plant Protection in Fruit Crops and Viticulture , Germany*

15:05 15:25 **BIOOTWIN L: NEW BIODEGRADABLE DISPENSERS FOR THE CONTROL OF LOBESIA BOTRANA (LEPIDOPTERA, TORTRICIDAE).** *A. Lucchi, University of Pisa, Italy*

15:25 15:45 **DROSOPHILA SUZUKII AND D. MELANOGASTER AND THEIR IMPACT ON SOUR ROT DISEASE DEVELOPMENT IN VITICULTURE.** *C. Hoffmann, JKI- Institute for Plant Protection in Fruit Crops and Viticulture , Germany*

**15:45 17:15 Session 3: IPM implementation and tools for sustainable viticulture**

**Chairs: Mauro Jermini and António Mexia**

15:45 16:15 **Keynote lecture: USE OF ENVIRONMENTAL NICHES TO UNDERSTAND INTERACTIONS AMONG BOTRYTIS CINEREA, BIOCONTROL AGENTS, AND THE ENVIRONMENT.** *V. Rossi, Università Cattolica del Sacro Cuore, Italy*

16:15 16:35 **N - MINIMAL VS. INTENSIVE PRUNING: DOES THE TRAINING SYSTEM INFLUENCE OCCURRENCE OF FUNGAL GRAPEVINE DISEASES?** *C. Kraus, Julius Kühn-Institute, Germany*

16:35 16:55 **THE INTERACTION BETWEEN LIGHT EXPOSURE, GRAPE BERRIES AND POWDERY MILDEW** *T. Zahavi, Ministry of Agriculture and Rural Development, Israel*

16:55 17:15 **PROTECTION IN VITICULTURE: INNOVATION NEEDS AND PERCEPTION OF THE SOCIETY.** *E. Angelini, CREA Viticulture and Enology, Italy*

**17:15 18:00 Poster Flash Talks session 2 and 3 (New strategies in arthropod pest control and IPM implementation and tools for sustainable viticulture)**

**IMPACT OF LEAF REMOVAL ON CLUSTER DISEASE PRESSURE FOR COLD-HARDY HYBRID CULTIVARS UNDER CLIMATIC CONDITIONS OF EASTERN CANADA.** *C. Provost, Centre de recherche agroalimentaire de Mirabel, Canada*

**EXPLOIT BIODIVERSITY IN VITICULTURAL SYSTEMS TO REDUCE PEST DAMAGE AND PESTICIDE USE, AND INCREASE ECOSYSTEMS SERVICES PROVISION: THE BIOVINE PROJECT.** *T. Caffi, Università Cattolica del Sacro Cuore, Italy*

**THE EXPERIENCE OF APPLICATION OF A WEB-BASED DECISION SUPPORT SYSTEM IN THE IBERIAN PENINSULA FOR THE SUSTAINABLE MANAGEMENT OF VINEYARDS.** *V. Rossi, Università Cattolica del Sacro Cuore, Italy*

**REDUCED PESTICIDE APPLICATION PROMOTES NATURAL PEST CONTROL IN VINEYARDS.** *J. Reiff, JKI Siebeldingen, Germany*

**AUDISENS (AUTOMATED DISEASE SENSING) – IMPROVING THE EARLY-DIAGNOSIS OF GRAPEVINE DOWNY MILDEW TO REDUCE THE APPLICATION OF PLANT PROTECTION PRODUCTS.** *E. Kalvelage, Julius Kühn-Institute, Germany*

**OPTIMISATION OF THE METHOD TO ASSESS DROSOPHILA SUZUKII INFESTATION ON GRAPES.** *P. Kehrli, Agroscope, Switzerland*

**EFFECT EVALUATION ON TERRESTRIAL SPECIES OF COMMERCIAL FORMULATIONS CONTAINING LAMBDA-CYHALOTHRIN: A COMPARISON OF NANOPESTICIDE AND ITS CONVENTIONAL.** *A. Cachada, CIMAR-UP, Portugal*

**ENHANCING IPM IMPLEMENTATION PERSPECTIVES IN MONTENEGRO AND ITALY BY MEANS OF A DYNAMIC MECHANISTIC MODEL FOR PHOMOPSIS VITICOLA INFECTIONS: VITISUST.** *N. Latinovic, University of Montenegro, Montenegro*

**AN IDENTIFICATION WEBSITE TO ARTHROPODS ASSOCIATED WITH DOURO REGION VINEYARD AGROECOSYSTEM.** *S. Reis, CoLAB Vines&Wines - National Collaborative Laboratory for the Portuguese Wine Sector; ADVID-Association for the Development of Viticulture in the Douro Region, Portugal*

**STUDY ON THE USE OF FOOD TRAPS TO EVALUATE THE EFFICACY OF MATING DISRUPTION AGAINST LOBESIA BOTRANA IN DOURO DEMARCATED REGION.** *A. Nave, Association for the Development of Viticulture in the Douro Region, Portugal*

**THE BEHAVIOUR OF GRAPEVINE GROWERS IN THE DECISION-MAKING OF USING PESTICIDES FROM PALMELA REGION.** *M. Cachão, AVIPE, Portugal*

**18:00 18:45 Cocktail and Poster Viewing Session 2 and 3 - Quinta de Ventozelo Wine**

**20:00 Gala Dinner – Symington Family Estates Wine**

## Friday, 8 November 2019 - Quinta da Pacheca

09:00 10:50 Session 3 (IPM implementation and tools for sustainable viticulture) and Session 4 (Sustainable management of soil and weeds)

Chairs: Tirtza Zahavi and Laura Torres

09:00 09:30 **Keynote lecture: THE EFFECT OF DIFFERENT MANAGEMENT PRACTICES ON SOIL QUALITY: A CONTRIBUTION TO EVALUATE THE SUSTAINABILITY OF DOURO VINEYARDS SOILS.** *A. Cachada, CIMAR-UP, Portugal*

09:30 09:50 **BIO-POTENTIAL OF COMPOSTED AGRO-FOOD WASTES AS NATURAL FUNGICIDES AGAINST BOTRYTIS AND FUSARIUM WILT DISEASES.** *C. Santos, CoLAB Vines&Wines - National Collaborative Laboratory for the Portuguese Wine Sector; ADVID- Association for the Development of Viticulture in the Douro Region, Portugal*

09:50 10:10 **IMPACT OF WATER SUPPLY, BERRY HEALTH AND INSECTS IN THE DEVELOPMENT OF SOUR ROT IN VINEYARDS.** *S. Hevin, Agroscope, Switzerland*

10:10 10:30 **MODELLING GRAPEVINE PHENOLOGY FOR CV. TOURIGA FRANCA AND TOURIGA NACIONAL IN THE DOURO REGION.** *S. Reis, CITAB; CoLAB Vines&Wines - National Collaborative Laboratory for the Portuguese Wine Sector; ADVID- Association for the Development of Viticulture in the Douro Region, Portugal*

10:30 10:50 **INNOVATIVE AND INTERACTIVE TOOL FOR IMPROVING SOIL ECOSYSTEM SERVICES IN VITICULTURE.** *S. Legler, Horta Srl, Italy*

10:50 11:10 **LEVELS OF GLYPHOSATE IN VINEYARD SOILS AND POTENTIAL ADVERSE EFFECTS TO THE ENVIRONMENT.** *A. Cachada, CIMAR-UP, Portugal*

11:10 11:40 Coffee break

11:40 12:40 **PRESENTATION AND DISCUSSION OF IPM GUIDELINES IN VITICULTURE - C. Malavolta (IOBC)**

12:40 13:00 **Closing remarks**

*Carlo Duso, Christoph Hoffman, Michael Maixner, Agnès Calonnec, René Fuchs, Tirtza Zahavi*

13:00 - 14:30 Lunch – *Quinta da Pacheca Wine*

14:30 18:30 **Technical Excursion**



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