



**European
Weed
Research
Society**

19th European Weed Research Society Symposium

20-23 June 2022 • Athens Greece



MONDAY 20/6/2022

9.00 – 10.30 | Chair: Josef Soukup

• **Opening ceremony**

• **Welcome address**

• **Invited speaker**

“Food safety including pesticide residues in the broader perspective of public health”

Antonis Zampelas

10.30 – 11.00 | **COFFEE BREAK**

MAIN AUDITORIUM

11.00 – 12.30 | **Non-Chemical Weed Control I**

Chair: Judith Wirth & Marleen Riemens

- 1) “Advances in mechanical weed control technologies.” KEYNOTE”
Bo Melander; Margaret McCollough
- 2) “Facilitation of weed seed predation by living mulch and cover crops.”
Matthias Schumacher; Roland Gerhards
- 3) “Experiences in electrophysical vegetation control as substitution for non-selective herbicide-application.”
Benjamin Klauk; Jan Petersen
- 4) “Managing inactive weed propagules – key technologies in sustainable weed management.”
Bärbel Gerowitt; Barbara Baraibar
- 5) “The potential for Harvest Weed Seed Control (HWSC) of Common Weed Species in Denmark.”
Christian Andreassen; Zahra Bitfarafan
- 6) “Carry over effects of cover crop mixtures and management practices on subsequent crops and weeds in no-till.”
Alicia Rouge; Guillaume Adeux ; Delphine Moreau ; Jean-Philippe Guillemain ; Stéphane Cordeau

LECTURE HALL

11.00 – 12.30 | **Agricultural, Economic and Societal Aspects of Weed Management I**

Chair: Lena Ulber & Björn Ringselle

- 1) “The strategy of weed scientists for managing new or emerging weeds under global climate change”
Ahmet Uludag; Heinz Müller-Schärer; Mark van Kleunen; Sava Vrbničanin; Alexandros Tataridas; Christian Bohren; Bojan Konstantinović; Tijana Stojanović; Mehmet Arslan; Miloš Rajković; İlhan Üremiş; Necmi Aksoy; Javid Kashefi; Marie Claude Bon; Vladimir Vladimirov; Rumen Tomov; Eyüp Gülbandır; Yasin Çiçek; Mostafa Oveisi; Ahmet Tansel Serim; Khawar Jabran; Giuseppe Brunda
- 2) “Joining efforts in the Mediterranean and sub-Mediterranean Europe to tackle the invasion of *Ailanthus altissima* (Tree of Heaven)”
Javid Kashefi; Vladimir Vladimirov; Ahmet Uludag; Francesca Marinini; Elisavet Chatzivassiliou; Vaya Kati; Bojan Konstantinović; İlhan Üremiş; Guillaume Fried; Sava Vrbničanin; Nicos Seraphides; Giuseppe Brundu; Maria Ángeles Marcos García; Tijana Stojanović; Ahmet Tansel Serim; Sonja Stutz
- 3) “Assessing the Economic Performance of Livestock Legume Farms: A Case Study from Thessaly, Greece”
Efstratios Michalis; Athanasios Ragkos; Ilias Travlos; Chrysovalantis Malesios
- 4) “A regional scale study of the contribution of weed management actions and climatic conditions on *Amaranthus*”
Roni Gafni; Lior Blank; Hanan Eizenberg
- 5) “Using Ecoinformatics to Estimate and Characterize Herbicide Effectiveness in Maize (*Zea mays*)”
Shlomi Aharon; Ran Lati; Yafit Cohen; Hanan Eizenberg
- 6) “German farmers’ and crop consultants’ perspectives on herbicide resistance management strategies”
Lena Ulber; Han Zhang

12.30 – 13.30 | **LUNCH BREAK**

MAIN AUDITORIUM

13.30 – 15.00 | Weed Crop Interaction I

Chair: [Stephane Cordeau](#) & [Bàrbara Baraibar](#)

- 1) "The competitiveness of the invasive weed *Parthenium hysterophorus* with field tomato (*Lycopersicon esculentus*) in Israel."
Tuvia Yaacoby; Gal Yaacobi; Baruch Rubin
- 2) "Plant-soil-microbe interactions, new perspectives in crop-weed competition."
Andrea Cavalieri; Paul Neve
- 3) "Competition of *Amaranthus palmeri* S. Watson with corn and cotton at two different germination times."
Serap Sutay; Filiz Erbas; Mehmet Nedim Dogan; Ali Riza Ongun; Suleyman Gurdal Tuekseven; Safiye Pinar Tunali; Zuhail Erturk; Cuneyt Ulgen, Anil Altug Pek
- 4) "Deciphering field-based evidences for crop allelopathy in weed regulation." [ONLINE]
Inès Mahé; Bruno Chauvel; Nathalie Colbach; Stéphane Cordeau; Aurélie Gfeller; Antje Reiss; Delphine Moreau
- 5) "Increased weed diversity mitigates weed competition with Romaine lettuce (*Lactuca sativa* L., var. Romana)."
Alessandra Virili; Anna-Camilla Moonen
- 6) "Rotational diversification and fertilization together explain the impacts of tropical weeds on rice yields through changes in plant communities and biomass."
Ripoche A.; Allouch N.; Barkaoui K.

LECTURE HALL

13.30 – 14.30 | Site-specific Weed Management I

Chair: [Therese With Berge](#)

- 1) "Monitoring patch size changes of the creeping perennial *Cirsium arvense* to evaluate the efficiency of control treatments."
Marian Weigel; Sabine Andert; Bärbel Gerowitt
- 2) "Which interpolation method most accurately estimates weed distribution for site-specific weed control?"
Mona Schatke; Christoph von Redwitz; Christoph Kämpfer; Jana Wäldchen; Lena Ulber
- 3) "Enhanced intra-row weed control using bi-directional camera-guided hoeing in maize."
Georg-Peter Naruhn; Kurt Möller; Gerassimos Peteinatos; Roland Gerhards
- 4) "Implementing image vision for real-time weed management with the aid of ISOBUS."
Gerassimos G Peteinatos; Dionisio Andujar; Manuel Perez - Ruiz; Sara Esparza Sengáriz; Roland Gerhards

15.00 – 15.30 | COFFEE BREAK

MAIN AUDITORIUM

15.30 – 17.00 | Weed genomics and population genetics

Chair: [Maor Matzrafi](#) & [Dana MacGregor](#)

- 1) "Bringing Agricultural Weeds into the Molecular Lab." KEYNOTE
Dana MacGregor; Seanna McTaggart; Hannah Rees; Anthony Hall
- 2) "Weed Genomic contribution to unravel herbicide detoxification pathways. A review."
Roland Beffa
- 3) "Blackgrass genome sequencing reveals complex patterns of evolved non-target site herbicide resistance."
David Comont; Lichun Cai; Dana MacGregor; Claudia Lowe; Roland Beffa; Christopher Saski; Paul Neve
- 4) "Upregulated glutathione transferases found in resistant black-grass populations can detoxify flufenacet in vitro."
Evlampia Parcharidou; Rebecka Duecker; Peter Zoellner; Susanne Ries; Roland Beffa
- 5) "Analysis of genetic diversity and population structure in weedy rice using SSR markers."
E Kaya Altop; O Güzel; H Mennan
- 6) "Molecular Identification of *Phelipanche* species from the western Mediterranean region of Türkiye."
Esra CIGNITAS; Yasin Emre KITIS

LECTURE HALL

15.30 – 16.45 | Herbicide Application and Technology I

Chair: [Francesco Vidotto](#) & [Nedim Dogan](#)

- 1) "Yellow nutsedge: what control strategies work in practice?"
Max Fuchs; Judith Wirth

- 2) "The Sustainable Use of Herbicides Using Digital Agronomy and Precision Application Technologies"
Joanna Davies

- 3) "The efficacy and off-target movement of mesotrione and rimsulfuron plus thifensulfuron-methyl."
Milan Brankov; Milena Simić; Greg Kruger

- 4) "Characterization of the retention process of diuron and diclosulam in different types of straw."
Gustavo Vinícios Munhoz-Garcia; V Takeshita; N G Moraes; C W Pinácio; R F Pimpinato; V L Tornisielo

- 5) "Evaluation of the selectivity of new winter cereal varieties to herbicides"
Montull J.M.; Taberner A.; Llop J.; Llenes J.M.; Betbese J.A.

17.30–18.30 Working Groups Meetings

20.30 EWRS Student Welcome-Reception

TUESDAY 21/6/2022

MAIN AUDITORIUM

9.00 – 10:15 Invited speakers

Chair: [Maurizio Vurro](#) & [Husrev Mennan](#)

- 1) "The current status of the IWGC as well as applications of weed genomics."
Eric Patterson; Dana MacGregor; Todd Gaines

- 2) "Global Herbicide Resistance Action Committee: how the Ag Industry collaborate to tackle the weed resistance challenge."
Gael Le Goupi

10:15 – 10.45 COFFEE BREAK

MAIN AUDITORIUM

10.45 – 12.30 Weed Ecology I

Chair: [Matthias Schumacher](#) & [Jonathan Storkey](#)

- 1) "Benefits of a more functionally diverse weed flora and opportunities/barriers to manipulating weed diversity through integrated weed management." KEYNOTE
Stéphane Cordeau

- 2) "Arable Weeds and Management in Europe (AWME): A database of weed survey data from across Europe."
Helen Metcalfe; Jana Bürger; Guillaume Fried; Christoph von Redwitz; Alicia Cirujeda; Silvia Fogliatto; Denise Dostatny

- 3) "The role of legume cover crops in the ecological intensification of winter wheat to manage weeds under different soil tillage regime."
Alireza Taab; Ekhlās Amini; Emanuele Radicetti; Lars Andersson

- 4) "Effect of early and late mechanical treatments in autumn on bud growth and long-term control of *Sonchus arvensis* in spring cereals." ONLINE
Øystein Skagestad; Kirsten S. Tørresen; Lars Olav Brandsæter

- 5) "Reintroduction of rare arable plants and their influence on ecosystem services and yield under various farming practices"
Rosa Witty; Matthias Schumacher; Roland Gerhards

- 6) "What ecological traits and functions are important in a crop mixture for effective weed management?"
Malick Sidiki OUATTARA; Raphaël PAUT; Muriel MORISON; Safia MEDIENE

LECTURE HALL

11.00 – 12.30 Integrated Weed Management I

Chair: [Ilias Travlos](#) [Milena Simic](#)

- 1) "Amaranthus palmeri S. Wats. invasion in Greece, chemical control and insights for its successful management and prevention of further dispersal."
Ilias Travlos; Alexandros Tataridas; Dimitra Petraki; Panagiotis Kanatas; Ioannis Gazoulis

- 2) "Aculus mosoniens (Acari: Eriophyoidea) a potential biological control agent of Tree of heaven (*Ailanthus altissima*) in an integrated management plan"
Francesca Marini; Philip Weyl; Hariet Hinz; Enrico de Lillo; Radmila Petanović; Tatjana Cvrković; Marie-Claude Bon; Biljana Vidović; René F.H. Sforza; Javid Kashefi; Massimo Cristofaro

- 3) "Revealing the interaction between compost rate and non-chemical weed control methods on control efficacy in organic field crops"
Itai Shulner; Meidad Kissinger; Ran Nisim Lati

- 4) "Customization and field validation of a DSS for IWM named IPMwise in Greek winter wheat."
Alexandros Tataridas; Illias Travlos; José Maria Montull; Andreu Taberner; Ole M Bojer; Per Rydahl; Kirsten Torresen

- 5) "Biodiversity-based agroecological system experiments to test agroecological weed management at various temporal and spatial scales: The CA-SYS and ABY platforms."
Stéphane Cordeau; Jérôme Boucherot; Pascal Marget; Fabrice Martin-Laurent; David Maupetit; Nicolas Munier-Jolain; Sandrine Petit; Adam Vanbergen; Violaine Deytieux

- 6) "Purple nutsedge Control through Improved Crop Rotations under Cotton-Wheat System."
Javaid Iqbal; Muhammad Sohail Saddiq; Muhammad Hassaan Javaid

12.30 – 13.30 | LUNCH BREAK

13.30 – 15.00 | Poster Session

Chair: Josef Soukup & Garyfalia Economou

15.00 – 15.30 | COFFEE BREAK

MAIN AUDITORIUM

15.30 – 16.30 | Herbicides and Application Technology II

Chair: Francesco Vidotto & Nedim Dogan

- 1) "Evaluation of persistence, efficacy and volatilization of a new dicamba based nanoformulation."
Francesco Vidotto; Giulia Papandrea; Tiziana Tosco; Monica Granetto; Lorenzo Patrucco; Marco Milan; Silvia Fogliatto

- 2) "Soybean response to micro-rates of dicamba and 2,4-D."
Stevan Knezevic

- 3) "Benefits and risks of Conviso® Smart technology for sugar beet growers in conditions of Central Europe."
Miroslav Jursík; Josef Soukup; Michaela Kolářová; Luděk Procházka

- 4) "The herbicidal potential of pelargonic acid to control *Cirsium arvense* in arable farming." ONLINE
Eliyeh Ganji; Sabine Andert

LECTURE HALL

15.30 – 17.00 | Weed Ecology II & Herbicide Resistance I

Chair: Matthias Schumacher & Jonathan Storkey

Chair: Roland Beffa & Katerina Hamouzova

- 1) "Weed communities in conservation agriculture: what really changes?"
Bruno Chauvel; Damien Derrouch

- 2) "Weed flora diversification through patch cropping"
Michael Glemnitz; Kathrin Grahmann; Gina Geittner

- 3) "Effect of irrigation on weed occurrence in Oregano crop."
Georgia Nikolakopoulou; Dimitra Douli; Alexandros Fournarakos; Alexandros Assariotakis; Garyfalia Economou

- 4) "How Australian Cereal Farmers Combat Multiple Resistant *Lolium rigidum*."
Peter Boutsalis

- 5) "Herbicide efficacy patterns in sensitive and ALS-resistant *A. caucalis* populations and other weedy Apiaceae species."
Rebecka Dücker; Manja Landschreiber; Johannes Herrmann; Martin Heß; Wagner Jean

- 6) "Rigid ryegrass (*Lolium rigidum* L.) occurrence and ACCase / ALS resistance in brewery barley belt in North Greece."
Dimitra Douli; Garyfalia Economou; Ilias Eleftherohorinos; Panagiotis Madesis

17:15-18:15 | EWRS General Assembly

20.30 | Gala Dinner at "Lazaro 1971"

WEDNESDAY 22/6/2022

MAIN AUDITORIUM

09.00 – 10:30 | Weed Biology and Physiology

Chair: Aritz Royo Esnal & Jevgenija Necajeva

- 1) "Exploring the dioecious nature of weeds: The case of *Amaranthus palmeri*." KEYNOTE
Nikolaos Korres; Jason K. Norsworthy; Toby FitzSimons; Trenton L. Roberts; Derrick M. Oosterhuis; Govindjee Govindjee
- 2) "A framework for Critical Control Windows using weed emergence and phenology models."
TA Reinhardt Piskackova; Ramon Leon
- 3) "What are the biological determinants of regeneration of perennial weeds? Effect of fragment weight and bud number on the regrowth of five perennial weed species."
Solègne Skorupinski; Nathalie Colbach; Annick Matejcek; Hugues Busset; Eric Vieren; Delphine Moreau
- 4) "Sprouting potential of *Sonchus arvensis* under defoliation treatments in Northern Europe." ONLINE
Eliyah Ganji; Jukka Salonen; Bärbel Gerowitz; Kirsten S. Tørresen
- 5) "Weed seed decay after passing through cow digestive system."
Nebojša Nikolić; Franco Tagliapietra; Stefano Schiavon; Roberta Masin
- 6) "Development of a temperature-based seed germination model for silverleaf nightshade (*Solanum elaeagnifolium*)."
Omer Kapiluto; Hanan Eizenberg; Ran Lati

LECTURE HALL

9.00-10.30 | Weed ecology II

Chair: Matthias Schumacher & Jonathan Storkey

- 1) "Fighting neobiota with neobiota: do it more rigorously and more often"
Heinz Müller-Schärer; Yan Sun; Urs Schaffner
- 2) "Vascular Plant Biodiversity Change in Central European Fields over 70 years – Winners and Losers of the Great Transition."
Michael Glaser; Stefan Dullinger; Franz Essl
- 3) "First comparative results after 45 years of weed surveys in winter cereals in northeastern Spain."
A. Cirujeda; Teresa Segarra; Gabriel Pardo; Joaquín Aibar; Ana Isabel Marí; Jorge Pueyo; Carlos Zaragoza
- 4) "Weed distribution in the Italian rice area in relation to agronomic practices and soil characteristics."
Silvia Fogliatto; Marco Milan; Francesco Vidotto
- 5) "A Weed Survey in Winter Sown Rapeseed Fields."
Alireza Taab; Sedighe Nazari; Michaela Kolářová; Somayeh Hajinia
- 6) "Management of *Phelipanche aegyptiaca* in cabbage (*Brassica oleracea* var. capitata)."
Amit Wallach; Guy Achdary; Hanan Eizenberg

10.30 – 11.00 | COFFEE BREAK

MAIN AUDITORIUM

11.00 – 12.00 | INDUSTRY SESSION

Chair: Josef Soukup & Demosthenis Chachalis

- 1) EHRAC-presentation
Bernd Sievernich
- 1) "Automated Precise Weed Control in Cotton"
George N. Zanakis; Georgios Valais
- 2) "BENZOBICYCLON: A NEW HERBICIDE FOR RICE IN EUROPE"
M. Martin-Andres; L. Cornette
- 3) "Environmental Impact Reduction of Crop Protection – How to model, how to measure, how to achieve?"
Anja Gladbach; Yuyue Zhang; Peter Fantke; Luke Settles and Daniel Glas
- 4) "UPL reimagines sustainability"
Emilie Seguret

12.30 | FIELD TRIP: Papagiannakos Winery

THURSDAY 23/6/2022

MAIN AUDITORIUM

9.00 – 10.15 | Site-specific Weed Management II

Chair: Therese With Berge

- 1) "10 years of UAV technology for weed mapping: overview and future trends for site-specific." KEYNOTE
Jose M. Peña; Ana I. de Castro; Gustavo A. Mesias-Ruiz; Cesar Fernandez-Quintanilla; Jose Dorado
- 2) "Effect of sprayer section control widths and spatial weed distribution on potential herbicide savings using aerial mapping at single plant level."
Robin Mink; Lukáš Kovářik; Moritz Roth; Michael Cramer; Alexander Ingo Linn
- 3) "Hyperspectral imaging facilitates early recognition of *Orobanche cumana* below-ground parasitism on sunflower under field conditions."
Guy Atsmon; Hanan Eizenberg; Ran Lati
- 4) "A method for online separation of alfalfa seeds from weeds (*Cuscuta* spp.)."
C.N. Kasimatis; G.G. Peteinatos; N. Katsenios; K. Ferentinos; D. Leonidakis; A. Efthimiadou
- 5) "Spatial-temporal aspects of weeds distribution within fields and orchards."
Lior Blank; Gal Rozenberg; Nitzan Birger

LECTURE HALL

9.00 – 10.30 | Herbicide Resistance

Chair: Roland Beffa & Katerina Hamouzova

- 1) "Irish black-grass (*Alopecurus myosuroides*) populations carrying target-site resistance to ACCase/ALS herbicides also impact glyphosate efficacy."
Vijaya Bhaskar; Dermot Forristal; Sarah Cook; Michael Hennessy; Susanne Barth
- 2) "Herbicide resistance mechanisms in *Bromus sterilis*."
Madhab Kumar Sen; Katerina Hamouzová; Jakub Mikulka; Rohit Bharati; Pavlina Košnarová; Pavel Hamouz; Amit Roy; Josef Soukup
- 3) "Alterations in glutathione metabolism induced by ALS inhibition in *Amaranthus palmeri* in Spain."
Mikel Vicente Eceiza; Miriam Gil-Monreal; Josu Encinas; María Barco-Antoñanzas; Ana Zabalza; Mercedes Royuela
- 4) "Actual status of herbicide resistance of species from Panicoideae sub-family in some European countries."
Jan Petersen
- 5) "Potential regulation of herbicide-resistant seeds by seed predator."
HF Foffová
- 6) "Multiple Herbicide-Resistant *Amaranthus tuberculatus* (Waterhemp) in Israel is an Alien Weed Species."
B. Rubin; I. Yadid; A. Singer; I. Roth; Z. Peleg; M. Sibony

10.30 – 11.00 | COFFEE BREAK

MAIN AUDITORIUM

11.00 – 12:30 | Integrated Weed Management II

Chair: Ilias Travlos & Milena Simić

- 1) "Improving weed management for the naturalized species *Ambrosia grayi*."
Danielle Vaknin; Daniella Cafri; Nadav Ezra; Hanan Eizenberg; Martin Goldway; Maor Matzrafi
- 2) "Integrated management of *Solanum elaeagnifolium* Cav.: challenges and novel approaches."
Alexandros Tataridas; Ilias Travlos; Panagiotis Kanatas
- 3) "Combining chemical and mechanical weeding in wheat."
Christophe Lacroix; Jérôme Pierreux; Gilles Geruzet; Christophe Vandenberghe; Benjamin Dumont
- 4) "Weed control in a mineral-ecological cropping system (MECS) including wider crop rotations and stubble tillage compared to organic- and conventional cropping systems."
Marcus Saile; Roland Gerhards
- 5) "Innovative solutions to manage and monitor broomrapes in industrial tomato in Greece"
Demosthenis Chachalis; Dimitrios Argyris; Maria Gerakari; Nikolina Cheimona; Anastasia Tsekoura; Angeliki Kousta; Antonis Kavvadias; Eleni Tani
- 6) "The potential of natural substances as bio-based herbicides to control arable weeds."
Sabine Andert

LECTURE HALL

11.00– 12.30 | Non-Chemical Weed Control II

Chair: Judith Wirth & Marleen Riemens

- 1) "Unravelling the success of weed control by relay intercropping with legumes in low-input cereal-based Mediterranean cropping systems."
Federico Leoni; Stefano Carlesi; Per Kudsk; Anna-Camilla Moonen
- 2) "Phytotoxic efficacy of phytocannabinoids isothiocyanates, polyphenols and on the germination and root growth of common problematic weeds in *Zea mays* (L.)."
Michael Merkle; Roland Gerhards
- 3) "A quest for herbicide-free viticulture".
Matteo Mota; Serena Fantasia; Thierry Heger; Florine Degrunne; Frédéric Lamy; Dorothea Noll; Markus Rienth; David Marchand; Robin Sonnard; Vivian Zufferey; Nicolas Delabays
- 4) "Two years multi-site field experiments to control perennial weed species without herbicides."
Marian Weigel; Lars Olav Brandsaeter; Therese W. Berge; Jukka Salonen; Timo Lötjönen; Bärbel Gerowitt
- 5) "Decay dynamic of *Avena fatua* and *Echinochloa crus-galli* seeds from different populations in a seed burial experiment"
Jevgenija Necajeva; Elvis Garais
- 6) "The Potential of Cover Crop (CC) Mixtures to Suppress Winter and Summer Weeds in Citrus Orchards."
Nikolaos Antonopoulos; Ioannis Gazoulis; Katerina Zervopoulou; Panagiotis Kanatas; Ilias Travlos

MAIN AUDITORIUM

12.30– 13.00 | Closing ceremony

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