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Trophic relationships between host and parasitic plants : a case study with the parasitic plant species Phelipanche ramosa

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17th EUROPEAN WEED RESEARCH SOCIETY SYMPOSIUM

EWRS 2015

22-26 June 2015

Montpellier SupAgro, France

CAMPUS DE LA GAILLARDE

- 5 Reception
- 6 Training rooms
- 9 Conference hall
- 11 Restaurant
- 34 Student Residence

Accueil SupAgro

Tel. +33 (0)4 99 61 22 00
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What is the EWRS ?

The European Weed Research Society is an international body which was formed in 1975. It is open to everyone who has an interest in weed research and related topics. Its members come from official, commercial, university and independent research organizations: all have a particular interest in the many different aspects of weed science and its technology. The official language of the society is English and all the societies' publications are in English. More information is available at www.ewrs.org.

EWRS MISSION STATEMENT

To support the development of weed science, and the exchange of knowledge among weed scientists, with a primary aim of improving weed management systems, emphasizing the sustainable use of natural resources and protection of the environment.

THE 17TH EWRS SYMPOSIUM

This Symposium, which celebrates the 40th anniversary of the constitution of the EWRS, is returning to France after its inaugural meeting in Paris in 1975. It aims at bringing people together to report on and examine all topics of weed science. It will emphase "Weed management in changing environments".

Practical information

- Shuttle schedule: morning departure Tuesday 23 (7h20 - 7h40 - 8h) - Wednesday 24, Thursday 25 and Friday 26 (7h50 - 8h - 8h10) - Afternoon : 15 and 35 mn after the end of the activities.
- Lunches: at the "Chateau" on the side of amphitheaters buildings.
- Poster display: from Tuesday 23, 8h to Friday 26, 14h; poster board will be ranked by session and marked with the name of first author and a number; authors are expected to be at their poster and available to answer questions during the poster session.
- Oral presentations: speakers are requested to upload the presentation file (if not yet sent to the organizers), no less than one hour in advance of the session, in front of the registration desk.
- Symposium dinner: Les Cuisiniers Vignerons, Mas de Saporta, 34970 Lattes, Tel: 33 (0)4 67 06 88 66

22-26 June 2015

SYMPOSIUM VENUE

The symposium will take place at the campus of Montpellier SupAgro (International Centre for Higher Education in Agricultural Sciences, Chateau de la Gaillarde, Place Viala, 34060, Montpellier) which is situated close to the city center of Montpellier, south of France.

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Schedule 17th EWRS Montpellier 2015

Monday 22 June 2015

9H00 - 17H00
EWRS Education and Training Workshop: "How to write a paper for a scientific journal" *(J. Marshall & JC. Streibig)*

9H00 - 17H00
EWRS Education and Training Workshop: "Scientific and documentary photography for professionals in agriculture" *(D. Cloutier & JC. Streibig)*

10H00 - 18H00
Working Group meeting: Germination and early growth *(KS. Torresen)*

Tuesday 23 June 2015

8H00 - 9H00
Registration

9H00 - 9H45
Welcome addresses (Amphithéâtre Philippe Lamour)
Marie-Laure Navas (Montpellier SupAgro)
Radics Laszlo (President of EWRS)
Marc Delattre (President of AFPP)
Henri Darmency (Organizing committee)

9H45 - 10H30
Invited paper: Big data analytics for weed control and crop protection
Spyros Fountas (Agricultural University of Athens, Greece)

10H30 - 11H15
Coffee break

11H15 - 13H15

PLENARY SESSION (Amphithéâtre Philippe Lamour)

Session I - New management approaches

Chair: *Svend Christensen & Hanan Eizenberg*

- Using a fleet of robots for patch spraying - *C. Fernandez-Quintanilla (Instituto de Ciencias Agrarias, Spain)*
- Sensor-based inter- and intrarow weed hoeing - *R. Gerhards (University of Hohenheim, Germany)*
- Pre-harvest assessment of perennial weeds in cereals based on images from unmanned aerial systems (UAS) - *J. Rasmussen (University of Copenhagen, Denmark)*
- Aerial imagery for site specific weed management - *M. Louargant (AgroSup Dijon, France)*
- Knowing weed growth stages in real time to improve weed control - *F. Vuillemin (ACTA, France)*
- Small weeding tools for small vegetable farms - *M. Leblanc (Institut de recherche et de développement en agroenvironnement, Canada)*
- Using fuzzy logic to estimate a competition index - *C. Andreasen (University of Copenhagen, Denmark)*

Schedule 17th EWRS Montpellier 2015

13H15 - 14H30

Lunch

14H30 - 15H30

CONCURRENT SESSIONS

Session IIA - Chemical weed management (Amphithéâtre Philippe Lamour)

Chair: *Per Kudsk & Jens Carl Streibig*

- Investigating glyphosate use and weed patterns in German arable farming - *L.A. Koning (University of Rostock, Germany)*
- Prediction of herbicide efficacy in the decision support system DSSHerbicide - *F. de Mol (University of Rostock, Germany)*
- Response of grass weeds to herbicides depending on spraying techniques and spray liquid properties - *R. Kierzek (Institute of Plant Protection, Poland)*
- Aspects of Glyphosate Mechanism in Egyptian Broomrape Control - *T. Shilo (Department of Plant Pathology and Weed Research, Israel)*

Session IIB - Weed biology (Amphithéâtre 206)

Chair: *Hansjoerg Kraehmer & Kirsten Torresen*

- Differential germination in seeds produced in apical and basal fruits of two *Thlaspi arvense* populations - *E. Edo (HBJ, ETSA, UdL, Spain)*
- Assessment of phylogenetic signal in the germination ability of broomrape (*Phelipanche ramosa*) on Brassicaceae hosts - *R. Perronne (INRA Dijon, France)*
- Effect of burial depth and environmental factors on seasonal germination of bearded sprangletop (*Leptochloa fusca*) - *H. Mennan (University Faculty of Agriculture Samsun, Turkey)*
- Study of germination parameters of summer annual weeds: transferability of AlertInf model to Croatia - *V. Sostarcic (University of Zagreb, Croatia)*

15H30 - 16H00

Coffee break

16H00 - 17H00

CONCURRENT SESSIONS (continued)

Session IIA - Chemical weed management (Amphithéâtre Philippe Lamour)

Chair: *Per Kudsk & Jens Carl Streibig*

- Assessment of drift potential of sprays produced from forward tilted shielded rotary atomizers compared to hydraulic nozzles - *S. Ouled Taleb Salah (Gembloux Agro-Bio Tech, Belgium)*
- Characterization of *Ambrosia artemisiifolia* dose-response to ALS-inhibiting herbicides - *L. Meyer (INRA Dijon, France)*
- Are herbicide efficacy, selectivity and resistance factors well defined by dose-response curves?- *J.-S. Streibig (University of Copenhagen, Denmark)*

Session IIB - Weed biology (Amphithéâtre 206)

Chair: *Hansjoerg Kraehmer & Kirsten Torresen*

- A simulation model to predict dormancy changes in underground buds of *Sonchus arvensis* - ***A. Taab (Weed Science at Ilam University, Iran)***
- Effect of temperature on the development of *Ambrosia confertiflora* - ***Y. Yair (Tel Aviv University, Israel)***
- Northern adaptation of short-day weeds - ***R. Scalone (University of Agricultural Sciences, Sweden)***

17H00 - 18H00 Working Group meetings

18H00 - 19H00 Welcome cocktail

Wednesday 24 June 2015

PLENARY SESSION (Amphithéâtre Philippe Lamour)

9H00 - 9H45 Invited paper: A horizon scan for research priorities in weed ecology, evolution and management
Paul Neve - (Rothamsted Research, United Kingdom)

9H45 - 10H30 Invited paper: Translating research into an Integrated Weed Management Program: sharing our company experience
Christine Brunel-Ligneau - (Bayer CropScience AG, Germany)

10H30 - 11H15 Coffee break

11H15 - 13H15 Poster session

13H15 - 14H30 Lunch

Schedule 17th EWRS Montpellier 2015

14H30 - 15H30

CONCURRENT SESSIONS

Session IIIA - Herbicide resistance (Amphithéâtre Philippe Lamour)

Chair: *Ivo Brants & Paul Neve*

- Managing ALS-resistant broad-leaved weeds: current research and future needs - ***L. Tatnell (ADAS, United Kingdom)***
- Impact of the amino acid substitution Asp376Glu on the efficacy of acetohydroxyacid synthase inhibiting herbicides in *Lolium sp.* (L.) - ***A. Menegat (University of Hohenheim, Germany)***
- Monitoring of resistance development against ALS inhibiting herbicides in dicotyledonous weeds in Germany - ***D. Rissel (Julius Kähn-Institut, Germany)***
- Patterns of cross-resistance to ACCase-inhibitor herbicides in winter wild oat (*Avena ludoviciana*) populations - ***H. Sasanfar (Ferdowsi University of Mashhad, Iran)***

Session IIIB - Weed ecology (Amphithéâtre 206)

Chair: *Garifalia Economou & Paula Westerman*

- Understanding scale-dependent relationships between spatially heterogeneous populations of *Alopecurus myosuroides* and soil properties - ***H. Metcalfe (Rothamsted Research, United Kingdom)***
- Does plant activator application help the antioxidant defense of tomato plants during broomrape infection? - ***O. Acar (Canakkale Onsekiz Mart University, Turkey)***
- Importance of habitat, local management and landscape composition on the abundance of weed seed-eating carabid species in crop fields - ***S. Labruyère (INRA Dijon, France)***
- Density-dependent seed predation in maize monoculture - ***H. Pannwitt (Faculty of Agricultural and Environmental Science of Rostock, Germany)***

15H30 - 16H00

Coffee break

16H00 - 17H00

CONCURRENT SESSIONS (continued)

Session IIIA - Herbicide resistance (Amphithéâtre Philippe Lamour)

Chair: *Ivo Brants & Paul Neve*

- Evaluating the risk of herbicide resistance in weeds in glyphosate-based maize cropping systems. A simulation study - ***N. Colbach (INRA Dijon, France)***
- Glyphosate resistance on *Conyza species*: mechanism and standardization of screening tests - ***I. Travlos (Agricultural University of Athens, Greece)***
- Identification of genes involved in non-target-site based resistance to ALS inhibitors in *Lolium sp.*: a step toward the development of diagnosic tools - ***A. Duhoux (INRA Dijon, France)***
- Mechanism of resistance to mesotrione in an *Amaranthus rudis* population from Nebraska, USA ***D. Kaundun (Syngenta Ltd., United Kingdom)***

Session IIIB - Weed ecology (Amphithéâtre 206)

Chair: *Garifalia Economou & Paula Westerman*

- Crop competitive interactions drive the functional structure of weed communities within arable fields - ***R. Perronne (INRA Dijon, France)***
- Attempting to separate resource competition from allelopathic root interactions - ***J. Wirth (Agroscope, Switzerland)***
- Effect of herbicide treatments on the assembly of weed communities - ***G. Fried (Anses, France)***
- Density-dependent effects during re-establishment of rare arable plants - ***H. Albrecht (Technische Universitaet Muenchen, Germany)***

17H00 - 18H00 General assembly

Thursday 25 June 2015

9H00 - 10H30

PLENARY SESSION (Amphithéâtre Philippe Lamour)

Session IV - Integrated weed management

Chair: *Euro Pannacci, Marleen Riemens & Theo Verwijst*

- Towards a control strategy against *Cyperus esculentus* L. in Switzerland - ***C. Bohren (Agroscope, Switzerland)***
- Sensitivity of *Echinochloa crus-galli* populations to maize herbicides: a comparison between cropping systems - ***S. Claerhout (Ghent University, Belgium)***
- On-farm evaluation of integrated weed management tools in maize production: agronomic efficacy, herbicide use reduction and economic sustainability - ***V. Vasileiadis (National Research Council, Italy)***
- What are the real effects of herbicide use on weed control and crop yield in farmers' arable crops? - ***S. Gaba (INRA Dijon, France)***
- Effect of herbicide dose, rotation and crop competition on management of cross-resistance to pre-emergence herbicides - ***R. Busi (University of Western, Australia)***
- The effect of seed rate and herbicide programme on *Alopecurus myosuroides* in hybrid barley and wheat - ***S. Cook (ADAS, Cambridge, United Kingdom)***

Schedule 17th EWRS Montpellier 2015

10H30 - 11H15

Coffee break

11H15 - 13H15

PLENARY SESSION (continued)

Session IV - Integrated weed management

Chair: ***Euro Pannacci, Marleen Riemens & Theo Verwijst***

- An analysis of the effects of cover crops' competition strategies on weed growth - ***F. Tardy (CIRAD, France)***
- Long term effects of cover crops on weeds in Mediterranean low input arable management systems - ***S. Carlesi (Scuola Superiore Sant'Anna, Italy)***
- Cover crops in potatoes as an alternative environmentally-friendly management practice - ***H. Kuzikaro (Hebrew University of Jerusalem, Israel)***
- Effect of conservation agriculture on weed infestation in rainfed rice - ***L. Ranaivoson (FOFIFA - CIRAD UPR AIDA, Madagascar)***
- Weed emergence and population dynamics in alternative irrigation systems in California rice - ***W. Brim-DeForest (University of California, USA)***
- Assessment of temporary grassland impact on weed flora in following crops - ***S. Médiène (AgroParisTech, France)***
- Multiple benefits of delayed drilling for *Alopecurus myosuroides* (black-grass) control in winter wheat - ***R. Hull (Rothamsted Research Harpenden, United Kingdom)***
- How to control weeds in arable farming? Analysis of technical drivers in a national demonstration farm network FERMEcophyto - ***C. Denieul (InVivo AgroSolutions, France)***

13H15 - 14H30

Lunch

14H30

Excursions

Tour n° 1: Rare arable weeds on the Larzac Plateau in farmers' fields and steppe-like lawn with *Stipa*; a glance to and regional historic sites (La Couvertoirade, Millau viaduc) if time left... ***(Guillaume Fried)***

Tour n° 2: Visit of a rice production farm in West Camargue with research trials, global management and weed flora; return along Aigues-Mortes if time left... ***(Pascal Marnotte)***

Tour n° 3: Visit of the experimental Agroforestry domain of Restinclières: global approach and weed control trials; surprise if time left... ***(Christian Dupraz & Delphine Méziere)***

Tour n° 4: Visit to weed control trials in vineyard near Perpignan; grass covering trial; herbicide control and a stop at Baixas cellar. ***(Éric Chantelot)***

20H00

Symposium dinner and dancing party at the restaurant "Les Cuisiniers Vignerons" in Lattes

23H30

Return to hotels

Friday 26 June 2015

9H00 - 9H45 — **PLENARY SESSION (Amphithéâtre Philippe Lamour)**

Invited paper: Ecology theory meets agronomy
Cyrille Violle - (CEFE-CNRS, France)

9H45 - 10H30

Invited paper: Is agroecology a relevant and achievable pathway for sustainable food systems?
Philippe Baret - (ELI - University of Louvain, Belgium)

10H30 - 11H15

Coffee break

11H15 - 13H15 — **PLENARY SESSION (Amphithéâtre Philippe Lamour)**

Session V - New challenges

Chair: *Christian Bohren & Maurizio Vurro*

- Climate change and weed flora from a Fenno-Scandinavian perspective - *L. Andersson (Dept. of Crop Production Ecology, Sweden)*
- Weed control by allelopathic potential of corn (*Zea mays* L.) - *H.-M. Mezori (University of Duhok, Iraq)*
- Let's take advantages of *Eucalyptus globulus* plantations for weed control in sustainable agriculture! - *C. Puig (University of Vigo, Spain)*
- *Abutilon theophrasti*: from a weed to a crop for modern use of renewable resources - *J. Petersen (University of Applied Sciences Bingen, Germany)*
- Use of allelopathic plants as living mulch in apple orchards - *A. Uludag (Onsekiz Mart University, Turkey)*
- "Vraies Messicoles": a label for rare arable plants produced from the wild for functional and ornamental purposes as a way to preserve biodiversity - *J. Cambecèdes (Fédération des Conservatoires botaniques nationaux, France)*
- Control of *Ailanthus altissima* in a natural environment - *F. Casella (Institute of Sciences of Food Production, Italy)*
- Investigating a potential auxin-related mode of hormetic/inhibitory action of the phytotoxin parthenin - *R. Belz (University of Hohenheim, Germany)*

13H15 - 13H30

Conclusion
Bärbel Gerowitt (Vice President of EWRS)

13H30 - 14H30

Lunch

14H30

End of the symposium

Poster presentations

Session I - New management approaches

S1-P-001
Manual for Propane-Fueled Flame Weeding in Corn, Soybean, and Sunflower
S. Knezevic (University of Nebraska, USA)

S1-P-002
Effect of microencapsulated caraway *(Carum carvi)* essential oil on the weed infestation in maize and a number of microorganisms in the soil
A. Synowiec (University of Agriculture, Poland)

S1-P-003
Assessment of allelopathic potential of alcohol and aqueous extracts of *Solidago gigantea* in terms of their effect on dry mass of two weeds *Echinochloa crus-galli* and *Amaranthus retroflexus*
T. Sekutowski (Institute of Soil Science and Plant Cultivation, Poland)

S1-P-004
Effects of fungal toxins on *Ambrosia artemisiifolia*
M. Vurro (Institute of Sciences of Food Production National Research Council, Italy)

S1-P-005
Herbicidal efficacy of metabolites from *Streptomyces scopuliridis* on upland weed species
K.-W. Park (Chungnam National University, South Korea)

S1-P-006
Amino acids as orobanchicides: an innovative approach for biocontrol of broomrape weeds
D. Moreau (INRA Dijon, France)

S1-P-007
eyeWeed: mapping of black-grass (*Alopecurus myosuroides*) infestations using ground-based machine vision
A. Murdoch (University of Reading, United Kingdom)

S1-P-008
RGB imagery as basis for site-specific management of perennial weeds
T. Berge (Bioforsk, Plant Health and Plant Protection Division, Norway)

S1-P-009
Precision control of weeds in carrots and onions - Challenges
B. Panneton (Horticultural R&D Centre Agriculture and Agri-Food, Canada)

S1-P-010
Biodegradable paper mulch for weed control
J. Salonen (MTT Agrifood Research, Finland)

S1-P-011
Excellent weed control with biodegradable mulches in pepper
A. Cirujeda (Unidad de Sanidad Vegetal, Spain)

Session IIA - Chemical weed management

S2A-P-012
Chemical control of sensitive and resistant to ALS inhibitors *Apera spica-venti* populations
M. Stankiewicz-Kosyl (Warsaw University of Life Sciences, Poland)

S2A-P-013
Resistance management and control of sulfonylurea-resistant broadleaf weeds in cereals with the phenoxyalkanoates, picolinate, pyridyloxyalkanoate and arylpicolinate herbicides belonging to group O (auxinic herbicides)
E. Paterson (Dow AgroSciences, United Kingdom)

S2A-P-014
Herbicide control of imidazolinone resistant volunteer oil seed rape in winter wheat
V. Spacilova (Agrotest fyto, s.r.o., Czech Republic)

S2A-P-015
Herbicide control of *Cirsium arvense* in winter wheat, Czech Republic
V. Spacilova (Agrotest fyto, s.r.o., Czech Republic)

S2A-P-016
Glyphosate 71% SG (Ammonium Salt) in Tea - bio-efficacy against weeds, phyto-toxicity in tea & effect on soil physico-chemical and biological properties
P. Poddar (Uttar Banga Krishi Viswavidyalaya, India)

S2A-P-017
An optimized glyphosate formulation
Z. Woznica (Poznan University of Life Sciences, Poland)

S2A-P-018
Efficacy of rice herbicides on *Echinochloa spp.* as affected by repeated use
F. Vidotto (DISAFA, Italy)

S2A-P-019
Sensitivity of different *Zea mays Sh2* genotypes to foramsulfuron
A. Paporisch (Hebrew University of Jerusalem, Israel)

S2A-P-020
Maize tolerance to herbicides - Role of secondary metabolites
M. Brankov (Maize Research Institute "Zemun Polje", Serbia)

S2A-P-021
Efficacy and phytotoxicity of herbicides applied pre and post-emergence in lupin crops
L. Sobiech (Poznan University of Life Sciences, Poland)

S2A-P-022
Weed control with post-emergence herbicides in yellow lupin (*Lupinus luteus* L.) and narrow-leafed lupin (*Lupinus angustifolius* L.)
R. Krawczyk (Institute of Plant Protection, Poland)

S2A-P-023
Effect of seed size and herbicide placement on dry bean injury from flumioxazin
R. Boydston (Agricultural Research Service, USA)

S2A-P-024
Weeds control in haricot been sowings under the forest-steppe zone conditions of Ukraine
V. Zadorozhnyi (Institute of Feed research and Agriculture, Ukraine)

S2A-P-025
Oxidative stress parameters of an invasive weed species *Ambrosia artemisiifolia* L. in relation to the irrigation water quality
M. Meseldzija (University of Novi Sad Faculty of Agriculture, Serbia)

S2A-P-026
Chemical control of *Ambrosia artemisiifolia* L. in production of forest seedlings
V. Vasic (University of Novi Sad, Czech Republic)

S2A-P-027
Sensitivity of naturalized *Digitaria aequiglumis* populations to 4-hydroxyphenyl pyruvate dioxygenase- and acetolactate synthase-inhibiting herbicides in maize
S. Claerhaut (Faculty of Bioscience Engineering, Belgium)

S2A-P-028
Efficiency and selectivity of the herbicide combination flumioxazin and glyphosate in intensive cherry orchard
Z. Rankova (Fruit Growing Institute, Bulgaria)

S2A-P-029
Metsulfuron-methyl + thifensulfuron-methyl mixture - New opportunity for efficient chemical control of broad-leaved weeds in wheat
M. Tityanov (Fruit Growing Institute, Bulgaria)

S2A-P-030
Ionic liquids based on auxin-like herbicides
K. Marcinkowska (Institute of Plant Protection, Poland)

S2A-P-031
Mineralization of ^{14}C-hexazinone in Commercial Herbicide Mixture with Diuron and Sulfometuron-methyl
F. Reis (São Paulo University, Brazil)

S2A-P-032
OPTIHERB: a Decision Support System (DSS) for a site-specific optimization of herbicide application doses with regard to ALS- and ACCase inhibitors
A. Brathuhn (University of Applied Sciences, Germany)

Session IIB - Weed biology

S2B-P-033
Influence of environmental factors on germination of three Brazilian Rubiaceae weeds tolerant to glyphosate
M. Trezzi (Campus Pato Branco, Brazil)

S2B-P-034
What is more important for weed seed survival during dairy manure composting: seed source or manure properties?
S. Rahimi (University of Tehran, Iran)

S2B-P-035
Effect of different temperatures on germination of *Euphorbia maculata* L., a novel invasive weed in north of Iran
M. Oveisi (University of Tehran, Iran)

S2B-P-036
How soil disturbance affects the emergence of 30 rare arable plants in Spain
J. Torra (University of Lleida, Spain)

S2B-P-037
Effect of soil depth on the germination of some weeds in the Saharan agrosystem of Algeria
S. Kaci (University of Ouargla, Algeria)

S2B-P-038
Seed longevity of *Cortaderia selloana* compared with the native *Saccharum ravennae* in the Valencian Community populations
T. Company (Botanical Garden, University of Valencia, Spain)

S2B-P-039
Weed seeds ability to emerge on the soil surface
D. Lizon-au-Cire (INRA Dijon, France)

S2B-P-040
Effect of irrigation period and soil depth on seedling emergence of *Chenopodium album*
A. Taab (Ilam University, Iran)

S2B-P-041
Effect of irrigation period and soil depth on seedling emergence of *Amaranthus retroflexus*
A. Taab (Ilam University, Iran)

S2B-P-042
Seedling emergence of *Brassica kaber* affected by soil depth
A. Taab (Ilam University, Iran)

S2B-P-043
Seedling emergence under no-till conditions from increasing seed burial depth
D. Loddo (University of Padova, Italy)

S2B-P-044
Variability of germination response of European populations of *Abutilon theophrasti* as a function of seed maturing season
D. Loddo (University of Padova, Italy)

S2B-P-045
Effect of the ripening season on germination response of *Datura stramonium* populations
D. Loddo (University of Padova, Italy)

S2B-P-046
Heteroblasty and viability of *Setaria faberi* seeds change in response to cutting method and environmental conditions
F. Kordbacheh (University of Tehran, Iran)

S2B-P-047
Study on variability of *Cichorium intybus* L. flowers and fruits
N. Ionescu (Agricultural and Development Research, Romania)

S2B-P-048
Effect of drought on stolon germination of Sprangletop *(Leptochloa fusca* L.*)* under natural conditions
M. Oveisi (University of Tehran, Iran)

S2B-P-049
Allelopathy of tree of Heaven *(Ailanthus altissima)*, common milkweed *(Asclepias syriaca)* and giant hogweed *(Heracleum mantegazzianum)* on the germination of winter wheat
E. Nadasy (University of Pannonia, Hungary)

S2B-P-050 Differentiation of wild oat (*Avena spp.*) species in Turkey by classical and molecular methods
S. Türkseven (Ege University, Turkey)

S2B-P-051 No evolutionary shift in the mating system of the invasive weed *Ambrosia artemisiifolia* populations in France
L. Meyer (INRA Dijon, France)

Session IIIA - Herbicide resistance

S3A-P-052 Gene flow from tribenuron-methyl resistant sunflower hybrids to weedy sunflower
D. Bozic (University of Belgrade, Serbia)

S3A-P-053 Hybridization rates between wheat *(Triticum aestivum)* and its wild relative *Aegilops triuncialis* under real field conditions
I. Loureiro (INIA, Spain)

S3A-P-054 Chlorsulfuron resistance in *Lolium rigidum* Gaud. in winter cereal fields in Spain: evolution of resistance 10 years after
I. Loureiro (INIA, Spain)

S3A-P-055 Occurrence and spread of resistance of common groundsel *(Senecio vulgaris)* to acetolactate synthase (ALS) inhibitors
S. Michel (INRA Dijon, France)

S3A-P-056 First European cases of *Sorghum halepense* resistant to ALS inhibitors: resistance patterns and mechanisms
S. Panozzo (IBAF-CNR, Italy)

S3A-P-057 Identification and distribution of ALS resistant *Sorghum halepense* populations in Serbia
G. Malidza (Institute of Field and Vegetable Crops, Serbia)

S3A-P-058 Tracing biotypes of turnip weed (*Rapistrum rugosum* L.) resistant to tribenuron-methyl in wheat fields of Iran
Z. Hatami-Moghaddam (University of Gorgan, Iran)

S3A-P-059 Inheritance of ALS herbicide resistance in *Tripleurospermum perforatum*
L. Ulber (Julius Kähn-Institut, Germany)

S3A-P-060 Determination of ALS herbicides resistance biotypes of *Galium aparine* L. (Catchweed bedstraw) and *Bifora radians* Bieb. (Bifra) in wheat fields by bioassay methods
E. Kaya-Altop (Ondokuz Mayıs University, Turkey)

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M. Babineau (Aarhus University, Denmark)

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Y. I. Kaiser (University of Hohenheim, Germany)

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J. Herrmann (Bayer CropScience, Germany)

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R. Alcantara-de-la-Cruz (University of Córdoba, Spain)

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I. Calha (Instituto Nacional de Investigaçao Agraria e Veterinaria, Portugal)

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S. Knezevic (University of Nebraska, USA)

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S. Knezevic (University of Nebraska, USA)

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J. Rey Caballero (University of Lleida, Spain)

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R. Dücker (Bayer CropScience, Germany)

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M. Höfer (RLP Agroscience GmbH, Germany)

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M. Matzrafi (Institute of Plant Sciences and Genetics in Agriculture, Israel)

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R. Stefanoviciene (Institute of Agriculture, LRCAF, Lithuania)

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K. Hamouzova (University of Life Sciences, Czech Republic)

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C. Denieul (InVivo AgroSolutions, France)

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Y. Menchari (Institut Supérieur de Biotechnologie, Tunisia)

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C. Marchesi (Instituto Nacional de Investigacion Agropecuaria, Uruguay)

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D. Skirvin (ADAS, United Kingdom)

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C. von Redwitz (University of Rostock, Germany)

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P. Wang (University of Hohenheim, Germany)

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J. Lee (National Academy of Agricultural Science, South Korea)

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R. Alcantara-de la Cruz (University of Córdoba, Spain)

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K. Benaissa (University Mohamed Khider, Algeria)

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R. Rauber (Instituto Nacional de Investigacion Agropecuaria, Argentina)

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G. Pinke (University of West, Hungary)

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A. Eddoud (Université Kasdi Merbah Ouargla, Algérie)

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M. Mota (University of Applied Sciences and Arts, Switzerland)

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K. Hanitet (Djilali Liabes University, Algeria)

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I. Vanaga (Plant Protection Research Centre, Latvia)

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Z. Mintale (Plant Protection Research Centre, Latvia)

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S. Chovancova (Merdel University, Czech Republic)

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C. Selig (University of Rostock, Germany)

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D. Moreau (INRA Dijon, France)

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L. Koning (University of Rostock, Germany)

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M. Hozayn (Field Crop Research, Egypt)

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S. Kabiri (Wageningen University, The Netherlands)

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F. Dessaint (INRA Dijon, France)

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O. Auskalniene (Institute of Agriculture, Lithuania)

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R. Naderi (Shiraz University, Iran)

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R. Perronne (INRA Dijon, France)

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H. Darmency (INRA Dijon, France)

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D. Chachalis (Benaki Phytophath. Institut, Greece)

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E. Furlani Junior (Sao Paulo State University, Brazil)

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E. Imoloame (Kwara State University, Nigeria)

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I. Özberk (Harran University, Turkey)

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M. Lazzaro (Scuola Superiore Sant'Anna, Italy)

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A. Taab (Weed Science at Ilam University, Iran)

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M. Kolarova (CULS, Czech Republic)

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B. Gerowitt (University of Rostock, Germany)

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J. Holec (University of Life Sciences, Czech Republic)

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A. Dabbagh Mohammadi Nasab (University of Tabriz, Iran)

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H. Abaee (University of Tehran, Iran)

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L. Cazenave (Chambre d'agriculture de Gironde, France)

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G. Theisen (Embrapa, Brazil)

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F. Vidotto (DISAFA, Italy)

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A. Charalabidis (INRA Dijon, France)

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S. Noroozi (University of Tehran, Iran)

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A. Murdoch (University of Reading, United Kingdom)

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NOTES

NOTES

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