

GHRC 2017 – Program

Sunday, May 14, 2017

12 - 1 pm	Registration Open for Herbicide Resistance Methods Workshop
1 - 5 pm	Herbicide Resistance Methods Workshop
2 - 7 pm	GHRC 2017 Registration Open
2 - 5 pm	Speaker Room Open
2 - 5 pm	Poster Set-up
2 - 5 pm	Exhibitor / Sponsor Set-up
5 - 7 pm	GHRC 2017 Opening Reception

GLOBAL
HERBICIDE
RESISTANCE
CHALLENGE

Denver, Colorado, USA
May 14-18, 2017

Herbicide Resistance Methods Workshop

Sunday, May 14, 2017

12:00	Registration Open for Herbicide Resistance Methods Workshop
1:00	Perspectives on herbicide resistance research - S Powles, University of Western Australia
1:45	Identifying, characterizing, and reporting resistance: Experimental requirements for greenhouse dose responses to report to journals and the online resistance database - S Nissen, Colorado State University
2:30	Statistical methods for herbicide resistance research - dose response analysis, R:S ratios - A Kniss, University of Wyoming
2:45	BREAK
3:30	DNA markers for herbicide resistance diagnostics - M Jugulam, Kansas State University
4:15	Biochemical markers and enzyme assays for herbicide resistance diagnostics - F Dayan, Colorado State University
5:00	ADJOURN Workshop
5 - 7 pm	GHRC 2017 Opening Reception

GHRC 2017 – Program

Monday, May 15, 2017

6 - 8:30 am	Registration Open
7 am - 5 pm	Speaker Room Open
7 am - 6 pm	Information Desk Open
7 am - 8 am	CONTINENTAL BREAKFAST in Foyer and Poster/Exhibit Room
	Global Herbicide Resistance Challenge 2017 Opening Session
8:00 am	Conference Welcome - SK McDonald, Mountain West PEST, GHRC 2017 Organizing Committee Chair
8:10 am	“State of the Global Herbicide Resistance Challenge” -- #S Powles, University of Western Australia
8:30 am	Conference Welcome “Challenge Accepted” – T Gaines, Colorado State University, GHRC 2017 Scientific Program Chair
8:50 am	Overview of herbicide resistance issues in South America -- #RFL Ovejero, Monsanto
9:10 am	Overview of herbicide resistance issues in Europe -- #A Collavo, Bayer CropScience
9:30 am	Overview of herbicide resistance issues in North America -- #S Culpepper, University of Georgia
9:50 am	Summary of US National Academy of Science National Summits and regional Herbicide Resistance listening sessions -- #J Schroeder, USDA Office of Pest Management Policy
10:10 am	COFFEE BREAK in Poster/Exhibit Room
10:40 am	Overview of herbicide resistance issues in Asia -- #V Shivrain, Syngenta
11:00 am	Overview of herbicide resistance issues in Australia - #M Walsh, University of Sydney
11:20 am	Developing effective communication strategies for herbicide resistance - #M Curtin, G&S Business Communications
11:40 am	Industry perspective of how to meet the herbicide resistance challenge - #M Peterson, Global Herbicide Resistance Action Committee Chair and R&D Director, Dow AgroSciences
12:00 pm	LUNCH in Foyer and Poster/Exhibit Room

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1:00 pm	History of Auxin Herbicide Resistance - *I Heap, International Survey of Herbicide-Resistant Weeds
1:20	Evolution of Resistance to Auxin Herbicides: History, Spread and Mechanisms of Resistance - *M Jugulam, Kansas State University
1:40	Discovering and Developing New Synthetic Auxin Herbicides - *N Satchivi, Dow AgroSciences
2:00	Auxin Herbicide Perception and Metabolism - *R Napier, University of Warwick
2:20	COFFEE BREAK in Poster/Exhibit Room
2:40	Case study of weed species resistance to auxin herbicides – <i>Kochia scoparia</i> - *P Westra, Colorado State University
2:55	Resistance mechanisms to 2,4-D in multiple herbicide-resistant wild radish and management options - *R Busi, University of Western Australia
3:10	Resistance mechanisms to synthetic auxins in Spanish <i>Papaver rhoeas</i> populations - *J Torra, University of Lleida
3:25	2,4-D Resistance in Prickly Lettuce (<i>Lactuca serriola</i> L.) - *D Riar, Dow AgroSciences
3:40	Managing Resistance in Auxin Tolerant Crops - *M Horak, Monsanto and Chair of US HRAC
4:00	Panel Discussion, Identifying and Filling Knowledge Gaps to Ensure Auxin Herbicide Longevity, Sustainability and Utility - Panelists
4:30	COFFEE BREAK in Poster/Exhibit Room
4:45	Dicamba resistant crops: How dicamba resistance gene technology was developed and how it works – DP Weeks
5:00	Inheritance of 2,4-D resistance in <i>Amaranthus tuberculatus</i> - PJ Tranel
5:15	Cytochrome P450 modulates 2,4-D metabolic resistance in Waterhemp (<i>Amaranthus tuberculatus</i>) - ^MRA Figueiredo
5:30	Investigation of a role of β -Cyanoalanine Synthase in quinclorac resistance in multiple-herbicide resistant <i>Echinochloa phyllopogon</i> - ^P Chayapakee
5:45	Distinct mechanism contribute to dicamba resistance in <i>Kochia scoparia</i> from Kansas and Colorado - ^J Ou
6:00	ADJOURN

Only presenting authors are listed.

#GHRC 2017 Invited Speaker

*Speaker sponsored by Global HRAC

^Presenting as a student

GHRC 2017 – Program

Tuesday, May 16, 2017

6 - 8:30 am	Registration Open			
7 am - 5 pm	Speaker Room Open			
7 am - 6 pm	Information Desk Open			
7 am - 9am	CONTINENTAL BREAKFAST in Poster/Exhibit Room			
	Poster Session			
7:00	Education & Regulatory / Genomics / Diagnostics			
	Interactive Workshops			
9:00	Workshop 1	Workshop 2	Workshop 3	Workshop 4
	Socioeconomics and Human Dimensions of Herbicide Resistance <u>Organizer & Rapporteur:</u> #G Frisvold, University of Arizona	Communication is critical to solve our herbicide resistance problems <u>Organizer & Rapporteur:</u> #P Newman, University of Western Australia	Bridging the gap between weed genomics and herbicide resistance management <u>Organizer & Rapporteur:</u> #P Neve, Rothamsted Research	Linking Big Data and Resistance Testing for Precision Herbicide Resistance Management <u>Organizer & Rapporteur:</u> #I Burke, Washington State University
10:15	COFFEE BREAK in Poster/Exhibit Room			
10:45	Socioeconomics and Human Dimensions of Herbicide Resistance	Communication is critical to solve our herbicide resistance problems	Bridging the gap between weed genomics and herbicide resistance management	Linking Big Data and Resistance Testing for Precision Herbicide Resistance Management
12:00	LUNCH in Foyer and Poster/Exhibit Room			
	Education & Regulatory Session		Genomics Session	
1:00	Educational lessons from the Take Action: Herbicide Resistance Management project - *CL Sprague		Polyploidy and herbicide resistance evolution - #Q Yu	
1:15	European and Spanish legislation that increases agricultural diversity and its relationship with the management of herbicide resistance - *A Taberner		Progress and perspectives in transcriptomics-based herbicide resistance research - #D Giacomini	
1:30	The US EPA's herbicide resistance management approach - B Chism		Palmer amaranth genome assembly - #C Saski	

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1:45	Herbicide discovery in light of fast spreading resistance and ever increasing regulatory hurdles - B Peters	First case of glyphosate resistance in <i>Tridax procumbens</i> endowed by a novel EPSPS Thr-102-Ser mutation - J Li
2:00	New tax on pesticides triggers increased monitoring - SK Mathiassen	Transcriptomics and population genetics of glyphosate resistant <i>Conyza bonariensis</i> (fleabane) populations in Australia - JP Hereward
	Diagnostic Session	Genomics Session
2:15	Weed Herbicide Resistance Diagnostics From Field to New Molecular Biology Technology. A Review - R Beffa	EPSPS gene duplication is not sufficient for glyphosate resistance in Palmer amaranth - RD Sammons
2:30	Derived Polymorphic Amplified Cleaved Sequence (dPACS) assay: a novel PCR-RFLP procedure for detecting known Single Nucleotide Polymorphisms - SS Kaundun	Double amino acid substitutions in EPSPS endows high level glyphosate resistance in <i>Eleusine indica</i> - A Jalaludin
2:45	Rapid detection of resistance to post-emergence herbicides in <i>Amaranthus</i> spp. with the Syngenta Resistance In-Season Quick (RISQ) test - L Jackson	The EPSPS replicon: A massive vehicle for gene copy number proliferation in <i>Amaranthus palmeri</i> - WT Molin
3:00	COFFEE BREAK in Poster/Exhibit Room	
	Interactive Workshop Rapporteur Presentations	
3:30	Socioeconomics and Human Dimensions of Herbicide Resistance - G Frisvold	
3:50	Communication is critical to solve our herbicide resistance problems - P Newman	
4:10	Bridging the gap between weed genomics and herbicide resistance management - P Neve	
4:30	Linking Big Data and Resistance Testing for Precision Herbicide Resistance Management - I Burke	
4:50	Workshop Discussion	
5:00	ADJOURN for Day	

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6 - 8:30 am	Registration Open	
7 am - 5 pm	Speaker Room Open	
7 am - 6 pm	Information Desk Open	
7 am - 9 am	CONTINENTAL BREAKFAST in Poster/Exhibit Room	
	Poster Session	
7:00	Non-Target Site Resistance / Modeling & Population Genetics / Herbicide Resistance in Crops	
	Lessons from Other Disciplines	
9:00	Lessons from insecticide resistance – #Blair Siegfried, Professor and Department Chair, University of Florida	
9:20	Lessons from fungicide resistance – #Meg McGrath, Associate Professor, Cornell University	
9:40	Lessons from antimicrobial resistance – #Sarah Janelle, MPH, CIC; Medical Epidemiologist, Colorado Department of Public Health and Environment	
10:00	Panel discussion, differences among pesticide groups for managing resistance	
10:15	COFFEE BREAK in Poster/Exhibit Room	
10:45	An ecologist’s perspective on herbicide resistance - #A Davis	
11:00	Farmer’s awareness of resistant weeds and perception of resistant management strategies: Results from a German survey - #L Ulber	
11:15	Herbicide resistance surveys - a case study of Western Australia - #MJ Owen	
11:30	“International Weed Genomics Consortium (IWGC)”: an initiative to coordinate and enable research in weed genomics.– #K Ravet	
12:00	LUNCH in Foyer and Poster/Exhibit Room	
	Non-Target Site Resistance Session	Modeling & Population Genetics
1:00	Investigation of the resistance mechanisms to several ACCase inhibitors in a multiple-herbicide resistant line of <i>Echinochloa phyllopogon</i> - #S Iwakami	Evolution in ecological timescales: a threat to food production and security - HL Hicks
1:15	Herbicide metabolic resistance gene discovery in <i>Lolium rigidum</i> using RNA-sequencing - H Han	Modeling the evolution of metabolic resistance - O Richter

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1:30	The detection and underpinning mechanisms of non-target site based herbicide resistance in black-grass - R Edwards	Molecular evolution and population dynamics of herbicide resistance in genus <i>Amaranthus</i> : rapid proliferation of a highly conserved gene modulated by population history - A Lawton-Rauh
1:45	New insights in development and mechanism of non-target-site herbicide resistance in <i>Alopecurus myosuroides</i> - J Peterson	The population genomics of multiple herbicide resistant <i>Alopecurus myosuroides</i> in the UK - A Dixon
2:00	Evolution of non-target-site resistance to ALS inhibitors in the allergenic dicotyledonous weed <i>Ambrosia artemisiifolia</i> - L Meyer	A generalised population model for predicting the evolution of herbicide resistance in arable weed populations - C Liu
2:15	Next generation sequencing validation requested to reveal non-target-site herbicide resistance mechanisms in <i>Lolium rigidum</i> - S González Fernández-Niño	The Diversity model: A multi-species, multi-herbicide tool for strategy development in Australian cotton cropping - D Thornby
2:30	Molecular, proteome, and biochemical characterization of multiple herbicide resistant <i>Avena fatua</i> accessions - WE Dyer	The herbicide dose conundrum regarding the evolution and delaying of weed resistance - J Gressel
2:45	Climate changes increase the risk for evolution of herbicide resistance weeds - M Matzrafi	Could herbicide resistance be eradicated? - M Renton
3:00	COFFEE BREAK in Poster/Exhibit Room	
	Herbicide Resistance in Crops Session	Transcriptomics / Genomics Session
3:30	Kochia: biology, gene flow and management of a herbicide-resistant tumbleweed - # L Hall	RNA-seq transcriptome analysis of multiple herbicide resistance in <i>Avena fatua</i> L. - BK Keith
3:45	A decade of weed surveys across south-eastern Australia- changes in herbicide resistance levels and identification of new cases of resistance - P Boutsalis	Evaluation of epigenetic modifications in herbicide treated <i>Arabidopsis thaliana</i> mutants - A Merotto
4:00	Herbicide-resistant <i>Kochia scopariain</i> the US Great Plains: What we know and path forward - V Kumar	Decreased dicamba transport due to increased flavonoid biosynthesis: a candidate dicamba resistance mechanism - ^DJ Pettinga

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4:15	Adaptive value of single and double spontaneous EPSPS glyphosate resistance mutations in the agroecosystem - MM Vila-Aiub	Genome sequencing and assembly for <i>Kochia scoparia</i> - ^E Patterson
4:30	Market reactions to weed resistance: Mode of action changes in herbicides used in soybeans and corn in the USA, Brazil and Argentina from 1996 to 2015 - HJ Streck	Genetic diversity and resistance of 15 <i>Echinochloa crus-galli</i> biotypes to quinclorac in Mekong delta of Vietnam and Arkansas of US - L Duy
4:45	Eco-evolutionary dynamics on the invasion front allows both target site and non-target site resistance to establish in the same population - SR Coutts	Independent selection in glyphosate-resistant populations of <i>Digitaria insularis</i> from Brazil - ^HK Takano
5:00	Adjourn	

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#GHRC 2017 Invited Speaker

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Thursday, May 18, 2017

6 - 8:30 am	Registration Open	
7 am - 5 pm	Speaker Room Open	
7 am - 6 pm	Information Desk Open	
7 am - 9 am	CONTINENTAL BREAKFAST in Foyer and Poster/Exhibit Room	
	Poster Session	
7:00	HPPD Resistance / Management	
	HPPD Workshop (Sponsored by Global HRAC)	Management Session
9:00	Overview of HPPD Activity and Resistance Management - *J Norworthy	Herbicide resistance in California orchard and vineyard cropping systems - #B Hanson
9:15		Controlling herbicide resistant annual bluegrass (<i>Poa annua</i> L.) phenotypes with methiozolin - #JT Brosnan
9:30	Metabolic resistance to the HPPD-inhibitor tembotrione in Palmer amaranth (<i>Amaranthus palmeri</i>) - ^A Küpper	Control of glyphosate-resistant waterhemp (<i>Amaranthus tuberculatus</i> var. <i>rudis</i>) in Roundup Ready, Liberty Link, Enlist and HPPD Soybean (<i>Glycine max</i>) in Ontario - PH Sikkema
9:45	An RNA-seq based genomic analysis of 4-hydroxyphenylpyruvate dioxygenase inhibitor herbicide resistance in <i>Amaranthus tuberculatus</i> - ^DR Kohlhas	Biology aspects, differential susceptibility and efficacy of alternative herbicides to glyphosate in the management of goosegrass resistant populations to glyphosate (<i>Eleusine indica</i> L. Gaertn.) - PJ Christoffoleti
10:00	Mechanism of resistance to mesotrione in an <i>Amaranthus tuberculatus</i> population from Nebraska, USA - S-J Hutchings	Blackgrass (<i>Alopecurus myosuroides</i> Huds.) resistance to ALS-inhibitors: A case study approach to study causes of weed resistance to herbicides - JKMB Herrmann
10:15	Biochemical mechanisms and genes conferring metabolic resistance to multiple herbicides in <i>Amaranthus tuberculatus</i> - DE Riechers	Resistance Fighter: A Platform to Help Retailers and Growers Manage Herbicide Resistant Weeds - D Bowers

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10:30	Physiological, biochemical and molecular characterization of multiple herbicide resistance in Palmer amaranth (<i>Amaranthus palmeri</i>) - S Nakka	State of weed resistance in western Canada, economic impact, and grower adoption of proactive and reactive management practices - H Beckie
10:45	COFFEE BREAK in Poster/Exhibit Room	
GHRC 2017 Closing Session		
11:00	Looking ahead from the Private Sector perspective towards meeting the herbicide resistance challenge - #A Percy, Bayer CropScience Global R&D Director	
11:20	HPPD Workshop Summary - *R Beffa	
11:30	Presentation of Graduate Student Awards	
11:35	Wrap-up session: Lessons learned, and what was missing at GHRC 2017	
12:00	ADJOURN - Safe Travels!	
12:00 - 5:00	Remove posters / exhibits / sponsors	

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Harvest Weed Seed Control Symposium – Program

Thursday, May 18, 2017

12:00	LUNCH for Harvest Weed Seed Control Symposium Participants
	HWSC Opportunities and Approaches
12:30	Why HWSC - P Newman
12:40	Canadian Prairies - H Beckie
12:55	Mid-south - L Schwartz
1:10	Mid-west - A Davis
1:25	Southern great plains - M Bagavathiannan
1:40	Central great plains - ^N Soni
1:55	UK and Europe - P Neve
2:10	Break
	Development and Introduction of HWSC for Cropping Systems
2:30	HWSC in US cropping systems - J Norsworthy
2:50	HWSC in Canadian cropping systems - N Harker
3:10	HWSC in irrigated cropping systems - J Broster
3:25	Facilitated discussion exploring global opportunities - P Newman
	Practical HWSC - The Farmer and industry Perspective
3:40	HWSC adoption - M Walsh
3:55	Narrow windrow burning in soybean - Arkansas Farmer
4:10	Commercial perspective on HWSC and the development plans for HSD and iHSD - J Wheatley
4:25	HWSC in wheat in Australia - R Harrington
4:50	Wrap-up and next steps - P Newman
5:00	ADJOURN

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GHRC 2017 – Sponsors

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GHRC 2017 – Diagnostics Poster Session

Tuesday, May 16, 2017

Glyphosate resistance in *Eleusina indica* populations from Brazil: detection, mechanism and monitoring - ^HK Takano

Early detection of herbicide resistance using spectral image analysis - DS Kim

Quick method for resistance detection in *Bidens pilosa* biotypes - F Gava

The effect of Tri-allele following a pre-emergence application on the formation of the wax leaf cuticle and comparison to field performance of grass-weeds in Europe - J Edmonds

Multiple resistance to glyphosate and ALS inhibitors in Palmer amaranth (*Amaranthus palmeri*) identified in Brazil - ^A Küpper

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GHRC 2017 – Education and Regulatory Poster Session

Tuesday, May 16, 2017

Experimental methods for confirming resistance to glyphosate and dicamba - ^C Coburn

Influence drives practice change, not information - P Newman

Bringing the challenge home to farmers: How interactive mapping of local resistance data may promote faster and more effective action - C White

A classroom and extension activity for teaching practical limitations to proactive herbicide resistance management - AR Kniss

WeedSmart - changing the way we communicate in Australian agriculture - L Mayer

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GHRC 2017 – Genomics Poster Session

Tuesday, May 16, 2017

Novel target-site β -tubulin mutations conferring trifluralin herbicide resistance in *Lolium rigidum*
- ^J Chen

The molecular basis of glyphosate resistance in *Conyza bonariensis*(L.) Cronq. from South
Africa - ^MN Okumu

Underlying mechanisms in glyphosate-resistant *Eleusine indica* from Mexico - ^PT
Fernandez-Moreno

Enhanced CYP-450 herbicide metabolism and ALS Pro-197-Gln mutation endow different
resistance levels to sulfonylureas herbicides in *Lolium rigidum* - ^AD Ponce

Investigating the 2,4-D resistance mechanism in Indian hedge mustard (*Sisymbrium orientale*)
from Australia using RNA-Seq - ^A Küpper

The role of the mitochondrial PPO gene (PPX2) in resistance to PPO herbicides - ^A Barker

Target-site mutations in ALS gene copies vary according to *Echinochloa* species - TBD

Mechanism of glyphosate resistance of *Lolium multiflorum* Japan - T Tominaga

Isolation and activity detection of EPSPS promoter from *Eleusine indica* - C Zhang

Mechanisms and EPSPS gene characteristics of plants naturally tolerant to glyphosate - S
Qiang

Glyphosate and Paraquat Stress in *Conyza bonariensis* and *Conyza canadensis*:

Transcription of Putative Tonoplast Transporters and Selection of Reference Genes for
qRT-PCR - ML Moretti

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GHRC 2017 – Herbicide Resistance in Crops Poster Session

Wednesday, May 17, 2017

- Characterization of multiple-resistant Italian ryegrass populations from western Oregon - ^LK Bobadilla
- Effect of soil moisture on the efficacy of pendimethalin formulations in greenhouse - ^M Kaur
- Coexistence of ALS-inhibitors resistant *Amaranthus* species in North-Eastern Italy - ^A Milani
- Distribution of glyphosate-resistant Palmer amaranth (*Amaranthus palmeri*) and common waterhemp (*Amaranthus rudis*) in Nebraska - ^BC Viera
- Evolution of resistance to ACCase-inhibiting and cross-resistance to non-selective herbicides in *Eleusine indica* - ^PT Fernandez-Moreno
- Initial case of cross resistance to PPO-inhibiting herbicides for a *Lolium rigidum* biotype resistant to glyphosate in Spain - ^PT Fernandez-Moreno
- Chemical, biochemical and physiological interactions between the herbicides glyphosate and 2,4-D - ^MRA Figueiredo
- Characterization of a multiple-resistant population of Italian ryegrass from California - ^C Brunharo
- Evolution of glyphosate-resistant *Salsola tragus* L. (Russian-thistle) in Montana and Pacific Northwest, USA - P Jha
- Weed control, crop tolerance and potential tank contamination in dicamba resistant soybeans - S Knezevic
- A rare Ile-2041-Thr mutation in ACCase gene confers resistance to ACCase-inhibiting herbicides in shortawn foxtail (*Alopecurus aequalis*) - J Wang
- Survey of weed resistance in Serbia - D Bozic
- Weedy sunflower (*Helianthus annuus* L.) response to herbicide ALS inhibitors - S Vrbnicanin
- Trends in green foxtail resistance to Group 1 and Group 2 herbicides - BM Jenks
- Lolium perenne* spp. *multiflorum* (Iredell County, NC) resistance to ACCase inhibitors, ALS inhibitors, and glufosinate - VK Nandula
- Resistance to ALS inhibitors in *Amaranthus tuberculatus* and *A. retroflexus* from Mississippi - VK Nandula
- Resistance of *Apera spica venticornis* Lithuania - O Auskalnine
- Which mechanism drives imazapyr + imazapic resistance in *Echinochloa crus-galli* biotype E3CL from eastern Uruguay? - C Marchesi
- Characterization of herbicide resistance in a multiple-resistant *Amaranthus rudis* population from Missouri, USA - LS Shergill
- Frequency and distribution of glyphosate resistance in *Eleusine indica* populations randomly collected across Indonesian corn fields - E Purba
- Glyphosate-resistant *Conyza canadensis* in Korea - KW Park
- Spatial distribution of ALS inhibitor and ACCase inhibitor resistant *Echinochloa oryzicola* in rice fields in Korea - J Lee
- The prevalence of Ile-1781-Leu mutation in conferring resistance to ACCase-inhibiting herbicides in *Avena ludoviciana* Dur. Biotypes - E Zand

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GHRC 2017 – Herbicide Resistance in Crops Poster Session

Wednesday, May 17, 2017

- Cross-resistance of wild mustard (*Sinapis arvensis*) populations to ALS inhibitor herbicides in wheat - E Zand
- Ile-2041-Asp mutation endowing high-level resistance to clodinafop-propargyl in *Avena ludoviciana* populations - H Sasanfar
- Multiple herbicide resistance of *Eleusine indica* to glyphosate and ACCase inhibitor herbicides in Brazil - PJ Christoffoleti
- New cases of herbicide-resistant *Echinochloa crus-galli* detected in Uruguayan rice fields - C Marchesi
- Mechanism of Acetolactate synthase (ALS) inhibitor resistance in *Echinochloa oryzicola* - JW Kim
- Geographical distribution of herbicide resistant *Echinochloa* species in Californian rice fields - DS Kim
- ALS resistant *Cyperus difformis* L. biotypes in rice - H Mennan
- Widespread multiple herbicide resistance in UK populations of *Alopecurus myosuroides* - L Crook
- A first case of glyphosate and paraquat resistance in *Plantago lanceolata* from South Africa - PJ Pieterse

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GHRC 2017 – Modeling & Population Genetics Poster Session

Wednesday, May 17, 2017

- Exploiting the phenology of herbicide-resistant *Ambrosia trifida* to manage the weed seed bank - ^J Goplen
- Impacts of environmental and biological stressors on the population dynamics of multiple herbicide resistant *Avena fatua* (L.) - EA Burns
- Herbicide resistance in rice in Italy: is its evolution associated with agronomic and environmental conditions? - ^E Mascanzoni
- How well will stacked transgenic herbicide resistances delay weeds from evolving resistance? - J Gressel
- How to integrate the management of resistant weed biotypes in a DSS? The case of the Spanish version of CPOWeeds - JM Montull
- The ecological fitness of multiple-resistant *Eleusine indica* - E Purba
- Glyphosate resistance in the UK? An epidemiological assessment of glyphosate sensitivity in UK populations of *Alopecurus myosuroides* - D Comont
- The ecological fitness cost of multiple-resistant *Echinochloa crus-galli* based on comparative proteomics and physiological analysis - X Yang

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GHRC 2017 – Non-Target Site Resistance Poster Session

Wednesday, May 17, 2017

Non-target site resistance in the HPPD-resistant waterhemp from Nebraska - ^MC Oliveira

Investigating metabolic resistance to the ALS herbicide *Kochia scoparia* - ^OE Todd

Exploring genotype-phenotype relations in non-target site resistant *Alopecurus myosuroides* populations - ^C Lowe

A novel mechanism that confers reduced glyphosate sensitivity in *Kochia scoparia* - ^N Soni

Study on the multiple-herbicide resistance mechanism in *Echinochloa crus-galli* with resistant to penoxsulam and quinclorac - Y Li

Non-target-site resistance evolution in *Apera spica-venti* - D Rissel

Scouting for metabolic resistance in weeds - A Collavo

Non-target-site resistance to ALS inhibitors in water chickweed (*Mysoton aquaticum* L.) - W Liu

Detection of *Bidens pilosa* with multiple resistance to atrazine and imazethapyr in Brazil - GBP Braz

Limited induction of ethylene and cyanide biosynthesis appears to be involved in resistance to quinclorac in *Echinochloa crus-galli* biotype found in Uruguay - C Marchesi

Evidence for multiple herbicide-resistant Italian ryegrass (*Lolium multiflorum*) populations in northern California - P Tehranchian

Glyphosate-Resistant *Ambrosia trifida*: Non-Target Site Resistance Mechanisms and Physiology of Rapid Tissue Death Response - ML Moretti

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GHRC 2017 – HPPD Resistance Poster Session

Thursday, May 18, 2017

Investigating a putative HPPD (4-hydroxyphenylpyruvate dioxygenase) inhibiting herbicide resistant *Ambrosia trifida* population - ^EAL Jones

Waterhemp resistance to post emergent application of HPPD herbicides - SZ Knezevic

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GHRC 2017 – Management Poster Session

Thursday, May 18, 2017

Rising CO₂ and temperature levels impact on herbicide efficacy and physiology of herbicide-resistant C3 and C4 weeds - NR Burgos

Preparation and characterization of bromoxynil ionic liquid for improving the effective utilization ratio - ^GL Ding

Evaluation of efficacy of glufosinate mixed with six herbicides in apple orchard - ^G Tang

Management and mitigation of herbicide resistance in weeds of wheat in India- it's possible - ^VK Sindhu

Monitoring multiple resistance to glyphosate and chlorimuron in *Conyza* populations from grain-producing areas of Paraná (Brazil) - ^RR Mendes

Evaluating the relative contribution of crop rotation, tillage, and herbicide diversity for proactive herbicide resistant weed management - ^EG Mosqueda

Crop safety and winter annual grass weed control in mutagenesis-derived ACCase-resistant winter wheat lines - ^CM Hildebrandt

An overview of the University of Tennessee Weed Diagnostics Center - JT Brosnan

Control of glyphosate-resistant *Conyza canadensis* in a corn/soybean/winter wheat rotation - N Soltani

Giant ragweed resistance to glyphosate in Nebraska - SZ Knezevic

Recent developments of herbicide resistance in New Zealand - TK James

Evolution of herbicide resistance in monocotyledonous weeds in Central Europe - J Petersen

Pre-launch activities and stewardship for the new ALS tolerant sugar beet system Conviso - A Collavo

Rinskor™ Active (florpyrauxifen-benzyl): A new aryloxyacetate herbicide for weed control and herbicide resistance management in rice - M Morell

Distribution and management of *Sorghum halepense* and *Amaranthus retroflexus* resistant to ALS inhibitors in Serbia - G Malidza

Evolution and management of glyphosate-resistant weeds in wheat-fallow in Montana, USA - V Kumar

Management of multiple herbicide resistant weeds in India - S Singh

Herbicide resistant weed management program in rice - H Mennan

Only presenting authors are listed.

^ Presenting as a student.

GHRC 2017 – Management Poster Session

Thursday, May 18, 2017

Glyphosate-resistant *Amaranthus palmeri* biotypes in Argentina: 2,4-D choline vs. dicamba DMA dose response in postemergence applications - R Frene

Status of herbicide weed resistance in Brazil - F Adegas

Weed control programs for *Conyza summatrensis* glyphosate-resistant biotypes in Enlist E3TM soybeans in Argentina - R Frene

Might artificial pollination be used as an herbicide-resistant weed management tool? - M Christoffers

Is the switch to residual herbicides for *Alopercurus myosuroides* control in the UK building up resistance problems for the future? - R Hull

Resistance management of *Amaranthus tuberculatus* in 2,4-D and dicamba tolerant soybean using tank-mixtures - SV Stepanovic

Current Status and Management Strategies for Herbicide-Resistant Weeds in India, Sri Lanka, and the Philippines - V Kumar

Current Status of Herbicide Resistant Weeds in Wet Seeded Rice in Sri Lanka - ASK Abeysekara

Management Strategies to Control Herbicide Resistance Weeds in Wet Seeded Rice in Sri Lanka - ASK Abeysekara

Improving Winter Crop Yield through No-till Agronomy and Summer Weed Management in the Scenario of Herbicide Resistance in Western Australia - M Amjad

Herbicide resistance in *Apera spica-venti* in the Czech Republic is spreading due to simplification of farming practices - J Soukup

Using herbicide layering for managing herbicide resistance in *Avena fatua* in wheat in western Canada - K Holmes

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