

Oral Sessions

Wednesday, September 20

14:45-16:05

Aquatic Weeds 1

Organizer/Chairperson: Nimal Chandrasena
GHD Pty Ltd., Australia

O-001 **Lead**

Endothall use in flowing systems for nuisance aquatic weed and algae control

Cody J. Gray

United Phosphorus, Inc., USA

O-002

Control of aquatic weeds in canals and drains in Australasia – a review of methods

William Chisholm¹, Nimal Chandrasena², Peter Harper³

¹Aquatic Weed Control Ltd, New Zealand; ²GHD Pty Ltd., Australia; ³Bettersafe Pest & Weed Management, Australia

O-003

Fungal metabolites of *Alternaria raphani* in microbial control agents of aquatic weed *Alternanthera phylloxeroides*

Puja Ray, Writuparna Dutta, Jashaswi Basu

Presidency University, India

O-004

Crassulacean acid metabolism in an aquatic weed, a fern-ally: *Isoetes coromandelina* L. f.

Royyim Thananusak, Ornusa Khamsuk, Tassanai Jaruwattanaphan, Srisom Suwanwong

Kasetsart University, Thailand

O-005

Submerged aquatic plant control in Sydney 2000 Olympic lakes with fluridone (Sonar®) –A case study

Nimal Chandrasena¹, Peter Harper², Kevin Flynn³

¹GHD Pty Ltd., Australia; ²Bettersafe Pest & Weed Management, Australia; ³Sydney International Regatta Centre, Australia

16:25-17:30

Aquatic Weeds 2

Organizer: Nimal Chandrasena
GHD Pty Ltd., Australia

Chairperson: A. N. Rao
International Crops Research Institute for Semi Arid Tropics (ICRISAT), India

O-006 **Lead**

Translocation of ^{14}C -endothall in *Eurasian Watermilfoil*, *Curlyleaf Pondweed*, and two *Hydrilla* biotypes

Cody J. Gray¹, Mirella Farinelli Ortiz², Scott Nissen²

¹United Phosphorus, Inc., USA; ²Colorado State University, USA

O-007

Genetic and morphological diversity of *Ludwigia sedioides* in Sri Lanka: a potential invasive aquatic plant

Dinusha Debarawatta, Kapila Yakandawala, Thilak Attanayake

Wayamba University of Sri Lanka, Sri Lanka

O-008 **APWSS Travel Grant**

Studies on understanding the trends of invasive aquatic plant succession through inter-specific interactions among weeds

Writuparna Dutta, Parbani Chaudhury, Puja Ray

Presidency University, India

O-009

Management of *Hydrocotyle rannunculoides* in the Canning River, Perth: an options review

Nimal Chandrasena¹, Peter Harper², Luke McMillan³, Greer Gilroy³, Brett Kuhlmann⁴, Matt Grimbly⁴, Russel Gorton⁵

¹GHD Pty Ltd., Australia; ²Bettersafe Pest & Weed Management, Australia; ³Perth Region NRM, Australia; ⁴South East Regional Centre for Urban Landcare (SERCUL), Australia; ⁵Wilson Wetlands Action Group Inc., Australia

Oral Sessions

Thursday, September 21

10:30-12:05

Invasive Alien Species

Organizer: Tjitrosemito Soekisman
BIOTROP, Indonesia

Chairpersons: Steve Adkins
University of Queensland, Australia
Rahayu Sukmaria Sukri
Universiti Brunei Darussalam, Brunei Darussalam

O-010 **Lead**

A preliminary work to control *Chimonobambusa quadrangularis*, an invasive alien plant species in Gunung Gede National Park, West Java.

Tjitrosemito Soekisman, Mawardi Imam, Bachri Syaiful, Setiabudi Setiabudi, Wahyuni Indah,
Tjitrosoedirdjo Sudarmiyati Sri
BIOTROP, Indonesia

O-011

Managing entry of noxious alien weeds in to Sri Lanka: Can DNA barcoding be an effective identification tool?

W. J. Nimanthika, W. L. I. A. Harischandra
National Plant Quarantine Service, Sri Lanka

O-012

What a changing climate may mean for an invasive giant, *Parthenium hysterophorus*?

Ali A. Bajwa, Bhagirath S. Chauhan, Steve Adkins
The University of Queensland, Australia

O-013

The impact of *Acacia* invasion on litterfall production in lowland tropical rain forests of Brunei Darussalam

Salwana Md Jaafar¹, Faizah Metali¹, David F. R. P. Burslem², Rahayu Sukmaria Sukri¹
¹Universiti Brunei Darussalam, Brunei; ²University of Aberdeen, Scotland

O-014

Invasive alien plants and policy needs in Turkey

Ahmet Uludag^{1,2}
¹Düzce University, Turkey; ²Canakkale Onsekiz Mart University, Turkey

O-015

Medieval and modern volunteer vegetation shift in Jammu and Kashmir Himalayas

Anil Kumar, Jai Kumar, A. P. Singh, Lobzang Stanzen, Vikas Abrol, Sapna Bhagat

Sher-e-Kashmir University of Agricultural Sciences and Technology of Jammu, India

14:15-16:00

Parasitic Weeds, Weed Biology and Ecology, Utilization of Weeds

Chairpersons: Asad Shabbir

University of the Punjab, Pakistan/University of Sydney, Australia

Cumali Özaslan

Dicle University, Turkey

O-016

Screening maize for compatibility with *F. oxysporum* to enhance *Striga Asiatica* (L.) Kuntze. resistance

Admire I.T Shayanowako, Mark D Laing, Hussein Shimelis

University of KwaZulu-Natal, South Africa

O-017

iTRAQ-based differential expression proteomics in roots of sunflowers differing in resistance to *Orobanche cumana*

Na Zhang¹, Chong Yang¹, Ling Xu¹, Xiaopeng Yun², Quanjiang Bai², Weijun Zhou¹

¹Zhejiang University, China; ²Inner Mongolia Academy of Agricultural & Animal Husbandry Sciences, China

O-018

Inventaritation of weeds in sweet corn (*Zea mays* L Saccarata Strurt) at different fields condition

Uum Umiyati, Denny Kurniadie

Padjadjaran University, Indonesia

O-019

Weed diversity is comparable in Bt-transgenic and conventional cotton fields

Yongbo Liu

Chinese Research Academy of Environmental Sciences, China

O-020

Hyperaccumulator identification from weed species and its phytoremediation potential in Cd contaminated field

Shuhe Wei¹, Huiping Dai²

¹Chinese Academy of Sciences, China; ²Shaanxi Sci-Tech University, China

O-021

Management of southern blight of bell pepper by soil amendment with dry biomass of *Datura metel*

Arshad Javaid, Nadia Jabeen, Amna Shoaib

University of the Punjab, Pakistan

O-022

Competitiveness of two broad-leaf weeds: sesbania pea (*Sesbania cannabina*) and bladder ketmia (*Hibiscus trionum*) in mungbean (*Vigna radiata*).

Sudheesh Manali^{1,2}, Bhagirath Singh Chauhan¹

¹The University of Queensland, Australia; ²Amrita University, India.

Oral sessions

Friday, September 22

10:30-12:05

Weedy Rice

Organizer: Muhamad Shakirin Mispan
University Malaya, Malaysia

Chairperson: Xing-You Gu
South Dakota State University, USA

O-023 **Lead**

An ecological genetics study on seed overwintering in weedy rice

Muhamad Shakirin Mispan¹, Jiujuan Feng², Xing-You Gu²

¹University Malaya, Malaysia; ²South Dakota State University, USA

O-024

Genetic diversity and population differentiation of weedy red rice in Japan

Toshiyuki Imaizumi¹, Kaworu Ebana¹, Maiko Akasaka¹, Ayumi Deguchi^{2,3}, Atsushi J. Nagano², Hiroyuki Kobayashi¹

¹NARO, Japan; ²Ryukoku University, Japan; ³Chiba University, Japan

O-025

Innovative solution for the management of weedy rice and other weeds in wet-direct seeded rice systems

Virender Kumar, Jhoana Opeña, Katherine Valencia, Ofelia Namuco, Teodoro Migo, Shalabh Dixit, David E Johnson

International Rice Research Institute, Philippines

O-026

Weedy rice management strategies in transplanted aromatic rice in sub-tropical North-Western Himalayas of India

Anil Kumar, Jai Kumar, R. Puniya, B. R. Bazaya, Susheel Rattan

Sher-e-Kashmir University of Agricultural Sciences and Technology of Jammu, India

O-027

Weedy rice: a threat to rice cultivation in Sri Lanka

A.S.K. Abeysekera, H.M.S.D. Kulatunga, D.D. Witharana, W.M.U.B. Wikrama

Rice Research and Development Institute, Sri Lanka

O-028

Spatial distribution pattern of weedy rice (*Oryza sativa* L.) in two rice granaries in Peninsular Malaysia

Muhamad Shakirin Mispan, Fazrul Rahman Yatim, Intan Filzah Mahmud

University Malaya, Malaysia

13:15-14:50

Herbicide Tolerant Crops

Organizers/Chairpersons: David E. Johnson

International Rice Research Institute, Philippines

Virender Kumar

International Rice Research Institute, Philippines

O-029 **Lead**

Herbicide-resistant crops: A quarter century journey from dominance to diminished utility to diversified weed management practices

Krishna N. Reddy

U. S. Department of Agriculture, Agricultural Research Service, USA

O-030

Sustainability of the Clearfield® production system for rice in Malaysia

M. Azmi¹, T. V. George¹, T. Alex¹, C. Kevin¹, M. Dilipkumar², B. Weston³

¹BASF (Malaysia) Sdn Bhd, Malaysia; ²MARDI Seberang Perai, Malaysia; ³BASF SE, Germany

O-031

Fifteen years of Clearfield™ rice in Brazil: What we have learned

Luis A. Avila¹, Aldo Merotto Jr.², Edinaldo R. Camargo¹

¹Federal University of Pelotas, Brazil; ²Federal University of Rio Grande do Sul, Brazil

O-032

Learning about the Provisia® rice technology

Nilda Roma-Burgos¹, Christopher E. Rouse¹, Vijay Singh^{1,2}

¹University of Arkansas, USA; ²Texas A&M University, USA

O-033

Provisia™ rice system: efficacy, stewardship and potential

S. Luke Mankin¹, Sudakir Sudakir², S. Tan¹, Brigitte Weston³, Zuhair Zainal Abidin⁴

¹BASF Corporation, USA; ²BASF Indonesia, Indonesia; ³BASF SE, Germany; ⁴BASF Malaysia, Malaysia

O-034

Evaluation of herbicide tolerant transgenic corn hybrids in India

Satbir Singh, Punia

CCS Haryana Agricultural University, India

Oral Sessions

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Biological Control 1

Organizers/Chairpersons: Kunjithapatham Dhileepan

Biosecurity Queensland, Australia

Gadi V. P. Reddy

Montana State University, USA

O-035 **Lead**

Physical and genetic exploration for effective biocontrol agents of the climbing fern *Lygodium microphyllum*: progress, problems, potential

Jeff Makinson¹, Graham McCulloch², Ryan Zonneveld¹, Ellen Lake³

¹ABCL, CSIRO Health & Biosecurity; ²University of Queensland; ³IPRL, USDA ARS

O-036

Biological control of prickly acacia (*Vachellia nilotica* subsp. *indica*) in Australia: prospective agents from Ethiopia and Senegal

Kunjithapatham Dhileepan¹, Boyang Shi¹, Jason T Callander¹, Mindaye Teshome², Stefan Nesar³, Nathalie Diagne⁴, Anthony King⁵

¹Biosecurity Queensland, Australia; ²Central Ethiopia Environment and Forest Research Center, Ethiopia; ³University of Pretoria, South Africa; ⁴National Centre for Agronomic Research, Senegal; ⁵Plant Protection Research Institute, South Africa

O-037

The development of biological control of *Chromolaena odorata*, a common invasive alien species in the Southeast Asian region

Tjitrosemiteo Soekisman, Mawardi Imam, Syaiful Bachri, SETIA BUDI, Sri SUDARMIYATI Tjitrosoedirdjo, Wahyuni Indah

SEAMEO BIOTROP, Indonesia

O-038

An emerging success story of a seed-attacking weevil *Cissoanthonomus tuberculipennis* Hustache (Coleoptera: Curculionidae) released against balloon vine *Cardiospermum grandiflorum* Sw. (Sapindaceae) in South Africa

David O Simelane, Khethani V Mawela

Agricultural Research Council-Plant Protection Research Institute, South Africa

O-039

Biological control programs of the invasive weeds in the Mariana Islands

Gadi V. P. Reddy¹, R. Muniappan²

¹Montana State University, USA; ²Virginia-Tech, USA

O-040

The adventive pathogen *Cercospora dolichandrae* and its impact on the biological control of cat's claw creeper, *Dolichandra unguis-cati*, in South Africa

Anthony M. King

Agricultural Research Council, Plant Protection Research, South Africa

16:35-18:10

Biological Control 2

Organizers/Chairpersons: Kunjithapatham Dhileepan

Biosecurity Queensland, Australia

Gadi V. P. Reddy

Montana State University, USA

O-041 **Lead**

Prioritizing weeds as targets for biological control: a consultative and transparent framework for investing limited resources for weed management

S. Raghu, Louise Morin

CSIRO Health & Biosecurity, Australia

O-042

Biological control of invasive weeds –a potential weed management strategy for Japan

Daisuke Kurose, Marion K. Seier

CABI, UK

O-043

Biological control of parthenium weed (*Parthenium hysterophorus* L.) in China: opportunities from Australia

Boyang Shi, Kunjithapatham Dhileepan

Biosecurity Queensland, Australia

O-044

Enhancing mycoherbicidal potential by combination treatment of fungi for biological control of waterhyacinth

Puja Ray¹, Sushil Kumar², Akhilesh Kumar Pandey³

¹Presidency University, India; ²Directorate of Weed Research, Jabalpur, India; ³R.D. University, Jabalpur, India

O-045

Genetic variation for tolerance to defoliation in *Cirsium arvense*

M. G. Cripps¹, C. A. Dowsett¹, S. D. Jackman¹, A. D. L. Noble¹, G. J. Houlston²

¹AgResearch, New Zealand; ²Landcare Research, New Zealand

O-046

Fungi species infesting weed species of lentil in Diyarbakr province, Turkey

Cumali Özaslan

Dicle University, Turkey

Oral Sessions

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Non-Chemical Control

Chairpersons: Daizy R. Batish

Panjab University, India

Mohamed Fathy Salem

Genetic Engineering and Biotechnology Research Institute, GEBRI, University of Sadat City, Egypt

O-047

Non-chemical weed management technique for rice

Eagan Somasundaram, Bhavaji Gudi Shoba Rathod, D. Udhaya Nandhini

Tamil Nadu Agricultural University, India

O-048

Utilization of *Chromoleana odorata* integrated with water irrigation on weed control, rice growth and yield

Nawapon Pimthong, Udornporn Pangnakorn, Thanatchasanha Poonpaiboonpipattana

Naresuan University, Thailand

O-049

Effect of *Biden pilosa* L. integrated with water logging on changes of water and soil properties, and its physiological mechanisms to control barnyardgrass

Saiwaree Poolkum, Wipa Homhaul, Udornporn Pangnakorn, Thanatchasanha Poonpaiboonpipattana

Naresuan University, Thailand

O-050

Evaluating of bio efficacy of the aqueous solution of *Michelia champaca* seeds in controlling common weeds in agricultural lands.

P. K. M. Deepani, K. G. Prematilake, A. G. A. W. Alakolanga

University of Sri Lanka, Sri Lanka

O-051

Altering arbuscular mycorrhizal native density has effects on weed suppression in wheat fields

Muhammad Akbar¹, Muhammad Sajjad Iqbal¹, Tayyaba Khalil¹, Aqeel Ahmad²

¹University of Gujrat, Pakistan; ²University of the Punjab, Pakistan

O-052

Natural herbicides from essential oils: prospects and constraints

Daizy R. Batish, Shalinder Kaur

Panjab University, India

14:15-16:00

Allelopathy

Chairpersons: Yoshiharu Fujii

Tokyo University of Agriculture and Technology, Japan

Hisashi Kato

Kagawa University, Japan

O-053

Competition and allelopathic potential of *Cyperus rotundus* L. on sweet corn

Panwaree Uchaiya, Surasak Thongmuang, Thanatchasanha Poonpaiboonpipattana
Naresuan University, Thailand

O-054

Allelopathic potential of *Ludwigia sedioides*

Dinusha Debarawatta, Kapila Yakandawala, Thilak Attanayake
Wayamba University of Sri Lanka, Sri Lanka

O-055

Two growth inhibitory substances in the leaves of the tree fern, *Cyathea lepifera*

Noriyuki Ida¹, Toshiaki Teruya², Arihiro Iwasaki³, Kiyotake Suenaga³, Hisashi Kato-Noguchi¹
¹Kagawa University, Japan; ²University of the Ryukyus, Japan; ³Keio University, Japan

O-056

Bioefficacy and phytotoxicity of Eucalyptus leaf oil on wheat and associated weeds under field condition

Ankita Arya, Vipin C. Dhyanj, Sumit Chaturvedi
GBPUAT, Pantnagar, India

O-057

Allelopathic potentiality of Bangladesh indigenous rice variety 'Boterswar'

Sheikh Md. Masum^{1,2}, Md. Amzad Hossain³, Hikaru Akamine³, Jun-Ichi Sakagami¹, Takahiro Ishii³, Shinichi Gima³, Takara Kensaku³, Prasanta Chitta Bhowmik⁴
¹Kagoshima University, Japan; ²Sher-e-Bangla Agricultural University, Bangladesh; ³University of The Ryukyus, Japan; ⁴University of Massachusetts, USA

O-058

Mechanism action analysis of horseweed (*Conyza canadensis*) subject to botanic caryplic acid stress

Zuren Li^{1,2}, Qiong Peng^{1,2}, Lifeng Wang^{1,2}, Lamei Wu^{1,2}, Haona Yang^{1,2}, Xiaomao Zhou^{1,2}, Qin Yu¹, Lianyang Bai^{1,2}

¹Hunan Academy of Agricultural Sciences, China; ²Collaborative Innovation Center for Field Weeds Control, China

O-059

Administration effect of L-DOPA · allelopathic substance of *Mucuna prurens* on dogs

Hiromi Shimasaki, Taiki Iida, Yoshiharu Fujii
Tokyo University of Agriculture and Technology, Japan

Oral Sessions

Friday, September 22

10:30-12:00

Weed Management (Sustainable System)

Chairpersons: Makhan S. Bhullar

Punjab Agricultural University, India

Udai Pratap Singh

Banaras Hindu University, India

O-060

Impact of climate change on weed growth and control

Khawar Jabran¹, M. N. Doğan²

¹Duzce University, Turkey; ²Adnan Menderes University Aydin, Turkey

O-061

Nitrogen scheduling and impact on weed management in aerobic rice

B. Sreedevi, B. Dhanunjaya Reddy, A. Sandhyarani, R. Mahender Kumar, P. Senguttuvel, V. Ravindrababu
ICAR-Indian Institute of Rice Research, India

O-062

Sustainable weed management options for conservation agriculture in eastern Indo-Gangetic Plains of India

U. P. Singh, Yashwant Singh, A. V. Dahiphale, Sanjeev Kumar Kashyap, Sandeep Kumar
Banaras Hindu University, India

O-063

Long term mechanical soil intervention and weed management on yield of irrigated Maize –Sunflower cropping system under semi arid tropics

Murali Arthanari Palanisamy, Chinnusamy Chinnagounder, N. K. Prabhakaran, P. Janaki
Tamil Nadu Agricultural University, India

O-064

Impact of tillage, crop residue, and weed management on crop productivity in a rice-wheat cropping system under conservation agriculture

Makhan S. Bhullar¹, Simerjeet Kaur¹, Navjyot Kaur¹, Pervinder Kaur¹, Tarundeep Kaur¹, Gurjeet Gill²

¹Punjab Agricultural University, India; ²The University of Adelaide, Australia

O-065

Direct seeded rice in sequence with zero tillage wheat in north-western Indo-Gangetic plains: dealing with increased complexity in weed management

Dharam Bir Yadav¹, Ashok Yadav², Dalip Kumar Bishnoi¹, Gurjeet Gill³

¹CCS Haryana Agricultural University, India; ²IRRI-CSISA Hub, OUAT Campus, India; ³University of Adelaide, Australia

13:15-15:00

Weed Management (Integrated Weed Management)

Chairpersons: Abdul Shukor Juraimi

Universiti Putra Malaysia (UPM), Malaysia

Abul Hashem

Government of Western Australia, Australia

O-066

Row spacing, herbicides and nitrogen effect on crop-weed competition in cereal-broadleaf crop rotation

A. Hashem¹, W. Vance², R. Brennan¹, R. Bell²

¹Department of Primary Industry and Regional Development, Government of Western Australia, Australia; ²Murdoch University, Australia

O-067

Quantitative sustainable weed management strategy in intensive rice-wheat double cropping fields

Sheng Qiang

Nanjing Agricultural University, China

O-068

Effect of integrated weed management practices on growth, yield and economics of transgenic cotton

Y. R. Aladakatti, Ramesh H. Jatti

University of Agricultural Sciences, India

O-069

Evaluation of eight rice varieties for their weed-suppressive ability under different water regimes

Abdul Shukor Juraimi, Masitah Ab Jalil

Universiti Putra Malaysia (UPM), Malaysia

O-070

A new weed control measure of synchronous seeding and spraying herbicides with the precision rice hill-drop drilling machine

Jianping Zhang, Yongliang Lu, Wei Tang, Xiaoyue Yu

China National Rice Research Institute, China

O-071

Evolving appropriate tillage, weed and nutrient management practices for improving resource use efficiency in Green Manure-Maize-Pulse cropping system for the Semi Arid Tropics

R. Thirumalaikumar, N. S. Venkataraman, K. Balakrishnan, R. Babu, A. Rathinasamy

Tamil Nadu Agricultural University, India

O-143

Response of some summer season crops on weed suppression

Javaid Iqbal, Javeria Muneer, Safdar Hussain, Muhammad Ishaq Asif Rehmani, Shahzadi Mahpara

Ghazi University, Pakistan

Oral Sessions

Wednesday, September 20

14:45-16:35

Weed Problem, Constraint, and Opportunity in different countries 1

Organizer: Bhagirath Singh Chauhan

The University of Queensland, Australia

Chairpersons: Buddhi Marambe

University of Peradeniya, Sri Lanka

Khawar Jabran

Düzce University, Turkey

O-072 **Lead**

Issues and opportunities for sustainable weed management in Pakistan: a review

Saima Hashim

The University of Agriculture Peshawar, Pakistan

O-073

Weed research issues, challenges, and opportunities in Cambodia

Robert J. Martin

The University of Sydney, Australia

O-074

Weed research issues and opportunities in China

Jinwen Zhu¹, Jian Wang¹, Chaoxian Zhang², Guiping Zheng¹, Wen Liang¹, Faisal Islam¹, Chong Yang¹, Xuexin Chen¹, Weijun Zhou¹

¹Zhejiang University, China; ²Chinese Academy of Agricultural Sciences, China

O-075

Weed research issues, challenges, and opportunities in India

A. N. Rao¹, Ravi G. Singh², G. Mahajan³, S. P. Wani⁴, J. K. Ladha⁵, Arvind. Kumar⁵, B. S. Chauhan³

¹ICRISAT Development Center (IDC) and IRRI, International Crops Research Institute for Semi Arid Tropics (ICRISAT); ²International Maize and Wheat Improvement Center (CIMMYT), Mexico; ³The University of Queensland, Australia; ⁴International Crops Research Institute for Semi Arid Tropics (ICRISAT), India; ⁵International Rice Research Institute (IRRI), Philippines

O-076

Weed problems in Japan

Tohru Tominaga¹, Shunji Kurokawa²

¹Kyoto University, Japan; ²National Agriculture and Food Research Organization, Japan

O-077

Confirmation of imidazolinone-resistant weedy rice (*Oryza sativa*) in Malaysia

Dilipkumar Masilamany¹, Zuhair Zainal Abidin², George Varghese², Nilda Roma Burgos³, Chuah Tse-Seng⁴

¹Malaysian Agricultural Research and Development Institute (MARDI), Malaysia; ²BASF (Malaysia), Malaysia;

³University of Arkansas, USA; ⁴University of Malaysia Terengganu, Malaysia

O-078

Current issues related to weeds and weed management in Sri Lanka

Buddhi Marambe

University of Peradeniya, Sri Lanka

16:55-17:55

Weed Problem, Constraint, and Opportunity in different countries 2

Chairperson: Bhagirath Singh Chauhan

The University of Queensland, Australia

O-079

Survey of weed floral composition under aerobic rice (*Oryza sativa* L.) soil condition in Malaysia.

Siti Nur Anisah Aani^{1,2}, Abdul Shukor Juraimi¹, Muhammad Saiful Ahmad Hamdani¹, Mohd Ridzwan A.Halim¹

¹Universiti Putra Malaysia, Malaysia; ²Universiti Teknologi Mara, Malaysia

O-080

Opportunities for capacity building in weed management - Laos PDR

Deirdre Lemerle

Charles Sturt University, Australia

O-081

The Wild Oat Problem in Wheat Fields in Turkey

Ahmet Uludag^{1,2}, Süleyman Türkseven³, İsmail Can Paylan³, Mehmet Demirci⁴, Deniz Çapkan³

¹Düzce University, Turkey; ²Çanakkale Onsekiz Mart University, Turkey; ³Ege University, Turkey; ⁴Agrobest Grup, Turkey

O-082

The succession of weed community demanding glyphosate-resistant corn production in China

Xiang-ju Li, Hai-lan Cui, Hui-lin Yu

Chinese Academy of Agricultural Sciences, China

Oral Sessions

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Herbicide Resistance (Status)

Organizer/Chairperson: **Bodo Peters**
Bayer AG, Germany

O-083 **Lead**

How to manage weed resistance and protect yields —a company perspective

Bodo Peters

Bayer AG, Germany

O-084

Overcoming the resistance to the uptake of integrated weed management tactics in farming systems

Murray Scholz

Scholz Farming Company, Australia

O-085

Seventeen years of continuous application of glyphosate leads to evolution of resistance and shift in weed species

Abul Hashem, Catherine Borger, Mohammad Amjad

Department of Primary Industry and Regional Development, Government of Western Australia, Australia

O-086

Herbicide resistant weeds and their emerging trends in China

Chaoxian Zhang, Hongjuan Huang, Shouhui Wei, Jingchao Chen, Zhaofeng Huang, Cuilan Jiang

Chinese Academy of Agricultural Sciences, China

O-087

Current status and management of herbicide resistance weeds in Sri Lanka

A. S. K. Abeysekara¹, D. D. Witharana², T. M. G. H. Tennakoon¹, W. M. U. B. Wickrama¹

¹Rice Research and Development Institute, Sri Lanka; ²Postgraduate Institute of Agriculture, Sri Lanka

O-088

Current and future herbicide resistance challenges in Asia

Vinod Shivrain¹, Florinda Vasquez², Xiaolong Jiang³, Susan Knight¹, Ajit Kumar⁴, Gaylene Marsden¹, Sugiyama Minoru⁵

¹Syngenta Asia Pacific Pte. Ltd., Singapore; ²Syngenta Philippines Inc., Philippines; ³Syngenta (China) Investment Co., Ltd, China; ⁴Syngenta India Ltd., India; ⁵Syngenta Japan, Japan

14:15-15:45

Herbicide Resistance (Management)

Chairpersons: Tse-Seng Chuah

University of Malaysia Terengganu, Malaysia

Roberto Busi

University of Western Australia, Australia

O-089

Outcrossing of herbicide resistance rice with local weedy rice variants in Malaysia

Norida Mazlan, Nur Hidayatul Shuhada Anuar, Engku Ahmad Khairi Engku Arif, Siti Nor Akmar Abdullah, Abdul Shukor Juraimi, Mohd Rafii Yusop

Universiti Putra Malaysia, Malaysia

O-090

Weed control efficacy and herbicide resistance management of Rinskor™ active in rice fields in Asian countries

Lê Duy¹, Trần Trọng Vinh¹, Mongkol Sripeangchan², Bobba Venkata Niranjan Kumar³, Robert A. Master⁴, Richard K. Mann⁴, Mauricio Morell⁴

¹Dow AgroSciences Vietnam, Vietnam; ²Dow AgroSciences Thailand, Thailand; ³Dow AgroSciences Malaysia, Malaysia;

⁴Dow AgroSciences LLC, USA

O-091

Strategies to manage multiple resistant wheat weeds in India to herbicides of several sites of action

Samunder Singh, Aman Dhillon, Pawan Gowda, Mohammad Irfan, Pradeep Kumar

CCS Haryana Agricultural University, India

O-092

Efficacy of MSMA based premix herbicides on control of goosegrass that evolved multiple resistance across glyphosate, glufosinate and fluazifop in Malaysia

Sim Khay Chuan¹, Anthony Tan Swee Hock¹, Wong Kian Joo¹, Chuah Tse Seng²

¹Ancom Crop Care Sdn. Bhd., Malaysia; ²University Malaysia Terengganu, Malaysia

O-093

Strategic cultivation for control of glyphosate-resistant weeds in Australian conservation agriculture considering weed ecology and cultivation type

Michael Widderick, Andrew McLean

Queensland Department of Agriculture and Fisheries, Australia

O-094

Identification of paraquat-resistant *Eleusine indica* populations in corn fields across district of Tiga Binanga, Karo, Indonesia

Edison Purba, Kristian Adinata Ginting

Universitas Sumatera Utara, Indonesia

Oral Sessions

Friday, September 22

10:30-12:00

Herbicide Resistance (Target-Site Resistance)

Chairpersons: Michael Widderick

Queensland Department of Agriculture and Fisheries, Australia

Tae-Seon Park

National Institute of Crop Science, Korea

O-095

A novel EPSPS Thr-102-Ser mutation endows glyphosate resistance in *Tridax procumbens*

Jingbo Li^{1,2}, Qiong Peng^{2,3}, Heping Han², Qin Yu², Stephen B. Powles²

¹Hunan University of Humanities, Science and Technology, China; ²University of Western Australia, Australia; ³Hunan Academy of Agricultural Sciences, China

O-096

The dose responses of various sulfonyleurea-resistant *Monochoria vaginalis* to ALS inhibitors

Kensuke Ohta, Yoshimi Fujino, Yoshinao Sada

Sumitomo Chemical Co.,Ltd., Japan

O-097

Stacking effects of the mutated ALS genes in SU-resistant *Schoenoplectiella juncooides*

Yoshinao Sada

Sumitomo Chemical Co., Ltd., Japan

O-098 **IWSS**

Single nucleotide substitution at Asp-376-Glu conferred various resistance patterns to AHAS inhibitors in a problematic rice field weed *Limnocharis flava*

Norazua Zakaria, Muhammad Saiful Ahmad-Hamdani, Mahbod Sahebi, Abdul Shukor Juraimi, Norhayu Asib

Universiti Putra Malaysia, Malaysia

O-099

CRISPR/Cas9-mediated base-editing system efficiently creates point mutations conferring herbicide resistance in *Arabidopsis*

Linjian Jiang, Yiyu Chen, Zhiping Wang, Hanwen Ni, Yong Xu, Qijun Chen

China Agricultural University, China

O-100

A rapid assay method for detecting ACCase activities of grasses using malachite green

Yoshinobu Jin

Sumitomo Chemical, Japan

13:15-15:00

Herbicide Resistance (Non-Target-Site Resistance), Others

Chairpersons: Shyama R. Weerakoon

The Open University of Sri Lanka, Sri Lanka

Kiyoshi Kawai

Kumiai Chemical Industry Co., Ltd, Japan

O-101

Investigating the glyphosate resistance mechanism in *Conyza canadensis* from Korea

WeiQiang Jia¹, Aung BoBo¹, Ok Jae Won¹, Young Tae Kim¹, Inkon Park², Kee Woong Park¹

¹Chungnam National University, Korea; ²Syngenta Korea Limited, Korea

O-102

Enhanced activity of β -cyanoalanine synthase does not confer quinclorac resistance in multiple-herbicide resistant *Echinochloa phyllopogon*

Pattarasuda Chayapakdee¹, Satoshi Iwakami², Yoshitaka Kamidate¹, Akira Uchino³, Longjiang Fan⁴, Yukari Sunohara¹, Hiroshi Matsumoto¹

¹University of Tsukuba, Japan; ²Kyoto University, Japan; ³NARO, Japan; ⁴Zhejiang University, China

O-103

Effect of metabolic enzyme inhibitors on herbicides

Bo Tao, Hao Sun, Jingjing Li

Northeast Agriculture University, China

O-104

Multiple-resistance to ACCase- and ALS-inhibiting herbicides in *Polypogon fugax*

Xiaoyue Yu, Wei Tang, Jianping Zhang, Yongliang Lu

China National Rice Research Institute, China

O-105

Tribenuron-methyl resistance in *Myosoton aquaticum*: ALS resistance mutation and P450-mediated enhanced herbicide metabolism

Weitang Liu, Shuang Bai, Lele Zhang, Wei Li, Jinxin Wang

Shandong Agricultural University, China

O-106

Investigation of clomazone resistance mechanism in multiple-herbicide resistant *Echinochloa phyllopogon*

Feng Guo¹, Satoshi Iwakami², Takuya Yamaguchi¹, Kiichi Nagai¹, Akira Uchino³, Yukari Sunohara¹, Hiroshi Matsumoto¹

¹Tsukuba University, Japan; ²Kyoto University, Japan; ³NARO, Japan

O-146

Studies on germination ecology and interference of *Cleome viscosa* in mungbean (*Vigna radiata* (L.) Wilczek)

Hafiz Haider Ali¹, Muhammad Mansoor Javaid¹, Zaighum Abbas¹, Muhammad Ehsan Safdar¹, Asif Tanveer²

¹University of Sargodha, Pakistan; ²University of Agriculture, Pakistan

Oral Sessions

Wednesday, September 20

14:45-16:15

Herbicide 1

Chairpersons: Shinichi Shirakura

Bayer CropScience, Japan

Simerjeet Kaur

Punjab Agricultural University, India

O-107

Discovery and development of novel pesticides by combining biological and chemical rationales with computational technologies

Boaz Inbal

Evogene Ltd., Israel

O-108

Weed control efficacy and crop safety of Rinskor™ active against common weeds in rice fields in Asian countries

Lê Duy¹, Trần Trọng Vinh¹, Mongkol Sripeangchan², Marman Maulana³, Jasmi Aiman Hanis⁴, Bobba Venkata Niranjan Kumar⁴, Richard K. Mann⁵, Mauricio Morell⁵

¹Dow AgroSciences, Vietnam; ²Dow AgroSciences Thailand, Thailand; ³Dow AgroSciences Indonesia, Indonesia; ⁴Dow AgroSciences Malaysia, Malaysia; ⁵Dow AgroSciences LLC, USA

O-109

Rinskor™ active: biological studies with granule and EC formulations in Japan

Masanori Kobayashi, Shun Nomoto, Ikuo Shiraishi

Dow Chemical Japan Ltd., Japan

O-110

Rinskor™ active + Penoxsulam 3.41% OD: A novel pre-mixture formulation for post-emergence use in transplanted rice in Taiwan

Yi-hsiou Huang, Ta-I Huang

Dow AgroSciences Taiwan Ltd., Taiwan

O-111

A new rice herbicide: cyclopyrimorate

Hiroshi Tamaru¹, Takashi Sakamoto¹, Kosuke Yoshino¹, Nobuko Imamura¹, Soichi Saeki¹, Takuya Ando¹, Sadafumi Koda¹, Yoshihisa Tsukamoto¹, Junji Kadotani¹, Kenta Ikemachi², Katsuya Kitahara², Chie Furuyama², Ryoichi Aoyama²

¹Mitsui Chemicals Agro, INC., Japan; ²National Federation of Agricultural Cooperative Associations, Japan

O-112

Rinskor™ active control of *Echinochloa spp* and other grasses in rice fields in Jiangsu Province of China

Zhen Wei Yao¹, Jia Xing Yu², Li Yao Dong²

¹Dow AgroSciences (China) Ltd., China; ²Nanjing Agricultural University, China

16:35-18:20

Herbicide 2

Chairpersons: Yoshinao Sada

Sumitomo Chemical Co., Ltd., Japan

Zhen Wei Yao

Dow AgroSciences (China) Ltd., China

O-113

Triafamone (Council®)- A new herbicide for Asia's diverse rice cropping systems

Ramisis Fulgencio¹, Juergen Echle¹, Silke Heibges¹, Hans-Peter Krause¹, Eva-Maria Franken¹, Christopher Rosinger¹, Wolfgang Schulte¹, Shinichi Shirakura²

¹Bayer CropScience AG, Germany; ²Bayer CropScience K.K., Japan

O-114

Council Complete-Performance on hard-to-control weeds

Tatsuya Yamaoka, Nobuhiro Yamashita, Hidenori Hayakawa, Kenji Sugiura

Bayer CropScience K.K.(Japan), Japan

O-115

The effects of Fenquinotrione on ALS-R broadleaf weeds under flooded conditions

Ken Ueda, Yuta Amano, Atsushi Nagamatsu, Masami Kobayashi

Kumiai Chemical Industry Co., Ltd., Japan

O-116

A new herbicide mixture for early post-emergent application timing in transplanted rice

Vinod Shivrain¹, Ari Budiawan², Ruediger Kotzian³, Ajit Kumar⁴, Gaylene Marsden¹, Tiffany Su¹, Pete Tsai⁵, Nan Xu³

¹Syngenta Asia Pacific Pte. Ltd., Singapore; ²PT Syngenta Indonesia, Indonesia; ³Syngenta Crop Protection AG, Switzerland; ⁴Syngenta India Ltd, India; ⁵Syngenta Taiwan Limited, Taiwan

O-117

Effectiveness of the rice herbicidal agent, Pyraclonil

Takashi Shigefuji, Yoshio Ushiguchi, Katsuhiko Takahashi, Takuma Sasaki, Takayuki Uchida

Kyoyu Agri Co.,Ltd., Japan

O-118

Metabolism of the novel herbicide fenquinotrione.

Satoshi Usami, Mitsumasa Ikeda, Yudai Hotta, Yuji Ono

Kumiai Chemical Industry Co., Ltd., Japan

O-119

Re-evaluation of the effectiveness of commonly used herbicides in wet seeded rice in Sri Lanka

D. D. Witharana¹, A. S. K. Abeysekara², H. M. S. D. Kulatunga², W. M. U. B. Wikrama²

¹Postgraduate Institute of Agriculture, Sri Lanka; ²Rice Research and Development Institute, Sri Lanka.

Oral Sessions

Thursday, September 21

10:30-12:00

Herbicide 3

Chairpersons: Clair L Keene

North Dakota State University, USA

Ramesh Kumar Singh

Banaras Hindu University, India

O-120

Indaziflam – an innovative base herbicide for plantation crops in Asia

Ramisis Fulgencio¹, Joerg Oeser¹, Anne Helgers¹, Christopher Leake¹, MinSik Park²

¹Bayer CropScience AG, Germany; ²Bayer (South East Asia) Pte Ltd., Singapore

O-121

Indaziflam – a residual and broad spectrum herbicide for turf

Shin Nakamura, Shigetoshi Obuchi

BayerCropScience K.K., Japan

O-122

Indaziflam (Alion®) – a novel herbicide for weed management in oil palm (*Elaeis guineensis* Jacq.): crop safety and performance

S. H. Ho¹, R. Fulgencio², A. Xavier¹, C. K. Hoe³

¹United Plantations Berhad, Malaysia; ²Bayer CropScience AG, Germany; ³Bayer Co. (Malaysia) Sdn. Bhd., Malaysia

O-123

Herbicidal efficacy of tolpyralate under various environmental conditions

Yu Naito, Yoshikazu Satake, Hiroyuki Okamoto, Hiroshi Kikugawa, Shigeru Mitani

Ishihara Sangyo Kaisha, Ltd., Japan

O-124

Biological performance of tolpyralate and tank mixture with atrazine as a post-emergence herbicide application for corn (*Zea mays*) production

Taketo Suganuma, Yoshikazu Satake, Yosuke Kobayashi, Yu Naito, Hiroshi Kikugawa, Shigeru Mitani

Ishihara Sangyo Kaisha, Ltd., Japan

O-125

Control of mixed weed flora in maize with temboptrione and its tank-mix with atrazine and 2,4-D

Simerjeet Kaur, Makhan S. Bhullar, Tarundeep Kaur

Punjab Agricultural University, India

14:15-16:00

Herbicide Usage 1

Chairpersons: Naomi Hosaka

Japan Association for Advancement of Phyto-Regulators, Japan

Xiangju Li

Chinese Academy of Agricultural Science, China

O-126

Herbicides affect growth and seed germination of broadleaf dock (*Rumex obtusifolius*)

Wiharti Oktaria Purba, Lisa Wasko DeVetter, Chris Benedict, Ian C Burke, Timothy Miller

Washington State University, USA

O-127

Evaluation of weed control measures in combination with seeding rates on chickpea (*Cicer arietinum* L.) weeds under rainfed conditions

Rahamdad Khan¹, Ijaz Khan Ahmad Khan², Syed Salim Shah¹

¹Bacha Khan University, Pakistan; ²The University of Agriculture, Peshawar Pakistan, Pakistan

O-128

Bio-efficacy and phyto-toxicity of BAS 835 UB H against weeds in groundnut and its residual effects on succeeding sorghum, wheat and maize crops

Malligawad Lokanath Hemaraddi

University of Agricultural Sciences, India

O-129

Long term application of herbicides on weed shift, weed control, yield and soil properties in transplanted rice-rice system at north western zone of Tamil Nadu

Chinnusamy Chinnagounder, N. K. Prabhakaran, P. Murali Arthanari, P. Janaki

Tamil Nadu Agricultural University, India

O-130

Herbicide combinations for higher productivity and profitability of transplanted rice

M. Madhavi¹, S. Anusha¹, G. Pratibha², T. Ramprakash¹

¹Professor Jayashankar Telangana State Agricultural University, India; ²Central Research Institute for Dryland Agriculture, India

O-131

Studies on the efficacy of pre-emergence and post-emergence herbicides on control of weeds in groundnut and soybean and their residual toxicity on succeeding crops

H. D. Shilpa, Lokanath Hemaraddi Malligawad

University of Agricultural Sciences, India

O-144

Growth and yield of soybean as affected by irrigation and weed management method

Md. Hazrat Ali¹, Jannatul Ferdous¹, Md. Shahidul Islam¹, Imtiaz Faruk Chowdhury¹, Md. Nazmul Haque¹,
Sheikh Muhammad Masum^{1,2}

¹Sher-e-Bangla Agricultural University, Bangladesh; ²Kagoshima University, Japan

Oral Sessions

Friday, September 22

10:30-12:00

Herbicide Usage 2

Chairpersons: Lokanath Hemaraddi Malligawad

University of Agricultural Sciences, India

Vinod Shivrain

Syngenta Asia Pacific Pte. Ltd., Singapore

O-132

Bio-efficacy and phytotoxicity evaluation of pendimethalin + metribuzin (RM) for the control of weeds in wheat crop and its residual effect on succeeding crops

Satbir Singh

CCS Haryana Agricultural University, India

O-133

Bio-efficacy of post emergence herbicides alone and as tank mixtures on weed control, growth and yield of roselle (*Hibiscus sabdariffa* L.)

A. S. Rao

Acharya N.G. Ranga Agricultural University, India

O-134

Efficacy of pre-mix formulation of oxyfluorfen + glyphosate on weeds in non-crop areas

Ramesh Kumar Singh, Neelam Bisen

Banaras Hindu University, India

O-135

Troublesome perennial grass weed, dallisgrass (*Paspalum dilatatum*) and cogon grass (*Imperata cylindrica*) control by foramsulfuron in turf.

Shin Nakamura, Shigetoshi Obuchi, Hirohisa Ohtake

BayerCropScience K.K., Japan

O-136

Burn down effect and chlorosis of transgenic and conventional corn varieties due to potassium glyphosate 660 g/l at different time of application

Denny Kurniadie, Uum Umiyati, Dedi Widayat

Padjadjaran University, Indonesia

O-137

A new micro emulsion of propaquizafop 2.5%+imazethapyr 3.75% for weed control in Cluster bean (*Cyamopsis tetragonaloba* L.)

Ramesh K. Singh, Vishal Tyagi, Neelam Bisen

Banaras Hindu University, India

13:15-15:00

Herbicide Usage 3

Chairpersons: Camila Ferreira Pinho

UFRRJ - Federal Rural University, Brazil

Chairpersons: C. R. Chinnamuthu

Tamil Nadu Agricultural University, India

O-138

Inhibitory effect of some herbicides on Three Soil borne diseases

Pruchya Ekkathin, Chanya Maneechote, Yurawan Anantanamane, Suneerat Seemadua, Assiri Klangawad

Plant Protection Research and Development Office, Department of Agriculture, Thailand

O-139

Sorption and dissipation of pyrithiobac sodium in cotton growing soils of India

T. Ramprakash, M. Madhavi, P. Leela Rani

Professor Jayashankar Telangana State Agricultural University, India

O-140

Nano encapsulated formulations to improve absorption and translocation of herbicide for season long weed control

C. R. Chinnamuthu¹, N. Viji¹, T. Pradeeshkumar²

¹Tamil Nadu Agricultural University, India; ²Vanavarayar Institute of Agriculture, India

O-141

Alleviation of quinclorac toxicity by salicylic acid in rice seedlings based on visible/near-infrared hyperspectral imaging

Lan Li, Jian Wang, Chong Yang, Su Yang, Weijun Zhou

Zhejiang University, China

O-142

Comparative transcriptome and iTRAQ proteome analyses of rice leaf responses to salicylic acid under quinclorac stress

Jian Wang, Lan Li, Meijuan Long, Mengting Lv, Weijun Zhou

Zhejiang University, China

O-145

Influence of herbicides on plant parasitic nematodes infecting aerobic rice

Nethi Somasekhar, B. Sreedevi, K. Shivakrishna

ICAR-Indian Institute of Rice Research, India