

Oral Programme

Sunday 26th March 2017

11:30	Registration Desk Opens <i>Tramuntana Foyer</i>
Opening Remarks <i>Tramuntana 2&3</i> Session Chairs: <i>D. Edwards and R. Ortiz</i>	
13:00 – 13:45	[INV.1] Agriculture and food system adaptation and mitigation actions to respond to climate change B.M. Campbell ¹ , J. Hansen ² , T. Rosenstock ³ , L. Wollenberg ⁴ , A.M.L. Rodríguez* ¹ , ¹ <i>International Center for Tropical Agriculture (CIAT), USA</i> , ² <i>International Research Institute for Climate and Society (IRI), USA</i> , ³ <i>World Agroforestry Center (ICRAF), USA</i> , ⁴ <i>University of Vermont, USA</i>
Plenary Session 1: Increased Agricultural Uncertainty <i>Tramuntana 2&3</i> Session Chairs: <i>J. Fanzo and TBA</i>	
13:45 – 14:30	[INV.2] Sustainable food production in a changing climate P.C. West, <i>University of Minnesota, USA</i>
14:30 – 14:50	[O1.1] Long-term archaeobotanical records of agricultural practice under changing climatic conditions: Case studies from Western Asia and Europe A. Bogaard*, E. Stroud, A. Styring, <i>University of Oxford, UK</i>
14:50 – 15:10	[O1.2] Gaining agricultural resilience to climate change from big data B.D. Maxwell* ¹ , A. Bekkerman ¹ , R. Payn ¹ , J. Sheppard ¹ , C. Izurieta ¹ , J. Rounds ¹ , L.J. Rew ¹ , N. Silverman ² , P. Lawrence ³ , ¹ <i>Montana State University, USA</i> , ² <i>University of Montana, USA</i> , ³ <i>High Mowing Seed, USA</i>
15:10 – 15:30	[O1.3] Adapting to risk in a marginal dryland cropping system of Southern Australia M. Monjardino* ¹ , J. Ouzman ¹ , T. McBeath ¹ , M. Moodie ² , E. Hunt ³ , ¹ <i>CSIRO, Australia</i> , ² <i>Mallee Sustainable Farming, Australia</i> , ³ <i>Ed Hunt Consulting, Australia</i>
15:30 – 15:50	[O1.4] Uncertainty in climate-crop modelling precludes the design of appropriate crop management adaptations to climate change M. Corbeels* ^{1,2} , L. Rusinamhodzi ¹ , D. Berre ² , S.L. Ridaura ¹ , ¹ <i>CIMMYT, Kenya</i> , ² <i>CIRAD, France</i> , ³ <i>CIMMYT, Mexico</i>
15:50 – 16:20	Coffee Break & Poster Session 1 <i>Tramuntana 1</i>
Plenary Session 2: Modelling and its Application <i>Tramuntana 2&3</i> Session Chairs: <i>S. Asseng and P. West</i>	
16:20 – 17:05	[INV.3] Progress in modelling agricultural impacts of and adaptations to climate change R.P. Rötter, <i>Georg-August-University Göttingen, Germany</i>
17:05 – 17:25	[O2.1] Relevance of seasonal climate forecasts for crop yield estimates over Europe A.C. Ceglar* ¹ , C.P. Prodhomme ² , M.T. Turco ² , A.T. Toreti ¹ , F.D.R. Doblas-Reyes ¹ , ¹ <i>Joint Research Centre, Italy</i> , ² <i>Barcelona Supercomputing Centre, Spain</i> , ³ <i>Catalan Institute for Research and Advanced Studies, Spain</i>
17:25 – 17:45	[O2.2] Modeling climate change impacts and adaptation strategies on yields and profitability of post-rainy season chickpea farms in Andhra Pradesh, India S. Nedumaran*, K.D. Murthy, D. Kumaracharyulu, G.M. Krishna, <i>International Crops Research Institute for the Semi-Arid Tropics, India</i>
17:45 – 18:05	[O2.3] Improving the capability of the CERES-Rice model for climate change and mitigation applications U. Singh* ¹ , K.J. Boote ² , J. Fugice ¹ , Y.K. Gaihre ¹ , ¹ <i>International Fertilizer Development Center (IFDC), USA</i> , ² <i>University of Florida, USA</i>
18:05 – 18:25	[O2.4] Extreme risk to agriculture: A historical look at large scale climate extremes and their impact on productivity J. Elliott* ¹ , C. Mueller ² , B. Schauburger ² , S. Achontoulis ³ , K. Boote ⁴ , J. Chryssanthacopoulos ¹ , D. Deryng ¹ , C. Folberth ⁵ , C. Izaurralde ⁶ , D. Kelly ¹ et al, ¹ <i>University of Chicago Computation Institute, USA</i> , ² <i>Potsdam Institute for Climate Impact Research, Germany</i> , ³ <i>Iowa State University, USA</i> , ⁴ <i>University of Florida, USA</i> , ⁵ <i>IIASA, Austria</i> , ⁶ <i>University of Maryland, USA</i>
18:25 – 19:25	Welcome Drinks Reception & Poster Session 1 <i>Tramuntana 1</i>
Monday 27th March 2017	
Plenary Session 3: Impacts on Nutrition, Quality and Resource Use Efficiency <i>Tramuntana 2&3</i> Session Chairs: <i>B. Kilian and R. Rötter</i>	

09:00 – 09:45	[INV.4] Sustainable diets: Can we feed the world well and protect the planet? J. Fanzo, <i>Johns Hopkins University, USA</i>
09:45 – 10:05	[O3.1] Breeding more water and nitrogen use efficient C₄ crops O. Ghannoum, <i>Western Sydney University, Australia</i>
10:05 – 10:25	[O3.2] FAO's regional rice initiative: Building more productive, resource use-efficient, resilient and climate-smart rice production systems for food and nutrition security in Asia J.W.H. Ketelaar*, A.L.M. Abubakar, V.D. Pham, <i>Food and Agriculture Organization of the United Nations - Regional Office for Asia and the Pacific, Thailand</i>
10:25 – 10:45	[O3.3] Nitrogen x heat stress interactions on yield and quality of cereals: Can N management mitigate penalties from heat? G.A. Slafer* ^{1,2} , M. Elía ² , R.A. Ordóñez ² , R. Savin ² , ¹ ICREA, Spain, ² University of Lleida, Spain
10:45 – 11:15	Coffee Break & Poster Session 1 Tramuntana 1
Plenary Session 4: Abiotic Stress Tramuntana 2&3 Session Chairs: R. Henry and J.L. Araus Ortega	
11:15 – 12:00	[INV.5] Improving wheat yields under abiotic stress M.A.J. Parry, <i>Lancaster University, UK</i>
12:00 – 12:20	[O4.1] Expression profiles of iron responsive genes under different stresses in rice A.C. de Oliveira*, V.E. Viana, C. Pegoraro, L.C. Maia, <i>Federal University of Pelotas, Brazil</i>
12:20 – 12:40	[O4.2] Physiological basis of adaptation of chickpea to terminal drought K.H.M. Siddique* ¹ , J. Pang ¹ , N.C. Turner ¹ , T. Khan ¹ , Y. Du ² , J. Xiong ² , T.D. Colmer ¹ , R. Devilla ³ , K. Stefanova ¹ , ¹ The University of Western Australia, Australia, ² Lanzhou University, China, ³ CSIRO Agriculture, Australia
12:40 – 13:00	[O4.3] Assessment of performance of drought tolerant maize (<i>Zea mays</i> L.) hybrids under combined drought and heat stress S.K. Meseke*, A. Menkir, O. Bossey, O. Azeez, W. Mengesha, <i>International Institute of Tropical Agriculture, Nigeria</i>
13:00 – 14:00	Lunch Noray Restaurant
14:00 – 14:30	Poster Session 2 Tramuntana 1
Plenary Session 4: Abiotic Stress (cont.) Tramuntana 2&3 Session Chairs: R. Henry and J.L. Araus Ortega	
14:30 – 14:50	[O4.4] Characterization and assessment of yield robustness to abiotic perturbations N. Urruty* ^{1,2} , H. Guyomard ¹ , D. Tailliez-Lefebvre ³ , C. Huyghe ¹ , ¹ INRA, France, ² University of Poitiers, France, ³ Agrosolutions, France
14:50 – 15:10	[O4.5] Weather constraints and adaptive capacity of farmers at high latitudes of Europe P. Peltonen-Sainio*, L. Jauhiainen, A. Rajala, <i>Natural Resources Institute Finland (Luke), Finland</i>
15:10 – 15:30	[O4.6] Agronomic and metabolic responses of rice during simultaneous heat and drought stress and subsequent recovery L.M.F. Lawas* ^{1,2} , W. Shi ² , X. Li ^{1,3} , A. Erban ¹ , J. Kopka ¹ , E. Zuther ¹ , K.S.V. Jagadish ^{1,4} , D.K. Hinch ¹ , ¹ Max Planck Institute of Molecular Plant Physiology, Germany, ² International Rice Research Institute, The Philippines, ³ Chinese Academy of Agricultural Sciences, China, ⁴ Kansas State University, USA
15:30 – 16:00	Coffee Break & Poster Session 2 Tramuntana 1
Plenary Session 5: Effects of CO₂ on Plant Growth Tramuntana 2&3 Session Chairs: M. Parry and L. Ye	
16:00 – 16:45	[INV.6] Crop yield and quality under rising atmospheric CO₂ J. Uddling, <i>University of Gothenburg, Sweden</i>
16:45 – 17:05	[O5.1] A synthesis of approaches to improve crop models for effects of CO₂ on photosynthesis, transpiration, growth, and yield K.J. Boote* ¹ , S. Asseng ¹ , G. Hoogenboom ¹ , J.W. Jones ¹ , J.I. Lizaso ² , ¹ University of Florida, USA, ² Universidad de Madrid, Spain
17:05 – 17:25	[O5.2] Simulating effects of elevated CO₂ and drought on crop biomass and water fluxes using a coupled hydrological-plant growth model J. Kellner* ¹ , S. Multsch ¹ , P. Kraft ¹ , R. Manderscheid ² , H.J. Weigel ² , M. Erbs ¹ , L. Breuer ¹ , ¹ Justus-Liebig-Universität Giessen, Germany, ² Thünen Institute Braunschweig, Germany

17:25 – 17:45	[O5.3] Rubisco performance in a climate change context I. Aranjuelo* ¹ , J. Galmés ² , I. Loladze ³ , A. Sanz-Sáez ⁴ , G. Erice ⁵ , E. Ainsworth ⁶ et al, ¹ CSIC-UPNA, Spain, ² Universitat de les Illes Balears, Spain, ³ Bryan Medical Center, USA, ⁴ University of Missouri, USA, ⁵ Estación Experimental del Zaidín (CSIC), Spain, ⁶ University of Illinois Urbana-Champaign, USA
17:45 – 18:45	Author Workshop - How to Write a Great Research Paper, and Get it Accepted by a Good Journal S. Munné-Bosch, Editor-in-Chief, <i>Environmental and Experimental Botany</i>
19.30 – 22.00	Gala Dinner (optional – ticket holders only)
Tuesday 28th March 2017	
Plenary Session 6: Plant-microbe Interactions Tramuntana 2&3 Session Chairs: R. Buell and J. Uddling	
09:00 – 09:45	[INV.7] Ecological principles to overcoming lazy crops and soils G.A. Kowalchuk, <i>Utrecht University, The Netherlands</i>
09:45 – 10:05	[O6.1] Physiological effects and transcriptomic profiling of rice plant-microbe interactions in a System of Rice Intensification (SRI) agroecosystem: Identifying phenotypical modifications to deal with climate change F. Doni* ¹ , N. Uphoff ² , C.M.Z. Radziah ¹ , A. Isahak ¹ , F. Fathurrahman ¹ , W.Y.W. Mohtar ¹ , ¹ Universiti Kebangsaan Malaysia, Malaysia, ² Cornell University, USA
10:05 – 10:25	[O6.2] Impact of elevated CO₂ concentration on interactions between grapevine (<i>Vitis vinifera</i> L.) and <i>Plasmopara viticola</i>, the causal agent of downy mildew M. Selim* ¹ , B. Berkelmann-Löhnertz ¹ , A. Reineke ¹ , K-H. Kogel ² , ¹ Hochschule Geisenheim University, Germany, ² Justus-Liebig-University Gießen, Germany
10:25 – 10:45	[O6.3] Exploiting the functional role of the microbiome to protect plants from (a)biotic stress G. Berg, C. Zachow*, <i>TU Graz, Austria</i>
10:45 – 11:15	Coffee Break & Poster Session 2 Tramuntana 1
Plenary Session 7: Innovative Agronomic and Breeding Practices Tramuntana 2&3 Session Chairs: K. Siddique and G. Kowalchuk	
11:15 – 12:00	[INV.8] Harmonizing efforts among phenotyping initiatives: Bottlenecks and opportunities J.L. Araus Ortega, <i>University of Barcelona, Spain</i>
12:00 – 12:20	[O7.1] Cropping system innovation for coping with climatic warming in China W. Zhang, <i>Chinese Academy of Agricultural Sciences, China</i>
12:20 – 12:40	[O7.2] Developing and deploying climate-resilient maize varieties in the developing world B.M. Prasanna, <i>International Maize and Wheat Improvement Center (CIMMYT), Kenya</i>
12:40 – 13:00	[O7.3] Demand-driven innovative breeding approaches for developing climate change ready crop varieties in chickpea for Africa and Asia R.K. Varshney ^{1,2} , ¹ ICRISAT, India, ² The University of Western Australia, Australia
13:00 – 14:00	Lunch Noray Restaurant
14:00 – 14:30	Poster Session 2 Tramuntana 1
Plenary Session 8: New Crops for a New Climate Tramuntana 2&3 Session Chairs: R. Varshney and D. Edwards	
14:30 – 15:15	[INV.9] Reaching back through the domestication bottleneck to feed a hot and crowded planet B. Kilian, <i>Global Crop Diversity Trust, Germany</i>
15:15 – 15:35	[O8.1] Underutilised crops as 'new' crops under climate change: A South African perspective T. Mabhaudhi*, R.P. Kunz, R.E. Schulze, A.T. Modi, <i>University of KwaZulu-Natal, South Africa</i>
15:35 – 15:55	[O8.2] Breeding quinoa for novel environments in the climate change era K.M. Murphy, <i>Washington State University, USA</i>
15:55 – 16:15	[O8.3] Hemp (<i>Cannabis sativa</i> L.) leaf photosynthesis in relation to nitrogen content and temperature: Implication on annual biomass yield K. Tang* ¹ , P.C. Struik ¹ , X. Yin ¹ , S. Amaducci ¹ , ¹ Università Cattolica del Sacro Cuore, Italy, ² Wageningen University, The Netherlands
16:15 – 16:35	[O8.4] New genetic strategies for developing climate adapted wheat identified by analysis of gene expression under stress R.J. Henry* ¹ , A. Furtado ¹ , P. Rangan ^{1,2} , ¹ University of Queensland, Australia, ² ICAR-National Bureau of Plant Genetic Resources, Australia
16:35 – 16:45	Closing Remarks

16:45 – 17:15	Coffee Break <i>Tramuntana 1</i>
17:15	End of Conference